MURR ELEKTRONIK

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GENERAL CATALOG

2014



ELECTRONICS IN THE CONTROL CABINET



INTERFACES



CONNECTION TECHNOLOGY



I/O SYSTEMS



MURRELEKTRONIK GOES EVEN GREENER!

Being sustainable and respecting nature are part of our core values here. That's why we print our catalogs on uncoated paper which is produced without any solvents, chlorine and is environmentally friendly. Our supply chain is also an environmentally friendly production process.

We, here at Murrelektronik, are proud to say we act responsibly and protect the environment.

PEFC™
PEFC/04-31-0730

Note:

With this new main catalog, all information contained in previous brochures/catalogs expires. All drawings, diagrams, indications of weight, dimensions, ratings or other details printed in this catalog are only binding when specifically agreed upon.

Murrelektronik reserves the right to changes and modifications. The customer is responsible for using the components and units that they ordered in the way they are designed.

The information in this brochure has been compiled with the utmost care. Liability for the correctness, completeness and topicality of the information is restricted to gross negligence.

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Murrelektronik GmbH,
Falkenstr. 3, D-71570 Oppenweiler

www.murrelektronik.com

With compliments:

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GENERAL CATALOG
PRODUCT NEWS

SOME OF THE NEW PRODUCTS IN THIS CATALOG:



EMPARRO
SIMPLY THE BEST

- Efficiency up to 95 %
- 150 % Power Boost
- Practical metal housing

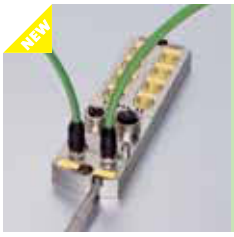
Page 1.3.1



CUBE20S
SMALL, SPEEDY, SAFE

- Quick setup and service
- Repeater included

Page 4.3.1



MVK SAFETY
ACTIVE SAFETY

- Optimum protection
- Safe inputs/outputs
- Easy installation

Page 4.4.12



ETHERNET CABLES
FOR ANY CONNECTION

- Plug available in five different angles
- Cables suitable for C-Tracks
- Molded or field-wireable

Page 3.6.7



MICO+
INTELLIGENTLY SECURED

- Protects 24 V DC systems
- 90 % warning as digital signal
- Shut off channels with control

Page 1.5.1



MODLIGHT XTREME 440
FOR PERFECT LIGHTING

- Bright as daylight
- IP69K for the toughest environments
- Energy saving LED technology

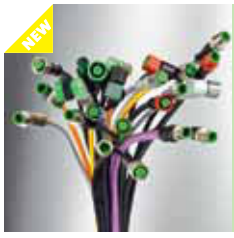
Page 2.4.4



MODLINK MSDD
FRONT PANEL INTERFACES

- For service work
- IP65 protection
- Modular Inserts

Page 2.1.1



... AND MANY MORE NEW PRODUCTS

1 ELECTRONICS IN THE CONTROL CABINET



1.1	Transformers
1.2	Rectified Power Supplies
1.3	Power Suppy Units
1.4	Buffer Modules / Redundancy Modules
1.5	Intelligent Power Distribution
1.6	Converters / Rectifiers
1.7	Control Cabinet Power Outlets
1.8	EMC Filters
1.9	EMC Suppressors
1.10	Relays / Safety Relays
1.11	Optocouplers / Semiconductors
1.12	Active Interface Technology
1.13	Passive Interface Technology
1.14	Eurocard Holders / Control Modules

2 INTERFACES



2.1	Front Panel Interfaces
2.2	Control Cabinet Interfaces / Cable Entry Systems
2.3	Hybrid Fieldbus Coupling
2.4	Lighting Elements

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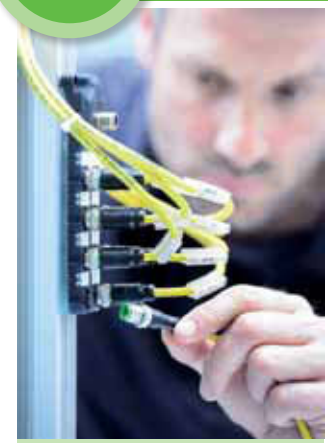
3 CONNECTION TECHNOLOGY



3.1	M8 Round Plug Connectors
3.2	M12 Round Plug Connectors
3.3	T-couplers M8, M12, 7/8"
3.4	Flange Connectors
3.5	MQ12 Round Plug Connectors
3.6	Fieldbus Connectors
3.7	Plug Connectors for Food & Beverage
3.8	M23 Round Plug Connectors
3.9	7/8" Round Plug Connectors
3.10	Valve Connectors
3.11	Technical Appendix

4 I/O SYSTEMS



4.1	Cube67
4.2	Cube20
4.3	Cube20S
4.4	MVK Metal
4.5	Impact67
4.6	Impact20
4.7	MASI00/20
4.8	MASI67
4.9	MASI68
4.10	M8 Distribution Systems
4.11	M12 Distribution Systems (Metal)
4.12	M12 Distribution Systems (Plastic)



24 BRANCH OFFICES AND 4 PRODUCTION PLANTS

Oppenweiler
Production Fieldbus Systems, Interface modules



Stollberg, Germany
Production of Connectors



Stod, Czech Republic
Production of Interface, Switch Mode Power Supplies, Transformers



STAY CONNECTED – REPRESENTED ON ALL CONTINENTS WORLDWIDE

The company was founded in 1975 by Franz Hafner



Over 1,800 employees, including 200 sales reps and customer service center technicians



Top student training is very important for Murrelektronik. Each year we offer apprenticeships in technical and commercial areas, as well as in logistics.





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MURRELEKTRONIK
FIGURES & FACTS

Shanghai, China
Production for the Asian markets



MURRELEKTRONIK IS YOUR PARTNER...

- Over 42,000 products available to order conveniently in our online shop
- Subdivided into four product fields:
  - **Electronics in the Control Cabinet**
  - **Interfaces**
  - **Connection Technology**
  - **I/O Systems**
- For industries and market segments as for example:
  - **Machine Tools**
  - **Machine Building and Plant Engineering**
  - **Assembly and Handling Technology**
  - **Food and Beverage**
  - **Automotive Industry**
  - **Warehousing and Logistics**
- Founded in Oppenweiler, Germany, in 1975
- Family-owned company
- Over €190 million turnover in the year 2012



CUSTOMER LOYALTY WITH INDIVIDUAL AND COMPETENT ON-SITE HELP

MURRELEKTRONIK OFFER VALUABLE BENEFITS

- Over 200 sales reps
- On-site support
- 4 international warehouses
- 1 million products in stock

- Murrelektronik Express Service

mex
More service

MURRELEKTRONIK YOUR BENEFITS



International approvals for flexible applications worldwide

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MURRELEKTRONIK QUALITY



MURRELEKTRONIK STANDS FOR QUALITY

- In-house test center and EMC lab for tested and accredited products
- Individual and competent on-site advice and support
- No use of hazardous materials
- Complies with RoHS requirements
- First-class design and production quality
- Systematic and sustainable quality management according to DIN EN ISO 9001

Tested and accredited: In-house test center and EMC laboratory



Endurance tests under extreme conditions



Product testing begins at the beginning of the project





connec+ivity®
by Murrelektronik

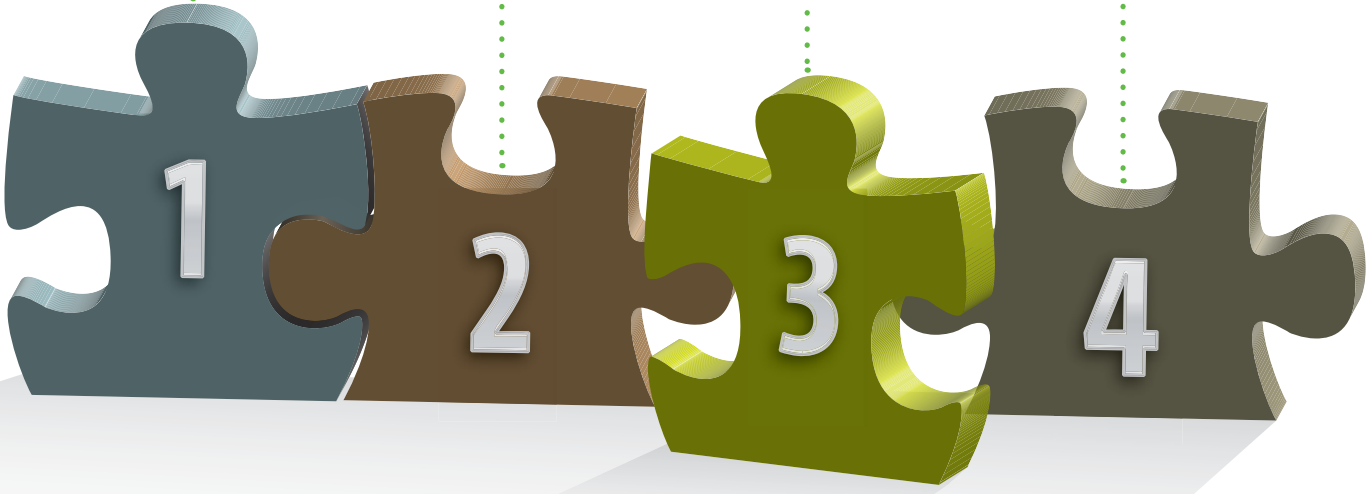
THE BACK BONE OF YOUR MACHINE AND SYSTEM INSTALLATIONS

ASSESSING STATUS
- On-site analysis
- Exchanging the basic documentation
- Discussing the current status

CREATING A CONCEPT
- Customer-specific requirements
- Industry-specific requirements
- Several concept options

SELECTING THE DESIGN
- Concept overview
- Analyzing advantages and disadvantages
- Bills of materials

PROJECT SUPPORT
- E-plan and CAD data
- Electronic catalog data (BMEcat)
- Setup support





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CONNECTIVITY
BY MURRELEKTRONIK

CONNECTIVITY MEANS INDIVIDUAL SOLUTIONS

- Best advice increases your competitive advantage
- Decrease your budget significantly
- We optimize your machine and system installation
- Highly skilled, specially trained staff
- Individual system solutions
- Consistent from a single source

SYSTEM ADVICE
WITH CONNECTIVITY CITY



Go from the industry overview to your application ...

... to the appropriate products.



Download the CONNECTIVITY app for your iPad here:

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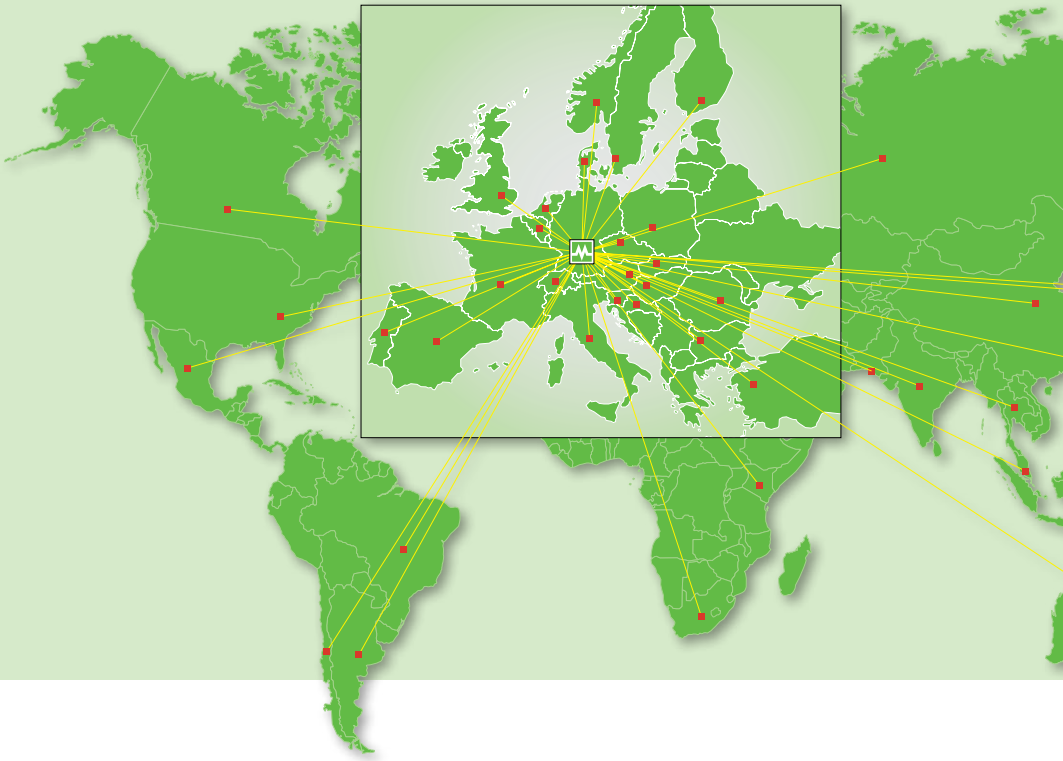
REPRESENTED ON ALL CONTINENTS WORLDWIDE



GERMANY
Murrelektronik GmbH
Falkenstraße 3
D-71570 Oppenweiler
Phone +49 7191 47-0
Fax +49 7191 47-491000
info@murrelektronik.de
www.murrelektronik.de

ARGENTINA
NAKASE SRL
ventas@nakase.com
www.nakase.com.ar

AUSTRALIA
Sick Pty. Ltd.
sales@sick.com.au
www.sick.com.au

AUSTRIA
Murrelektronik GmbH
info@murrelektronik.at
www.murrelektronik.at

BELGIUM
Murrelektronik B.V.B.A.
info@murrelektronik.be
www.murrelektronik.be

BRAZIL
Murrelektronik do Brasil
Indústria e Comércio Ltda.
info@murrelektronik.com.br
www.murrelektronik.com.br

BULGARIA
Murrelektronik GmbH
info@murrelektronik.at
www.murrelektronik.at

CANADA
Murrelektronik Canada
2sales@murrelektronik.ca
www.murrelektronik.ca

CHILE
Electrónica Rhomberg Ltda.
ventas@rhomberg.cl
www.rhomberg.cl

CHINA
Murrelektronik Components Co. Ltd.
info@murrelektronik.com.cn
www.murrelektronik.com.cn

CROATIA
Murrelektronik GmbH
info@murrelektronik.at
www.murrelektronik.at

CZECH REPUBLIC
Murrelektronik CZ spol. s.r.o.
info@murrelektronik.cz
www.murrelektronik.cz

DENMARK
Murrelektronik Aps
info@murrelektronik.dk
www.murrelektronik.dk

EGYPT
DANA Import & Export
usama@dana-egy.com
www.murrelektronik.com/en

FINLAND
Murrelektronik Power Oy
sales@murrelektronik.fi
www.murrelektronik.fi

FRANCE
Murrelektronik S.A.S.
info@murrelektronik.fr
www.murrelektronik.fr

GREAT BRITAIN
Murrelektronik Ltd.
sales@murrelektronik.co.uk
www.murrelektronik.co.uk

HUNGARY
Murrelektronik Kft.
info@murrelektronik.hu
www.murrelektronik.hu

INDIA
B.I. Enterprise
balluff@balluff.co.in
www.balluff.co.in

ISRAEL
O.M.S.T Marketing & Import Ltd.
miki@omst.co.il
www.omst.co.il

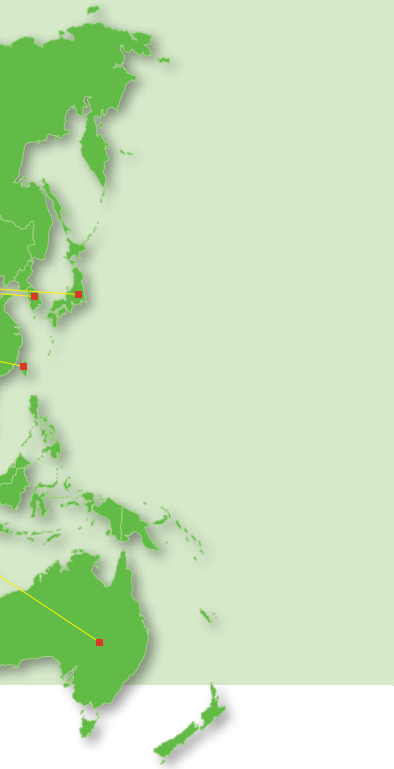
ISRAEL
Ancitech Ltd.
info@ancitech.com
www.ancitech.com

ITALY
Murrelektronik S.r.l.
info@murrelektronik.it
www.murrelektronik.it

JAPAN
K.MECS Co., Ltd.
info@kmecs.co.jp
www.kmecs.co.jp

KENIA
Profa-Tech Limited
info@profa-tech.com
www.profa-tech.com

NETHERLANDS
Murrelektronik B.V.
sales@murrelektronik.nl
www.murrelektronik.nl



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REPRESENTED WORLDWIDE

NEW ZEALAND
Sick Pty. Ltd.
sales@sick.co.nz
www.sick.co.nz

NORWAY
Murrelektronik A.S.
post@murrelektronik.no
www.murrelektronik.no

PAKISTAN
Overseas Enterprises
info@oe.com.pk
rehan_k@oe.com.pk
www.oe.com.pk

POLAND
Murrelektronik Sp. z o.o.
info@murrelektronik.pl
www.murrelektronik.pl

PORTUGAL
F.Fonseca S.A.
ffonseca@ffonseca.com
www.ffonseca.com

ROMANIA
Murrelektronik GmbH
info@murrelektronik.at
www.murrelektronik.at

RUSSIA
Murrelektronik
igor.kalinin@murrelektronik.de
www.murrelektronik.ru

SERBIA
Murrelektronik GmbH
info@murrelektronik.at
www.murrelektronik.at

SINGAPORE
Balluff Asia Pte. Ltd.
balluff@balluff.com.sg
www.balluff.com.sg

SLOVAKIA
Murrelektronik s.r.o.
info@murrelektronik.sk
www.murrelektronik.sk

SLOVENIA
Murrelektronik GmbH
info@murrelektronik.at
www.murrelektronik.at

SPAIN
Murrelektronik Spain S.L.U.
ventas@murrelektronik.es
www.murrelektronik.es

SOUTH AFRICA
Rubicon Electrical
and Automation
greg@rubiconsa.com
www.rubiconsa.com

SOUTH KOREA
Murrelektronik Korea Ltd.
info@murrelektronik.kr
www.murrelektronik.kr

SWEDEN
Murrelektronik AB
info@murrelektronik.se
www.murrelektronik.se

SWITZERLAND
Murrelektronik AG
info@murrelektronik.ch
www.murrelektronik.ch

TAIWAN
Lintronix Co. Ltd.
info@lintronix.com.tw
www.lintronix.com.tw

THAILAND
Maxtech Control Co., Ltd.
info@maxtechcontrol.co.th
www.maxtechcontrol.co.th

TURKEY
Murr Elektronik San. ve Tic. Ltd. Sti
erkan.balikci@murrelektronik.com.tr
www.murrelektronik.com.tr

UNITED ARAB EMIRATES
King Power Electrical Accessories
Trading
kpower@emirates.net.ae
www.murrelektronik.com/en

USA
Murrelektronik Inc.
2info@murrinc.com
www.murrinc.com

VIETNAM
OMINA Industrial Automation J.S.C
inquiry@omina.com.vn
www.omina.com.vn

1 ELECTRONICS IN THE CONTROL CABINET



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1

ELECTRONICS IN THE CONTROL CABINET

2

INTERFACES

3

CONNECTION TECHNOLOGY

4

I/O SYSTEMS

Transformers	1.1
Rectified Power Supplies	1.2
Power Suppy Units	1.3
Buffer Modules / Redundancy Modules	1.4
Intelligent Power Distribution	1.5
Converters / Rectifiers	1.6
Control Cabinet Power Outlets	1.7
EMC Filters	1.8
EMC Suppressors	1.9
Relays / Safety Relays	1.10
Optocouplers / Semiconductors	1.11
Active Interface Technology	1.12
Passive Interface Technology	1.13
Eurocard Holders / Control Modules	1.14



TRANSFORMERS
SAFE AND RELIABLE

- **Approvals for the global market**
- **Flexible and versatile**
- **Customized solutions**

MTS, MST, MET OR MTL – THE RIGHT TRANSFORMER FOR EVERY APPLICATION

Different situations require different voltages. Transformers have to be just as flexible as the application. Murrelektronik's range provides you with the flexibility you need! No matter if it's an isolation transformer, control transformer, or safety transformer – we have the right solution for any application. Murrelektronik's transformers are reliable, safe and their approvals and voltage ranges make them ideal for worldwide use.

Transformers



MTS – Isolation class T 40/B

• Nominal power rating:	40...250 VA
• Input voltage:	230, 400 V AC or multi voltage (± 15 V AC)
• Output voltage:	24 V AC or 230 V AC
• Ambient temperature:	40 °C

Page 1.1.1



MST – Isolation class T 40/B

• Nominal power rating:	320...1000 VA
• Input voltage:	230, 400 V AC or multi voltage
• Output voltage:	24 V AC or 230 V AC
• Ambient temperature:	40 °C

Page 1.1.4



MET – Isolation class T 60/B

• Nominal power rating:	500...5000 VA
• Input voltage:	230 V AC ± 5 %, 400 V AC ± 5 %, 240/415 V AC ± 5 %
• Output voltage:	24, 230, 110/240 V AC
• Ambient temperature:	60 °C

Page 1.1.7



MTL – Isolation class T 60/B

• Nominal power rating:	25...2500 VA
• Input voltage:	230/400 V AC ± 15 V AC
• Output voltage:	2 x 24 V AC or 2 x 115 V AC
• Ambient temperature:	60 °C

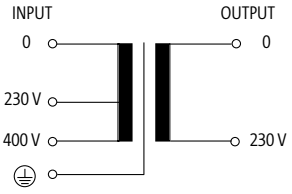
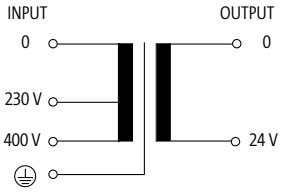
Page 1.1.11

1-/2-phase

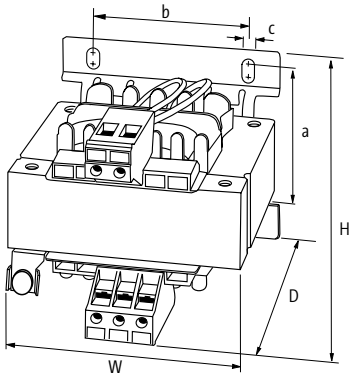
– INPUT: 230/400 V AC

– Isolation class T 40/B

Approvals:

	MTS	MTS	MTS	MTS
	OUTPUT: 230 V AC Screw terminals	OUTPUT: 230 V AC Spring clamp terminals	OUTPUT: 24 V AC Screw terminals	OUTPUT: 24 V AC Spring clamp terminals
Circuit diagram				
				

Order Data	**H×W×D/kg**	**Art-No.**	**H×W×D/kg**	**Art-No.**	**H×W×D/kg**	**Art-No.**	**H×W×D/kg**	**Art-No.**
40 VA	79×78×93/0.8	**86346**	79×78×93/0.8	**6686346**	79×78×93/0.8	**86340**	79×78×93/0.8	**6686340**
63 VA	79×78×93/1.2	**86347**	79×78×93/1.2	**6686347**	79×78×93/1.2	**86341**	79×78×93/1.2	**6686341**
100 VA	86×84×98/2.0 – GL	**86348**	86×84×98/2.0	**6686348**	86×84×98/2.0 – GL	**86342**	86×84×98/2.0	**6686342**
160 VA	101×96×106/2.7 – GL	**86349**	101×96×106/2.7	**6686349**	101×96×106/2.7 – GL	**86343**	101×96×106/2.7	**6686343**
250 VA	102×96×108/3.5 – GL	**86351**	102×96×108/3.5	**6686351**	102×96×108/3.5 – GL	**86345**	102×96×108/3.5	**6686345**
Input								
Frequency	50/60 Hz							
Input voltage	230/400 V AC							
Output								
Output voltage	230 V AC				24 V AC (SELV)			
General data								
Standards	(EN 61558-1), (EN 61558-2-4), (EN 62041 category 0)				(EN 61558-1), (EN 61558-2-6), (EN 62041 category 0)			
Test isolation voltage	4 kV (prim./sec.)							
Temperature range	-20...+40 °C, no condensation							
Mounting method	Long-hole mounting or DIN-rail mountable TH35 (EN 60715)							
Dimension drawing								



Murrelektronik Online Shop
onlineshop.murrelektronik.com/en

Notes	
	GL-Approval from 100 VA and with screw terminals

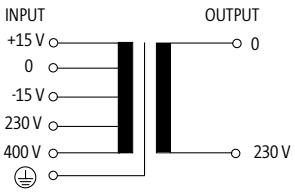
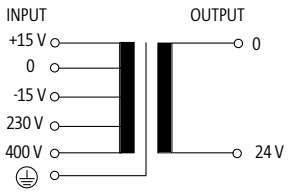
TRANSFORMERS

1-/2-phase

– INPUT: 230/400 ±15 V AC

– Isolation class T 40/B

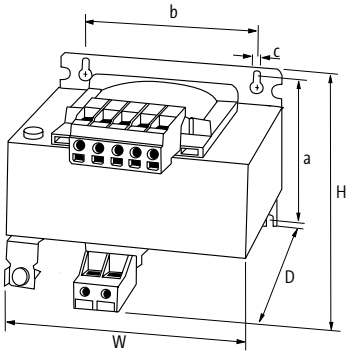
Approvals:

	MTS+	**MTS+**	**MTS+**	**MTS+**
	OUTPUT: 230 V AC Screw terminals	OUTPUT: 230 V AC Spring clamp terminals	OUTPUT: 24 V AC Screw terminals	OUTPUT: 24 V AC Spring clamp terminals
				
Circuit diagram				
				

Order Data	**H×W×D/kg**	**Art-No.**	**H×W×D/kg**	**Art-No.**	**H×W×D/kg**	**Art-No.**	**H×W×D/kg**	**Art-No.**
40 VA	79×78×93/0.8	**86366**	79×78×93/0.8	**6686366**	79×78×93/0.8	**86360**	79×78×93/0.8	**6686360**
63 VA	79×78×93/1.2	**86367**	79×78×93/1.2	**6686367**	79×78×93/1.2	**86361**	79×78×93/1.2	**6686361**
100 VA	86×84×98/2.0 – GL	**86368**	86×84×98/2.0	**6686368**	86×84×98/2.0 – GL	**86362**	86×84×98/2.0	**6686362**
160 VA	101×96×106/2.7 – GL	**86369**	101×96×106/2.7	**6686369**	101×96×106/2.7 – GL	**86363**	101×96×106/2.7	**6686363**
250 VA	102×96×108/3.5 – GL	**86371**	102×96×108/3.5	**6686371**	102×96×108/3.5 – GL	**86365**	102×96×108/3.5	**6686365**

Input		
Input voltage	230/400 ±15 V AC	
Frequency	50/60 Hz	
Output		
Output voltage	230 V AC	24 V AC (SELV)
General data		
Standards	(EN 61558-1), (EN 61558-2-4), (EN 62041 category 0)	(EN 61558-1), (EN 61558-2-6), (EN 62041 category 0)
Test isolation voltage	4 kV (prim./sec.)	
Temperature range	-20...+40 °C, no condensation	
Mounting method	Long-hole mounting or DIN-rail mountable TH35 (EN 60715)	

Dimension drawing



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onlineshop.murrelektronik.com/en

Notes

GL-Approval from 100 VA and with screw terminals

1-/2-phase

– Multi voltage output

– Isolation class T 40/B

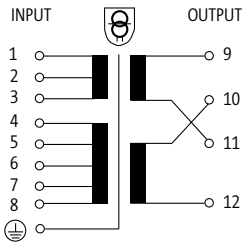
Approvals: cULus

MTS Multi

OUTPUT: 2 × 115 V AC/230 V AC
Screw terminals

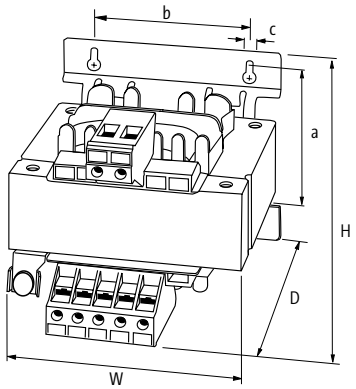


Circuit diagram



Order Data	H×W×D/kg	Art-No.
25 VA	90×78×102/0.7	**86140**
40 VA	88×78×93/1.1	**86141**
63 VA	97×78×93/1.4	**86142**
100 VA	105×84×98/2.0 – GL	**86143**
160 VA	101×96×106/2.7 – GL	**86144**
Input		
Input voltage	208, 230, 380, 400, 440, 460, 480, 500, 525, 550 V AC	
Frequency	50/60 Hz	
Output		
Output voltage	2 × 115 V AC/230 V AC	
General data		
Standards	(EN 61558-1), (EN 61558-2-4), (EN 62041 category 0)	
Test isolation voltage	4 kV (prim./sec.)	
Temperature range	-20...+40 °C, no condensation	
Mounting method	Long-hole mounting or DIN-rail mountable TH35 (EN 60715)	

Dimension drawing



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Notes

GL-Approval from 100 VA and with screw terminals

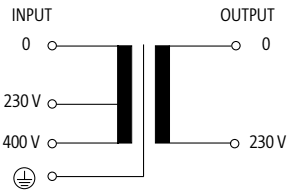
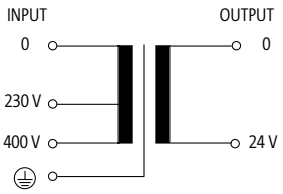
TRANSFORMERS

1-/2-phase

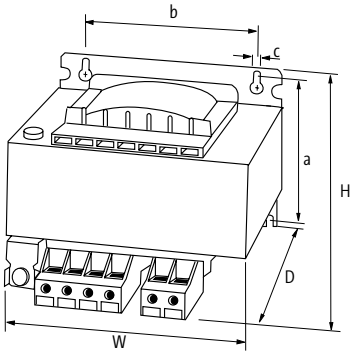
– INPUT: 230/400 V AC

– Isolation class T 40/B

Approvals:

	MST	MST	MST	MST
	OUTPUT: 230 V AC Screw terminals	OUTPUT: 230 V AC Spring clamp terminals	OUTPUT: 24 V AC Screw terminals	OUTPUT: 24 V AC Spring clamp terminals
				
Circuit diagram				
				

Order Data	**H×W×D/kg**	**Art-No.**	**H×W×D/kg**	**Art-No.**	**H×W×D/kg**	**Art-No.**	**H×W×D/kg**	**Art-No.**
320 VA	92×120×122/4.2 – GL	**86306**	92×120×122/4.2	**6686306**	92×120×122/4.2 – GL	**86326**	92×120×122/4.2	**6686326**
400 VA	104×120×122/5.2 – GL	**86307**	104×120×122/5.2	**6686307**	104×120×122/5.2 – GL	**86327**	104×120×122/5.2	**6686327**
500 VA	108×135×134/6.5 – GL	**86308**	108×135×134/6.5	**6686308**	108×135×134/6.5 – GL	**86328**		
630 VA	113×150×145/7.7 – GL	**86309**	113×150×145/7.7	**6686309**	113×150×145/7.7 – GL	**86329**		
800 VA	129×150×145/10.1 – GL	**86310**	129×150×145/10.1	**6686310**	136×150×149/10.1 – GL	**86330**		
1000 VA	128×174×160/12.3 – GL	**86311**	128×174×160/12.3	**6686311**	133×174×165/12.3 – GL	**86331**		
Input								
Input voltage	230/400 V AC							
Frequency	50/60 Hz							
Output								
Output voltage	230 V AC				24 V AC (SELV)			
General data								
Standards	(EN 61558-1), (EN 61558-2-4), (EN 62041 category 0)				(EN 61558-1), (EN 61558-2-6), (EN 62041 category 0)			
Test isolation voltage	4 kV (prim./sec.)							
Temperature range	-20...+40 °C, no condensation							
Mounting method	Key-hole mounting							
Dimension drawing								



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Notes

1-/2-phase

– INPUT: 230/400 ±15 V AC

– Isolation class T 40/B

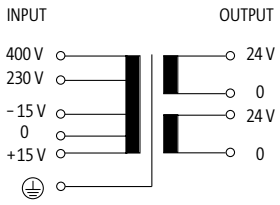
Approvals: cULus GL PCT

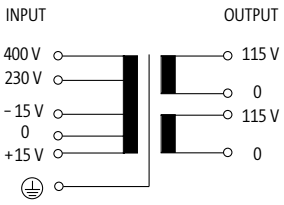
MST+
OUTPUT: 24 V AC, 48 V AC
Screw terminals



MST+
OUTPUT: 115 V AC, 230 V AC
Screw terminals

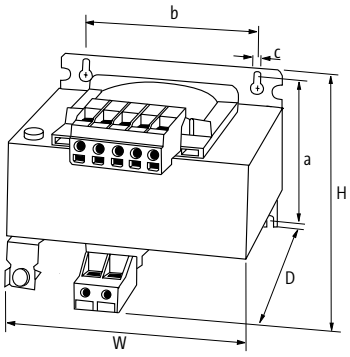
Circuit diagram





Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
630 VA	121×150×165/8.0	**86463**	113×150×146/8.2	**86483**
1000 VA	156×150×197/13.5	**86464**	156×150×146/13.5	**86484**
1600 VA	168×174×222/19.5	**86465**	168×174×163/19.5	**86485**
2500 VA	182×192×242/27.0	**86466**	182×192×196/27.0	**86486**
Input				
Input voltage	230/400 ±15 V AC			
Frequency	50/60 Hz			
Output				
Output voltage	1 × 24, 1 × 48, 2 × 24 V AC		1 × 230, 1 × 115, 2 × 115 V AC	
General data				
Standards	(EN 61558-1), (EN 61558-2-4), (EN 62041 category 0)			
Test isolation voltage	5.8 kV (prim./sec.)			
Temperature range	-20...+40 °C, no condensation			
Mounting method	Key-hole mounting			

Dimension drawing



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Notes

1-/2-phase

– INPUT: 208...520 V AC

– Isolation class T 40/B

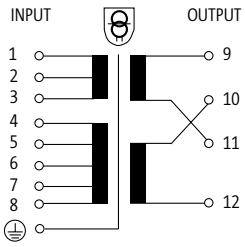
Approvals:

MST Multi

OUTPUT: 2 × 115 V AC/230 V AC
Screw terminals

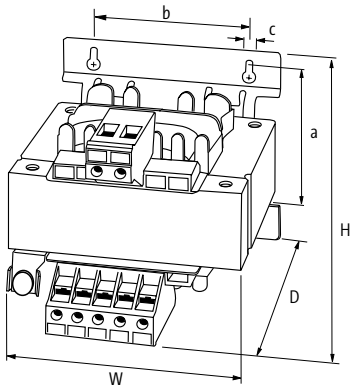


Circuit diagram



Order Data	H×W×D/kg	Art-No.
250 VA	104×120×122/4.0	**86145**
320 VA	115×135×132/5.8	**86146**
400 VA	115×135×132/6.2	**86147**
500 VA	108×135×134/6.5	**86148**
800 VA	129×150×145/10.1	**86150**
1000 VA	128×174×160/12.3	**86151**
1600 VA	128×174×160/12.3	**86152**
2000 VA	128×174×160/12.3	**86153**
2500 VA	200×195×217/26.3	**86154**
3000 VA	250×197×193/29.5	**86155**
5000 VA	248×147×250/37.0	**86157**
Input		
Input voltage	208, 230, 380, 400, 440, 460, 480, 500, 525, 550 V AC	
Frequency	50/60 Hz	
Output		
Output voltage	2 × 115 V AC/230 V AC	
General data		
Standards	(EN 61558-1), (EN 61558-2-4), (EN 62041 category 0)	
Test isolation voltage	4 kV (prim./sec.)	
Temperature range	-20...+40 °C, no condensation	
Mounting method	Key-hole mounting	

Dimension drawing



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Notes

1-/2-phase

– OUTPUT: 230 V AC

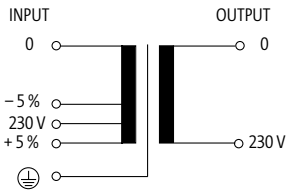
– Isolation class T 60/B

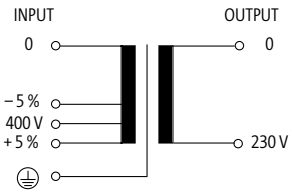
Approvals: cULus, PCT

	MET	**MET**	**MET**	**MET**
	INPUT: 230 V AC ±5 %	INPUT: 230 V AC ±5 %	INPUT: 400 V AC ±5 %	INPUT: 400 V AC ±5 %
	Screw terminals	Spring clamp terminals	Screw terminals	Spring clamp terminals



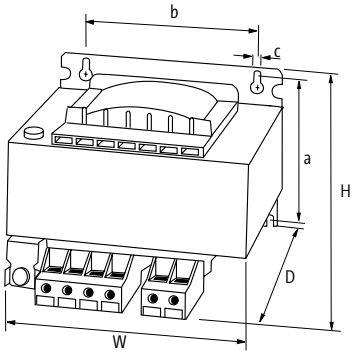
Circuit diagram





Order Data	**H×W×D/kg**	**Art-No.**	**H×W×D/kg**	**Art-No.**	**H×W×D/kg**	**Art-No.**	**H×W×D/kg**	**Art-No.**
500 VA	113×150×146/6.8 – GL	**86020**	113×150×146/6.8	**6686020**	113×150×146/6.8 – GL	**86021**	113×150×146/6.8	**6686021**
630 VA	131×150×148/8.2 – GL	**86030**	131×150×148/8.2	**6686030**	130×150×146/8.2 – GL	**86031**	130×150×146/8.2	**6686031**
800 VA	118×175×160/11.2 – GL	**86040**	118×175×160/11.2	**6686040**	118×175×160/11.2 – GL	**86041**	118×175×160/11.2	**6686041**
1000 VA	138×174×160/14.8 – GL	**86050**	138×174×160/14.8	**6686050**	138×174×160/14.8 – GL	**86051**	138×174×160/14.8	**6686051**
1500 VA	168×174×162/21.0 – GL	**86060**	168×174×162/21.0	**6686060**	168×174×162/21.0 – GL	**86061**	168×174×162/21.0	**6686061**
Input								
Input voltage	230 V AC ±5 %				400 V AC ±5 %			
Frequency	50/60 Hz							
Output								
Output voltage	230 V AC							
General data								
Standards	(EN 61558-1), (EN 61558-2-4), (EN 62041 category 0)							
Test isolation voltage	4 kV (prim./sec.)							
Temperature range	-20...+60 °C, no condensation							
Mounting method	Key-hole mounting							

Dimension drawing



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Notes

TRANSFORMERS

1-/2-phase

– OUTPUT: 110/240 V AC

– Isolation class T 60/B

Approvals:

MET

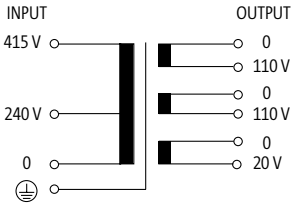
INPUT: 240/415 V AC
Screw terminals



MET

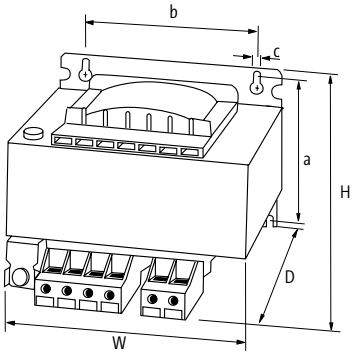
INPUT: 240/415 V AC
Spring clamp terminals

Circuit diagram



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
500 VA	113×150×170/6.8 – GL	**86025**	113×150×170/6.8	**6686025**
630 VA	129×150×148/8.2 – GL	**86035**	129×150×148/8.2	**6686035**
800 VA	118×174×148/11.2 – GL	**86045**	118×174×148/11.2	**6686045**
1000 VA	138×174×160/14.8 – GL	**86055**	138×174×160/14.8	**6686055**
Input				
Input voltage	240/415 V AC			
Output				
Output voltage	110/240 V AC			
General data				
Standards	(EN 61558-1), (EN 61558-2-4), (EN 62041 category 0)			
Test isolation voltage	4 kV (prim./sec.)			
Temperature range	-20...+60 °C, no condensation			
Mounting method	Key-hole mounting			

Dimension drawing



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Notes

1-/2-phase

– OUTPUT: 230 V AC

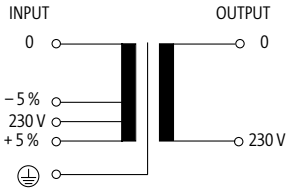
– Isolation class T 40/B

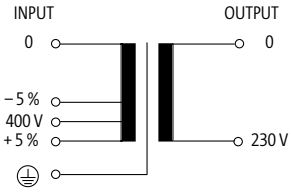
Approvals: cULus, PCT

	MET	**MET**	**MET**	**MET**
	INPUT: 230 V AC Screw terminals	INPUT: 230 V AC Spring clamp terminals	INPUT: 400 V AC Screw terminals	INPUT: 400 V AC Spring clamp terminals



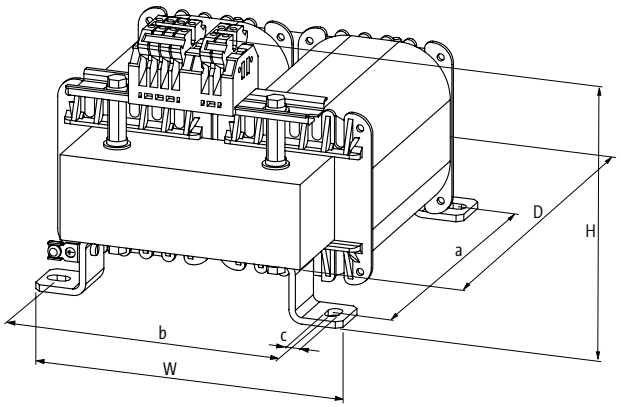
Circuit diagram





Order Data	**H×W×D/kg**	**Art-No.**	**H×W×D/kg**	**Art-No.**	**H×W×D/kg**	**Art-No.**	**H×W×D/kg**	**Art-No.**
2000 VA	170×195×250/24.0 – GL	**86070**	170×195×250/24.0	**6686070**	170×195×250/24.0 – GL	**86071**	170×195×250/24.0	**6686071**
3000 VA	195×198×250/30.0 – GL	**86090**	195×198×250/30.0	**6686090**	195×198×250/30.0 – GL	**86091**	195×198×250/30.0	**6686091**
4000 VA	206×198×250/32.0 – GL	**86110**	206×198×250/32.0	**6686110**	206×198×250/32.0 – GL	**86111**	206×198×250/32.0	**6686111**
5000 VA	225×198×250/40.0 – GL	**86130**	225×198×250/40.0	**6686130**	225×198×250/40.0 – GL	**86131**	225×198×250/40.0	**6686131**
Input								
Input voltage	230 V AC ±5 %				400 V AC ±5 %			
Frequency	50/60 Hz							
Output								
Output voltage	230 V AC							
General data								
Standards	(EN 61558-1), (EN 61558-2-4), (EN 62041 category 0)							
Test isolation voltage	4 kV (prim./sec.)							
Temperature range	-20...+40 °C, no condensation							
Mounting method	Long-hole mounting							

Dimension drawing



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Notes

TRANSFORMERS

1-/2-phase

– OUTPUT: 24 V AC

– Isolation class T 60/B

Approvals:

MET

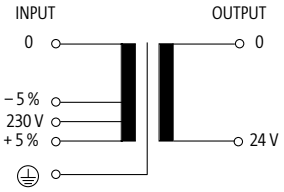
INPUT: 230 V AC
Screw terminals

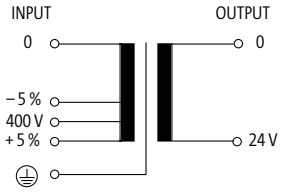


MET

INPUT: 400 V AC
Screw terminals

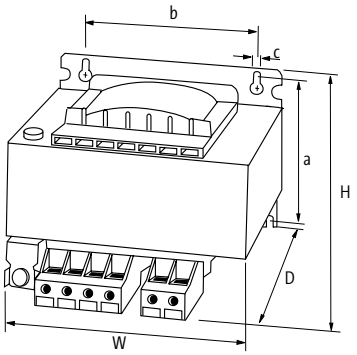
Circuit diagram





Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
500 VA	113×150×146/6.8	**86023**	113×150×146/6.8	**86024**
630 VA	129×150×148/8.2	**86033**	129×150×148/8.2	**86034**
800 VA	117×174×160/11.2	**86043**	117×174×160/11.2	**86044**
1000 VA	137×174×160/14.8	**86053**	137×174×160/14.8	**86054**
Input				
Input voltage	230 V AC ±5 %		400 V AC ±5 %	
Frequency	50/60 Hz			
Output				
Output voltage	24 V AC (SELV)			
General data				
Standards	(EN 61558-1), (EN 61558-2-6), (EN 62041 category 0)			
Test isolation voltage	4 kV (prim./sec.)			
Temperature range	-20...+60 °C, no condensation			
Mounting method	Key-hole mounting			

Dimension drawing



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Notes

1-/2-phase

– INPUT: 230/400 ±15 V AC

– Isolation class T 60/B

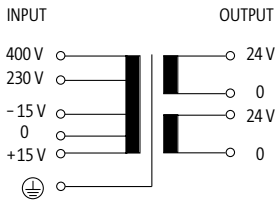
Approvals:

MTL
OUTPUT: 24 V AC, 48 V AC
Screw terminals



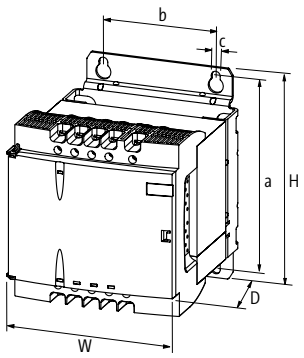
MTL
OUTPUT: 115 V AC, 230 V AC
Screw terminals

Circuit diagram



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
25 VA	108×87×98/1.1	**86450**	108×87×98/1.1	**86470**
40 VA	108×87×104/1.4	**86451**	108×87×104/1.4	**86471**
63 VA	108×87×116/2.0	**86452**	108×87×116/2.0	**86472**
100 VA	108×87×139/2.9	**86453**	108×87×139/2.9	**86473**
160 VA	153×123×128/4.4	**86454**	153×123×128/4.4	**86474**
250 VA	153×123×142/5.7	**86455**	153×123×142/5.7	**86475**
320 VA	153×123×160/7.2	**86456**	153×123×160/7.2	**86476**
Accessories				**Art-No.**
Label plates for MTL/MTPS				**89661**
Jumper				**89660**
Technical Data				
LED display	LED (green) for input voltage			
Input				
Input voltage	230/400 ±15 V AC			
Frequency	50/60 Hz			
Output				
Output voltage	1 × 24, 1 × 48, 2 × 24 V AC		1 × 230, 1 × 115, 2 × 115 V AC	
General data				
Standards	(EN 61558-2-4), (EN 61558-2-6), (EN 62041 category 0)		(EN 61558-1), (EN 61558-2-4), (EN 62041 category 0)	
Test isolation voltage	5.1 kV (prim./sec.)		4 kV (prim./sec.)	
Temperature range	-20...+60 °C, no condensation			
Mounting method	DIN-rail mountable TH35-15 (EN 60715) or for key-hole mounting			

Dimension drawing



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Notes

1-/2-phase

– INPUT: 230/400 ±15 V AC

– Isolation class T 60/B

Approvals:

MTL

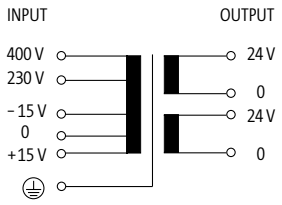
OUTPUT: 24 V AC, 48 V AC
Screw terminals



MTL

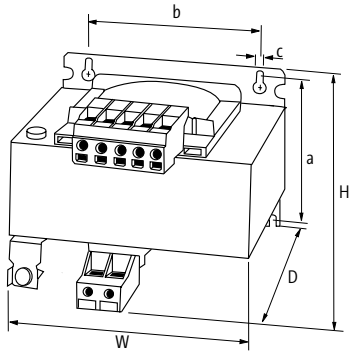
OUTPUT: 24 V AC, 48 V AC
Spring clamp terminals

Circuit diagram



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
400 VA	113×150×160/7.5 – ENEC, GL	**86457**	113×150×160/7.5	**6686457**
Input				
Input voltage	230/400 ±15 V AC			
Frequency	50/60 Hz			
Output				
Output voltage	1 × 24, 1 × 48, 2 × 24 V AC			
General data				
Standards	(EN 61558-2-4), (EN 61558-2-6), (EN 62041 category 0)			
Test isolation voltage	5.1 kV (prim./sec.)			
Temperature range	-20...+60 °C, no condensation			
Mounting method	DIN-rail mountable TH35-15 (EN 60715) or for key-hole mounting			

Dimension drawing



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Notes

1-/2-phase

– INPUT: 230/400 ±15 V AC

– Isolation class T 60/B

Approvals: cULus, PCT

MTL

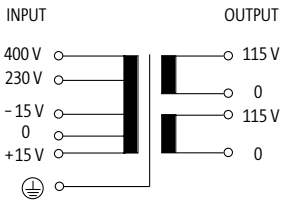
OUTPUT: 115 V AC, 230 V AC
Screw terminals



MTL

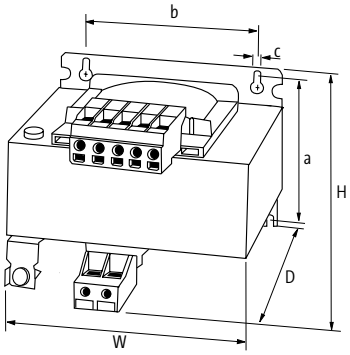
OUTPUT: 115 V AC, 230 V AC
Spring clamp terminals

Circuit diagram



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
400 VA	113×151×146/7.4 – ENEC, GL	**86477**	113×151×146/7.4	**6686477**
Input				
Input voltage	230/400 ±15 V AC			
Frequency	50/60 Hz			
Output				
Output voltage	1 × 230, 1 × 115, 2 × 115 V AC			
General data				
Standards	(EN 61558-1), (EN 61558-2-4), (EN 62041 category 0)			
Test isolation voltage	4 kV (prim./sec.)			
Temperature range	-20...+60 °C, no condensation			
Mounting method	DIN-rail mountable TH35-15 (EN 60715) or for key-hole mounting			

Dimension drawing



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Notes



RECTIFIED POWER SUPPLIES
RELIABLE AND DURABLE

- **Highly reliable**
- **Long life span saves money**
- **Low interference**

BASIC FUNCTIONS

Rectified power supplies galvanically separate input and output. They convert mains voltage into Protected Extra Low Voltage. The electronic unit rectifies and smooths the voltage.

Rectified power supplies are designed for a frequency of 50/60 Hz. Their slow reaction prevents voltage spikes from being passed from the mains side to the output, which would interfere with peripheral devices.

They have fixing brackets with keyholes that ensure easy wall mounting. Models for DIN-rail mounting are available for applications up to 5 A.

Single-phase, single/two-phase, smoothed



MEN

• Input voltage:	115/230 V AC and 230/400 V AC ± 15 V AC reconnectable
• Output voltage:	24 V DC SELV
• Output current:	1.0/2.5/5/7.5/10/15/20 A

Page 1.2.1



MTPS

• Input voltage:	230/400 V AC ± 15 V AC reconnectable
• Output voltage:	24 V DC SELV
• Output current:	0.5/1/2/4/6/10 A

Page 1.2.5

Single-phase, linear regulated



MKN

• Input voltage:	230 V AC ± 15 V AC reconnectable
• Output voltage:	5/10/±10/±15 or 24 V DC and 9.5...15 V DC (per SELV)
• Output current:	70...200 mA

Page 1.2.7

Three-phase, smoothed



MPL

• Input voltage:	3 x 400 V AC ± 5 % reconnectable 3 x 208...520 V AC
• Output voltage:	24 V DC SELV
• Output current:	5...60 A

Page 1.2.8

Single-phase

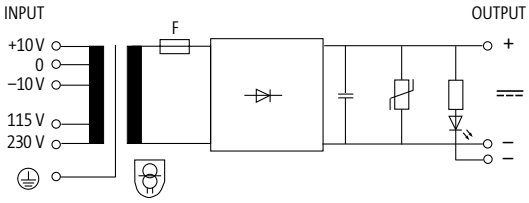
Approvals: cULus cULus Listed PCT

MEN
INPUT: 115/230 V AC



MEN
INPUT: 115/230 V AC
with DIN-rail adapter

Circuit diagram

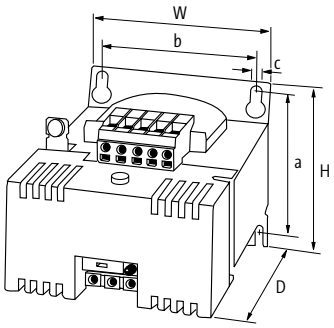


Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
24 V DC/1 A	64×78×120/1.3	**85360**	64×78×120/1.3	**8985360**
24 V DC/2.5 A	83×84×124/2.1	**85361**	83×84×124/2.1	**8985361**
24 V DC/5 A	95×96×136/3.0	**85362**	95×96×136/3.0	**8985362**
24 V DC/7.5 A	103×105×151/5.6	**85363**		

Accessories	Art-No.
Automotive fuses FKS (3 A)	**90401**
Automotive fuses FKS (5 A)	**90403**
Automotive fuses FKS (10 A)	**90405**
Automotive fuses FKS (15 A)	**90406**

Input		
Input voltage	115/230 V AC ±10 V AC	
Frequency	50/60 Hz	
Output		
Output voltage	24 V DC (SELV)	
Ripple	max. 5 % rms	
Output filter	LED, VDR and smoothing capacitor	
General data		
Standards	(EN 61558-2-6), (EN 62041 category I), (EN 55011 B), (EN 61000-3-2)	
Temperature range	-20...+60 °C, no condensation	
Mounting method	Key-hole mounting	DIN-rail mountable TH35-15 (EN 60715) or for key-hole mounting

Dimension drawing



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Notes

RECTIFIED POWER SUPPLIES

Single-phase

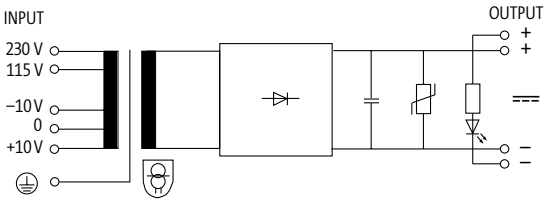
MEN

INPUT: 115/230 V AC



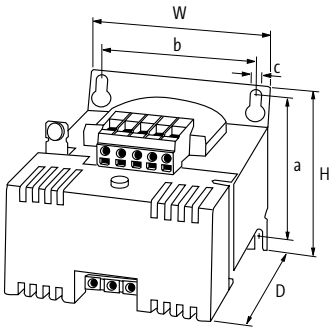
Approvals:

Circuit diagram



Order Data	H×W×D/kg	Art-No.
24 V DC/10 A	113×120×160/6.0	**85364**
24 V DC/15 A	139×135×182/8.2	**85355**
24 V DC/20 A	127×174×214/12.8	**85356**
Accessories		**Art-No.**
Automotive fuses FKS (20 A)		**90407**
Input		
Input voltage	115/230 V AC ±10 V AC	
Frequency	50/60 Hz	
Output		
Output voltage	24 V DC (SELV)	
Ripple	max. 5 % rms	
Output filter	LED, VDR and smoothing capacitor	
General data		
Standards	(EN 61558-2-6), (EN 62041 category I), (EN 55011 B), (EN 61000-3-2)	
Temperature range	-20...+60 °C, no condensation	
Mounting method	Key-hole mounting	

Dimension drawing



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Notes

RECTIFIED POWER SUPPLIES

MURR ELEKTRONIK
stay connected

1-/2-phase

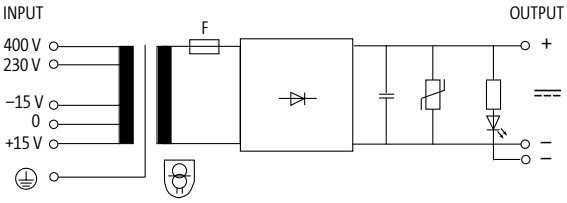
MEN
INPUT: 230/400 V AC

MEN
INPUT: 230/400 V AC
with DIN-rail adapter



Approvals: cULus cULus Listed

Circuit diagram

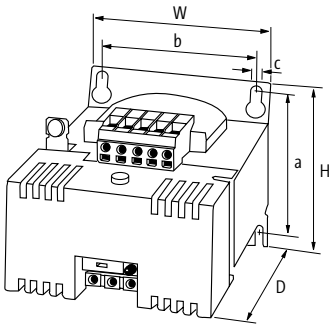


Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
24 V DC/1 A	64×78×120/1.3	**85349**	64×78×120/1.3	**8985349**
24 V DC/2.5 A	83×84×124/2.1	**85350**	83×84×124/2.1	**8985350**
24 V DC/5 A	95×96×136/3.0	**85351**	95×96×136/3.0	**8985351**
24 V DC/7.5 A	103×105×151/5.6	**85357**		

Accessories	Art-No.
Automotive fuses FKS (3 A)	**90401**
Automotive fuses FKS (5 A)	**90403**
Automotive fuses FKS (10 A)	**90405**
Automotive fuses FKS (15 A)	**90406**

Input		
Input voltage	230/400 ±15 V AC	
Frequency	50/60 Hz	
Output		
Output voltage	24 V DC (SELV)	
Ripple	max. 5 % rms	
Output filter	LED, VDR and smoothing capacitor	
General data		
Standards	(EN 61558-2-6), (EN 62041 category I), (EN 55011 B), (EN 61000-3-2)	
Temperature range	-20...+60 °C, no condensation	
Mounting method	Key-hole mounting	DIN-rail mountable TH35-15 (EN 60715) or for key-hole mounting

Dimension drawing



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Notes

RECTIFIED POWER SUPPLIES

1-/2-phase

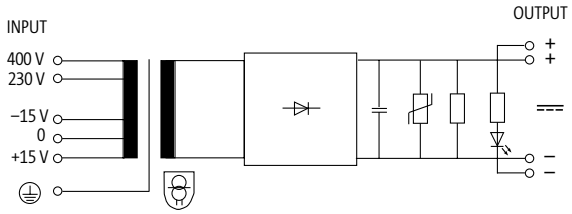
MEN

INPUT: 230/400 V AC



Approvals:

Circuit diagram

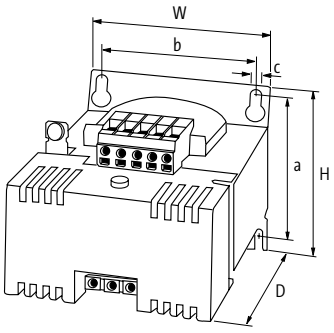


Order Data	H×W×D/kg	Art-No.
24 V DC/10 A	113×120×160/6.0	**85352**
24 V DC/15 A	139×135×182/8.2	**85353**
24 V DC/20 A	127×174×214/12.8	**85354**

Accessories		Art-No.
Automotive fuses FKS (20 A)		**90407**

Input	
Input voltage	230/400 ±15 V AC
Frequency	50/60 Hz
Output	
Output voltage	24 V DC (SELV)
Ripple	max. 5 % rms
Output filter	LED, VDR and smoothing capacitor
General data	
Standards	(EN 61558-2-6), (EN 62041 category I), (EN 55011 B), (EN 61000-3-2)
Temperature range	-20...+60 °C, no condensation
Mounting method	Key-hole mounting

Dimension drawing



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Notes

RECTIFIED POWER SUPPLIES

MURR ELEKTRONIK
stay connected

1-/2-phase

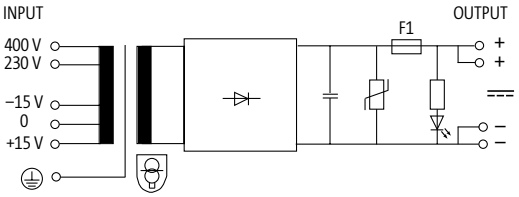
MTPS

INPUT: 230/400 V AC



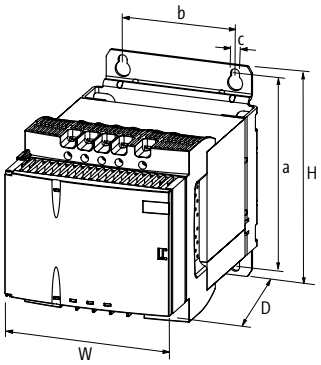
Approvals: cULus cULus Listed EN 14

Circuit diagram



Order Data	H×W×D/kg	Art-No.
24 V DC/0.5 A	108×87×124/1.3	**85400**
24 V DC/1 A	108×87×124/1.3	**85401**
24 V DC/2 A	108×87×142/2.0	**85402**
24 V DC/4 A	108×87×165/2.9	**85403**
Accessories		**Art-No.**
Glass automotive fuse 0.5 A (T)		**89650**
Label plates for MTL/MTPS		**89661**
Glass automotive fuse 1 A (T)		**89651**
Glass automotive fuse 2 A (T)		**89652**
Glass automotive fuse 4 A (T)		**89653**
Input		
Input voltage	230/400 ±15 V AC	
Frequency	50/60 Hz	
LED display	LED (green) for input voltage	
Output		
Output voltage	24 V DC (SELV)	
Ripple	max. 5 % rms	
Output filter	LED, VDR and smoothing capacitor	
General data		
Standards	(EN 61558-2-6), (EN 62041 category I), (EN 55011 B), (EN 61000-3-2)	
Temperature range	-20...+60 °C, no condensation	
Mounting method	DIN-rail mountable TH35-15 (EN 60715) or for key-hole mounting	

Dimension drawing



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Notes

RECTIFIED POWER SUPPLIES

1-/2-phase

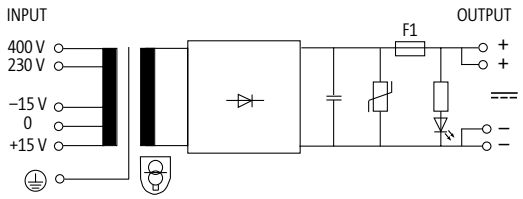
MTPS

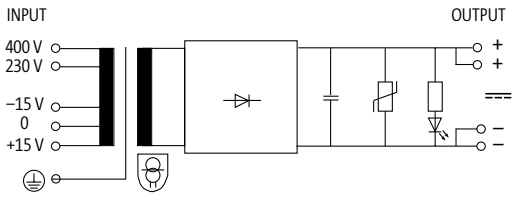
INPUT: 230/400 V AC



Approvals:

Circuit diagram



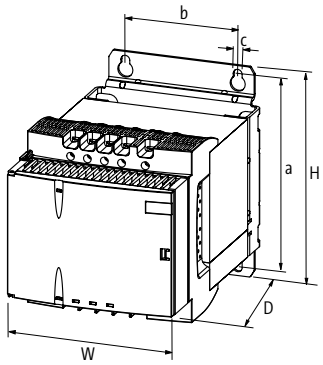


Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
24 V DC/6 A	153×123×153/4.9	**85404**		
24 V DC/10 A			153×123×185/7.7	**85405**

Accessories	Art-No.
Label plates for MTL/MTPS	**89661**

Input	
Input voltage	230/400 ±15 V AC
Frequency	50/60 Hz
LED display	LED (green) for input voltage
Output	
Output voltage	24 V DC (SELV)
Ripple	max. 5 % rms
Output filter	LED, VDR and smoothing capacitor
General data	
Standards	(EN 61558-2-6), (EN 62041 category I), (EN 55011 B), (EN 61000-3-2)
Temperature range	-20...+60 °C, no condensation
Mounting method	Key-hole mounting

Dimension drawing



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Notes

MURR ELEKTRONIK
stay connected

Single-phase, compact

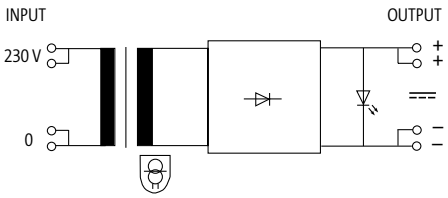
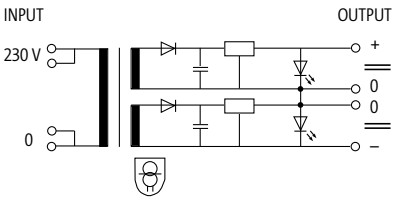
– stable output voltage

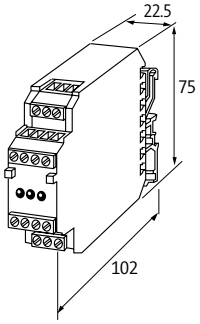
Approvals:

MKN

INPUT: 230 V AC



Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
24 V DC/70 mA	**85610**	
10 V DC/80 mA	**85615**	
5 V DC/200 mA	**85620**	
9.5...15 V DC/100 mA	**85625**	
2 × 10 V DC/2 × 50 mA		**85616**
2 × 15 V DC/2 × 35 mA		**85617**
Input		
Input voltage	207...253 V AC	
Frequency	50/60 Hz	
Output		
Ripple	max. 10 mV p-p	
Output filter	VDR and smoothing capacitor	LED, VDR and smoothing capacitor
Short-circuit and overload protection	yes	
LED display	LED (green): in operation	
General data		
Standards	(EN 61558-2-6), (EN 62041 category II), (EN 55011 B), (EN 61000-3-2)	
Temperature range	0...+60 °C, no condensation	
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)	
Dimension drawing		



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Notes

RECTIFIED POWER SUPPLIES

3-phase

Approvals: cULus Listed

MPL

INPUT: 3 × 400 V AC, ±5% reconnectable

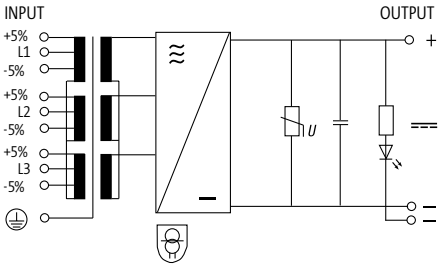


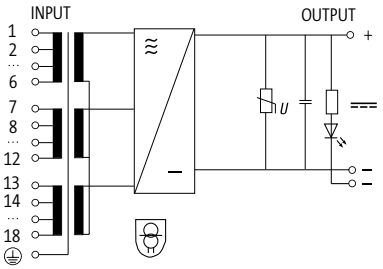
MPL Multi

INPUT: 3 × 208...520 V AC



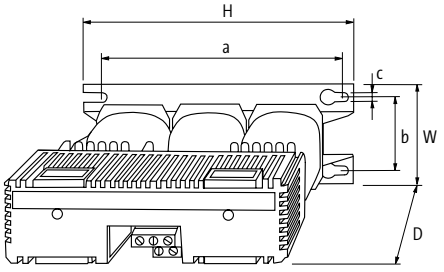
Circuit diagram





Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
24 V DC/5 A	125×73×153/2.9 – cURus	**85921**		
24 V DC/7.5 A	185×78×188/4.4 – cURus	**85923**		
24 V DC/10 A	185×78×188/4.5 – cURus	**85925**	185×93×188/6.6	**85953**
24 V DC/15 A	220×82×208/8.2 – cURus	**85927**	220×82×208/7.5	**85954**
24 V DC/20 A	220×103×213/10.5 – cURus	**85929**		
24 V DC/25 A	220×103×213/11.0 – cURus	**85931**	220×103×213/11.1	**85955**
24 V DC/30 A	240×107×250/13.5 – cURus	**85933**		
24 V DC/40 A	280×124×313/17.8 – cURus	**85935**	280×124×313/17.9	**85956**
24 V DC/50 A	280×134×313/20.9 – cURus	**85937**	280×134×313/20.9	**85957**
24 V DC/60 A	280×154×313/26.1 – cURus	**85939**		
Input				
Input voltage	3 × 400 V AC ±5 %		3 × 208...520 V AC	
Frequency	50/60 Hz			
Output				
Output voltage	24 V DC (SELV)			
Ripple	max. 2 % rms			
Output filter	LED, VDR and smoothing capacitor			
General data				
Standards	(EN 61558-2-6), (EN 62041 category I), (EN 55011 B), (EN 61000-3-2)			
Temperature range	-20...+55 °C, for any mounting position at vertical wall, no condensation			
Mounting method	Key-hole mounting			

Dimension drawing



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Notes



POWER SUPPLY UNITS
EMPARRO – SIMPLY THE BEST

- **Up to 95 % efficiency**
- **150 % power boost for 4 seconds**
- **Cutting edge technology**

EMPARRO – THE POWER SUPPLY WITH MAXIMUM EFFICIENCY

- Efficiency up to 95 %
- 150 % power boost for 4 seconds
- Metal housing with optimum EMC characteristics
- No derating between -25°C to +60°C
- Very small width
- High mains failure bridging time
- Seven models, the solution for many applications

Emparro Compared to the Competitors

The comparison is based on the same input current: Emparro (left) emits significantly less heat energy than conventional power supply units. The device itself remains cooler which protects the components installed near the unit. This increases their lifetime.



Power Supply Units



Emparro
- Single-phase
- 150 % power boost
- Spring clamp terminals

Page 1.3.1



ECO Rail/ECO Power
- Single-phase
- Full power up to 40 °C ambient temperature
- Screw terminal connection

Page 1.3.3



PICCO
- 16 models
- 12 V or 24 V outputs
- 10 W, 30 W, 60 W oder 100 W

Page 1.3.7



MCS-B
- Single-phase
- Wide voltage input
- Parallel and series operation possible

Page 1.3.9



Evolution67
- Single-phase
- IP67

Page 1.3.13

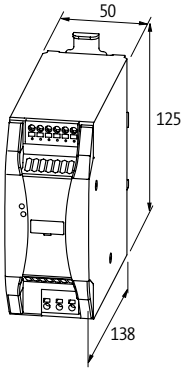
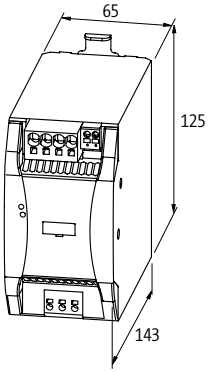
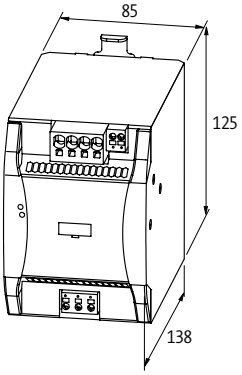


Evolution/Evolution+
- Two-/three-phase
- Extended temperature range of -25 °C ... +70 °C
- Approvals for applications worldwide

Page 1.3.14

Single-phase, primary switched

– short-circuit and overload protected

	Emparro OUTPUT: 12 V DC	**Emparro** OUTPUT: 48 V DC	**Emparro** OUTPUT: 48 V DC	**Emparro** OUTPUT: 48 V DC
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
12 V DC/10 A	cURus, cULus **85434**			
48 V DC/2.5 A		cURus, cULus **85437**		
48 V DC/5 A			cURus, cULus **85438**	
48 V DC/10 A				**85439**
Input				
Input voltage	85...265 V AC/90...250 V DC			
Input current	1.2 A (100 V AC); 0.6 A (230 V AC)	1.2 A (100 V AC); 0.6 A (240 V AC)	2.6 A (100 V AC); 1.1 A (240 V AC)	5.1 A (100 V AC); 2.4 A (240 V AC)
Inrush current after 1 ms	max. 10 A (230 V AC)	max. 3.5 A (230 V AC)	max. 5.5 A (230 V AC)	max. 11 A (230 V AC)
Power factor	0.88 (230 V AC)	0.87 (230 V AC)	0.95 (230 V AC)	0.94 (230 V AC)
External fuse	max. 20 A (T), cable protection			
Frequency	50/60 Hz			
Output				
Output voltage	12 V DC (SELV), ±1 %; 12...15 V adjustable	48 V DC (SELV), ±1 %; 48...56 V adjustable		
Powerboost	+150 % (min. 4 seg.)			
Constant current	10 A	2.5 A	5 A	10 A
Mains failure bridging time	min. 30 ms (100 V AC); 10 A (12 V DC)	min. 30 ms (100 V AC); 2.5 A (48 V DC)	min. 30 ms (100 V AC); 5 A (48 V DC)	min. 30 ms (100 V AC); 10 A (48 V DC)
Ripple	max. 50 mV rms			
Spikes	max. 200 mV p-p			
Short-circuit and overload protection	yes			
LED display	LED (green): OK; LED (red): overload, overheating or short-circuit			
Parallel usage/serial usage	max. 5 units/max. 2 units			
General data				
Standards	(EN 60950-1), (EN 61204-3), (EN 55011 B), (EN 61000-3-2)			
Relative humidity	5...95 %, no condensation			
Efficiency	92.7 % (12 V DC/7.5 A)	93.7 % (48 V DC/1.88 A)	94.5 %	95 %
Temperature range	-25...+60 °C (storage temperature -40...+85 °C)			
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Dimension drawing				
				
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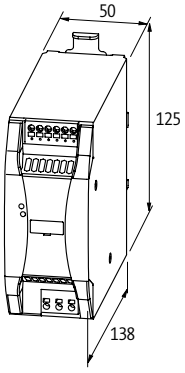
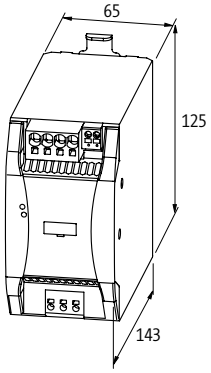
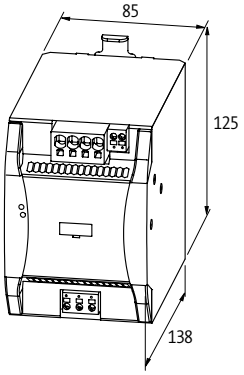
Notes				

POWER SUPPY UNITS

Single-phase, primary switched

– short-circuit and overload protected

	Emparro OUTPUT: 24 V DC	**Emparro** OUTPUT: 24 V DC	**Emparro** OUTPUT: 24 V DC
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
24 V DC/5 A	cURus, cULus **85440**		
24 V DC/10 A		cURus, cULus **85441**	
24 V DC/20 A			**85442**
Input			
Input voltage	85...265 V AC/90...250 V DC		90...265 V AC/90...250 V DC
Input current	1.3 A (100 V AC); 0.61 A (240 V AC)	2.6 A (100 V AC); 1.1 A (240 V AC)	5.2 A (100 V AC); 2.2 A (240 V AC)
Inrush current after 1 ms	max. 5.5 A (230 V AC)	max. 13 A (230 V AC)	max. 23 A (230 V AC)
Power factor	0.87 (230 V AC)	0.95 (230 V AC)	0.96 (230 V AC)
External fuse	max. 20 A (T)		
Frequency	50/60 Hz		
Output			
Output voltage	24 V DC (SELV), ±1 %; 24...28 V adjustable		
Powerboost	+150 % (min. 4 seg.)		
Constant current	5 A	11.8 A	20 A
Mains failure bridging time	min. 30 ms (230 V AC); 5 A (24 V DC)	min. 30 ms (230 V AC); 10 A (24 V DC)	min. 30 ms (230 V AC); 20 A (24 V DC)
Ripple	max. 50 mV rms		
Spikes	max. 200 mV p-p		
Short-circuit and overload protection	yes		
LED display	LED (green): OK; LED (red): overload, overheating or short-circuit		
Parallel usage/serial usage	max. 5 units/max. 2 units		
General data			
Standards	(EN 60950-1), (EN 61204-3), (EN 55011 B), (EN 61000-3-2)		
Relative humidity	5...95 %, no condensation		
Efficiency	84.7 % (100 V AC); 93.4 % (230 V AC)	94.3 % (230 V AC)	93.8 % (230 V AC)
Temperature range	-25...+60 °C (storage temperature -40...+85 °C)		
Mounting method	DIN-rail mountable TH35 (EN 60715)		
Dimension drawing			
			
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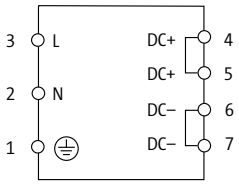
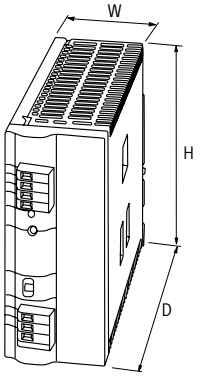
Notes			

MURR ELEKTRONIK
stay connected

Single-phase

– short-circuit and overload protected

Approvals: cULus cULus Listed

	Eco Rail	Eco Rail	Eco Rail
	OUTPUT: 24 V DC Current: 1.3 A	OUTPUT: 24 V DC Current: 2.5 A	OUTPUT: 24 V DC Current: 5 A
			
Circuit diagram			
			
Order Data	**H×W×D** **Art-No.**	**H×W×D** **Art-No.**	**H×W×D** **Art-No.**
24 V DC/1.3 A	125×50×70 mm **85301**		
24 V DC/2.5 A		125×50×80 mm **85302**	
24 V DC/5 A			125×50×125 mm **85303**
Input			
Input voltage	100...240 V AC		90...132 V AC/173...264 V AC
Input current	0.7 A (115 V AC); 0.4 A (230 V AC)	1.1 A (115 V AC); 0.6 A (230 V AC)	2.3 A (115 V AC); 1.2 A (230 V AC)
Inrush current after 1 ms	max. 20 A		
External fuse	max. 20 A		
Frequency	50/60 Hz		
Output			
Output voltage	24 V DC ±1 %		
Output current	1.3 A (+40 °C); 1.0 A (+55 °C)	2.5 A (+40 °C); 2.0 A (+55 °C)	5 A (+40 °C); 4 A (+55 °C)
Mains failure bridging time	min. 25 ms (115 V AC); min. 130 ms (230 V AC)	min. 20 ms (115 V AC); min. 100 ms (230 V AC)	min. 40 ms (115 V AC); min. 40 ms (230 V AC)
Ripple	max. 20 mV rms		
Short-circuit and overload protection	yes		
Spikes	max. 100 mV p-p		max. 60 mV p-p
LED display	LED (green) for output voltage		
Parallel usage/serial usage	no/yes (max. 2 units)		
General data			
Standards	(EN 60950-1), (EN 61204-3), (EN 55022 B), (EN 61000-3-2)		
Mounting method	DIN-rail mountable TH35 (EN 60715)		
Efficiency	84 % (115 V AC); 84 % (230 V AC)	85 % (115 V AC); 87 % (230 V AC)	84 % (115 V AC); 86 % (230 V AC)
Relative humidity	20...90 %, no condensation		
Temperature range	0...+40 °C, to +55 °C derating (storage temperature -20...+85 °C)		
Dimension drawing			
			

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Notes

POWER SUPPY UNITS

Single-phase

– short-circuit and overload protected

Approvals: cULus cULus Listed

Eco Rail

OUTPUT: 24 V DC
Current: 10 A

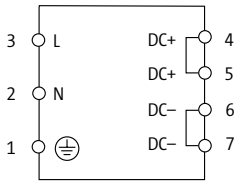


Eco Rail

OUTPUT: 24 V DC
Current: 20 A

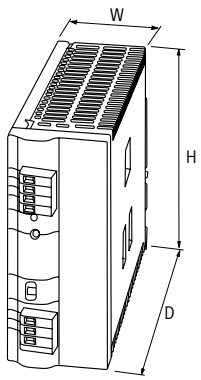


Circuit diagram



Order Data	H×W×D	Art-No.	H×W×D	Art-No.
24 V DC/10 A	125×72×125 mm	**85305**		
24 V DC/20 A			125×105×127 mm	**85307**
Input				
Input voltage	90...132 V AC/173...264 V AC			
Input current	4 A (115 V AC); 2.4 A (230 V AC)		9 A (100 V AC); 4.5 A (200 V AC)	
Inrush current after 1 ms	max. 20 A		max. 30 A	
External fuse	max. 20 A			
Frequency	50/60 Hz			
Output				
Output voltage	24 V DC ±1 %			
Output current	10 A (+40 °C); 7.5 A (+55 °C)		20 A (+40 °C); 16 A (+55 °C)	
Mains failure bridging time	min. 20 ms (115 V AC); min. 20 ms (230 V AC)		min. 15 ms (115 V AC); min. 30 ms (230 V AC)	
Ripple	max. 20 mV rms		max. 50 mV rms	
Short-circuit and overload protection	yes			
Spikes	max. 150 mV p-p		max. 100 mV p-p	
LED display	LED (green) for output voltage			
Parallel usage/serial usage	no/yes (max. 2 units)			
General data				
Standards	(EN 60950-1), (EN 61204-3), (EN 55022 B)			
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Efficiency	87 % (115 V AC); 88 % (230 V AC)		87 % (115 V AC); 89 % (230 V AC)	
Relative humidity	20...90 %, no condensation			
Temperature range	0...+40 °C, to +55 °C derating (storage temperature -20...+85 °C)			

Dimension drawing



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Notes

Single-phase

– short-circuit and overload protected

Eco Power

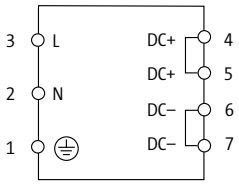
OUTPUT: 24 V DC
Current: 1.3 A



Eco Power

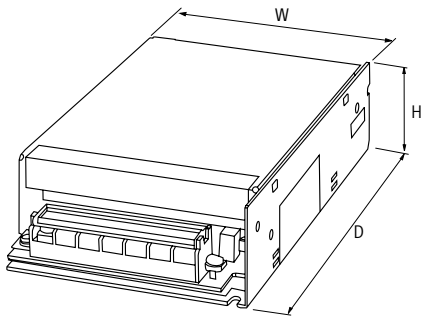
OUTPUT: 24 V DC
Current: 2.5 A

Circuit diagram



Order Data	H×W×D	Art-No.	H×W×D	Art-No.
24 V DC/1.3 A	36×77×105 mm	**85151**		
24 V DC/2.5 A			40×98×135 mm	**85152**
Input				
Input voltage	100...240 V AC			
Input current	0.7 A (115 V AC); 0.4 A (230 V AC)		1.2 A (115 V AC); 0.5 A (230 V AC)	
Inrush current after 1 ms	max. 20 A			
External fuse	max. 16 A			
Frequency	50/60 Hz			
Output				
Output voltage	24 V DC ±1 %			
Output current	1.3 A (+40 °C); 1.04 A (+50 °C)		2.5 A (+40 °C); 2.0 A (+50 °C)	
Mains failure bridging time	min. 10 ms (115 V AC); min. 90 ms (230 V AC)			
Ripple	max. 20 mV rms			
Short-circuit and overload protection	yes			
Spikes	max. 100 mV p-p			
LED display	LED (green) for output voltage			
Parallel usage/serial usage	no/yes (max. 2 units)			
General data				
Standards	(EN 60950-1), (EN 61204-3), (EN 55011 B)			
Mounting method	screw fixing, M3			
Efficiency	85 % (115 V AC); 85 % (230 V AC)		85 % (115 V AC); 87 % (230 V AC)	
Relative humidity	20...90 %, no condensation			
Temperature range	0...+40 °C, to +50 °C derating (storage temperature -20...+85 °C)			

Dimension drawing



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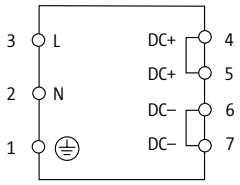
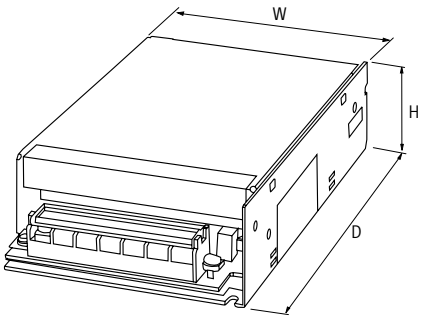
Notes

POWER SUPPY UNITS

Single-phase

– short-circuit and overload protected

	Eco Power	Eco Power	Eco Power
	OUTPUT: 24 V DC Current: 5 A	OUTPUT: 24 V DC Current: 7.5 A	OUTPUT: 24 V DC Current: 10 A
			
Circuit diagram			
			
Order Data	**H×W×D** **Art-No.**	**H×W×D** **Art-No.**	**H×W×D** **Art-No.**
24 V DC/5 A	41×98×164 mm **85153**		
24 V DC/7.5 A		50×100×205 mm **85154**	
24 V DC/10 A			50×115×230 mm **85155**
Input			
Input voltage	100...240 V AC	100...120 V AC/200...240 V AC	
Input current	2.4 A (115 V AC); 1.0 A (230 V AC)	3.4 A (115 V AC); 1.9 A (230 V AC)	4.6 A (115 V AC); 2.8 A (230 V AC)
Inrush current after 1 ms	max. 20 A		
External fuse	max. 16 A		
Frequency	50/60 Hz		
Output			
Output voltage	24 V DC ±1 %		
Output current	5 A (+40 °C); 4 A (+50 °C)	7.5 A (+40 °C); 6.0 A (+50 °C)	10 A (+40 °C); 8 A (+50 °C)
Mains failure bridging time	min. 15 ms (115 V AC); min. 80 ms (230 V AC)	min. 20 ms (115 V AC); min. 20 ms (230 V AC)	min. 15 ms (115 V AC); min. 15 ms (230 V AC)
Ripple	max. 30 mV rms	max. 50 mV rms	max. 30 mV rms
Spikes	max. 100 mV p-p		max. 200 mV p-p
Short-circuit and overload protection	yes		
LED display	LED (green) for output voltage		
Parallel usage/serial usage	no/yes (max. 2 units)		
General data			
Standards	(EN 60950-1), (EN 61204-3), (EN 55011 B)		
Mounting method	screw fixing, M3		screw fixing, M4
Efficiency	86 % (115 V AC); 87 % (230 V AC)	85 % (115 V AC); 86 % (230 V AC)	84 % (115 V AC); 85 % (230 V AC)
Relative humidity	20...90 %, no condensation		
Temperature range	0...+40 °C, to +50 °C derating (storage temperature -20...+85 °C)		
Dimension drawing			
			

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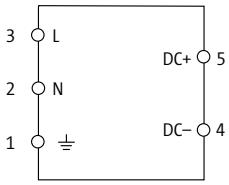
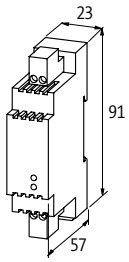
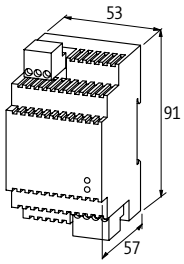
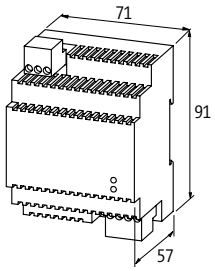
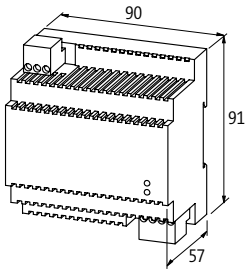
Notes

MURR ELEKTRONIK
stay connected

Single-phase

– short-circuit and overload protected

Approvals: cULus Listed

	Picco	Picco	Picco	Picco
	OUTPUT: 24 V DC ± 1% Current: 0.42 A	OUTPUT: 24 V DC ± 1% Current 1.25 A	OUTPUT: 24 V DC ± 1% Current: 2.5 A	OUTPUT: 24 V DC ± 1% Current: 4.2 A
				
Circuit diagram				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
Screw terminals	24 V DC/0.42 A **87011**	24 V DC/1.25 A **87013**	24 V DC/2.5 A **87015**	24 V DC/4.2 A **87017**
Spring clamp plug-in terminals	24 V DC/0.42 A **87111**	24 V DC/1.25 A **87113**	24 V DC/2.5 A **87115**	24 V DC/4.2 A **87117**
Input				
Input voltage	100...240 V AC; 120...370 V DC			
Input current	0.2 A (115 V AC); 0.12 A (230 V AC)	0.6 A (115 V AC); 0.4 A (230 V AC)	1.1 A (115 V AC); 0.6 A (230 V AC)	1.7 A (115 V AC); 1 A (230 V AC)
Inrush current after 1 ms	max. 30 A	max. 40 A	max. 60 A	
External fuse	max. 10 A		max. 16 A	max. 10 A
Frequency	50/60 Hz			
Output				
Output voltage	24 V DC (SELV), ±1 %; 24...28 V adjustable			
Output current	0.42 A (+50 °C); 0.042 A (+70 °C)	1.25 A (+50 °C); 0.125 A (+70 °C)	2.5 A (+50 °C); 0.25 A (+70 °C)	4.2 A (+50 °C); 0.42 A (+70 °C)
Mains failure bridging time	10...25 ms (115 V AC)			
Ripple	max. 20 mV rms			
Short-circuit and overload protection	yes			
Spikes	max. 100 mV p-p			
LED display	LED (green) for output voltage			
Parallel usage/serial usage	max. 5 units/max. 2 units			
General data				
Standards	(EN 60950-1), (EN 61204-3), (EN 55022 B), (EN 61000-3-2)			
Relative humidity	20...90 %, no condensation			
Efficiency	79 % (110 V AC); 80 % (230 V AC)	86 % (110 V AC); 88 % (230 V AC)		
Temperature range	0...+50 °C, to +70 °C derating (storage temperature -25...+70 °C)			
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Dimension drawing				
				
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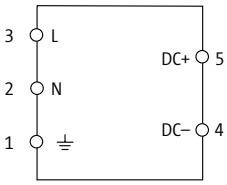
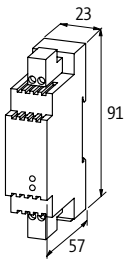
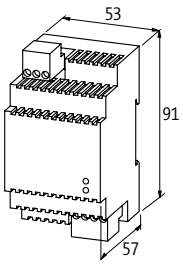
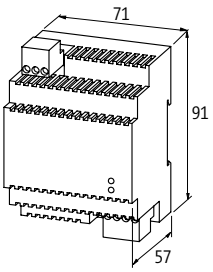
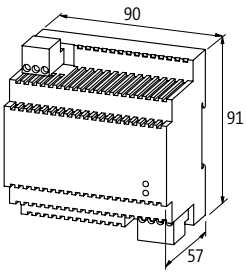
Notes				

POWER SUPPY UNITS

Single-phase

– short-circuit and overload protected

Approvals: cULus cULus Listed

	Picco	Picco	Picco	Picco
	OUTPUT: 12 V DC ± 1% Current: 0.85 A	OUTPUT: 12 V DC ± 1% Current: 2.5 A	OUTPUT: 12 V DC ± 1% Current: 4.5 A	OUTPUT: 12 V DC ± 1% Current: 6 A
				
Circuit diagram				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
Screw terminals	12 V DC/0.85 A **87012**	12 V DC/2.5 A **87014**	12 V DC/4.5 A **87016**	12 V DC/6 A **87018**
Spring clamp plug-in terminals	12 V DC/0.85 A **87112**	12 V DC/2.5 A **87114**	12 V DC/4.5 A **87116**	12 V DC/6 A **87118**
Input				
Input voltage	100...240 V AC; 120...370 V DC			
Input current	0.2 A (115 V AC); 0.12 A (230 V AC)	0.6 A (115 V AC); 0.4 A (230 V AC)	1 A (115 V AC); 0.58 A (230 V AC)	1.3 A (115 V AC); 0.75 A (230 V AC)
Inrush current after 1 ms	max. 30 A	max. 40 A	max. 60 A	
External fuse	max. 10 A		max. 16 A	max. 10 A
Frequency	50/60 Hz			
Output				
Output voltage	12 V DC (SELV), ±1 %; 12...15 V adjustable			
Output current	0.85 A (+50 °C); 0.085 A (+70 °C)	2.5 A (+50 °C); 0.25 A (+70 °C)	4.5 A (+50 °C); 0.45 A (+70 °C)	6 A (+50 °C); 0.6 A (+70 °C)
Mains failure bridging time	10...25 ms (115 V AC)			
Ripple	max. 20 mV rms			
Short-circuit and overload protection	yes			
Spikes	max. 100 mV p-p			
LED display	LED (green) for output voltage			
Parallel usage/serial usage	max. 5 units/max. 2 units			
General data				
Standards	(EN 60950-1), (EN 61204-3), (EN 55022 B), (EN 61000-3-2)			
Relative humidity	20...90 %, no condensation			
Efficiency	86 % (110 V AC); 88 % (230 V AC)			
Temperature range	0...+50 °C, to +70 °C derating (storage temperature -25...+70 °C)			
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Dimension drawing				
				
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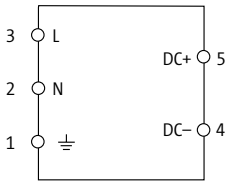
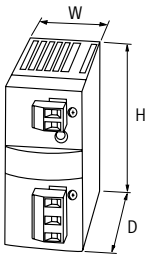
Notes				

MURR ELEKTRONIK
stay connected

Single-phase, primary switched

– stable output voltage, (short-circuit and overload protected)

Approvals: cULus cULus Listed

	MCS-B	MCS-B	MCS-B
	OUTPUT: 24 V DC ± 1% Current: 0.6 A	OUTPUT: 24 V DC ± 1% Current: 1.3 A	OUTPUT: 24 V DC ± 1% Current: 2.5 A
			
Circuit diagram			
			
Order Data	**H×W×D/kg** **Art-No.**	**H×W×D/kg** **Art-No.**	**H×W×D/kg** **Art-No.**
24 V DC/0.6 A	76×38×80/0.1 **85160**		
24 V DC/1.3 A		76×38×80/0.1 **85161**	
24 V DC/2.5 A			76×38×101/0.2 **85162**
Input			
Input voltage	90...265 V AC; 110...300 V DC		95...265 V AC; 110...300 V DC
Input current	0.3 A (100 V AC); 0.2 A (230 V AC)	0.65 A (100 V AC); 0.37 A (230 V AC)	1.04 A (110 V AC); 0.63 A (230 V AC)
Inrush current after 1 ms	max. 20 A		
External fuse	max. 10 A		
Frequency	50/60 Hz		
Output			
Output voltage	24 V DC (SELV), ±1 %; 22...28 V adjustable		
Output current	0.6 A (+50 °C); 0.5 A (+60 °C)	1.3 A (+60 °C, Uin min.170 V AC)	2.5 A (+40 °C); 2.0 A (+55 °C)
Mains failure bridging time	min. 25 ms (100 V AC); min. 150 ms (230 V AC)	min. 15 ms (100 V AC); min. 100 ms (230 V AC)	min. 15 ms (110 V AC); min. 80 ms (230 V AC)
Ripple	max. 50 mV rms		
Spikes	max. 350 mV p-p	max. 120 mV p-p	
Short-circuit and overload protection	yes		
LED display	LED (green) for output voltage		
Parallel usage/serial usage	max. 5 units/max. 2 units		
General data			
Standards	(EN 60950-1), (EN 61204-3), (EN 55022 B), (EN 61000-3-2)		
Relative humidity	5...95 %, no condensation		
Efficiency	81 % (100 V AC); 83 % (230 V AC)	82 %	85 % (110 V AC); 87 % (230 V AC)
Temperature range	0...+50 °C, to +70 °C derating (storage temperature -25...+85 °C)	0...+40 °C, to +70 °C derating (storage temperature -25...+85 °C)	
Mounting method	DIN-rail mountable TH35 (EN 60715)		
Dimension drawing			
			

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Notes

POWER SUPPY UNITS

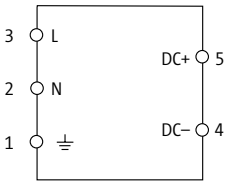
Single-phase, primary switched

– stable output voltage, (short-circuit and overload protected)

	MCS-B	MCS-B
	OUTPUT: 5 V DC ± 1% Current: 3 A	OUTPUT: 12 V DC ± 1% Current: 1 A

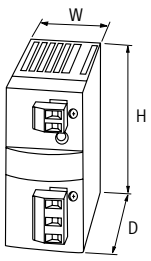


Circuit diagram



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
5 V DC/3 A	76×38×80/0.1	**85371**		
12 V DC/1 A			76×38×80/0.1	**85372**
Input				
Input voltage	95...265 V AC; 110...300 V DC		90...265 V AC; 110...300 V DC	
Input current	0.3 A (115 V AC); 0.2 A (230 V AC)		0.29 A (115 V AC); 0.16 A (230 V AC)	
Inrush current after 1 ms	max. 15 A		max. 20 A	
External fuse	max. 10 A			
Frequency	50/60 Hz			
Output				
Output voltage	5 V DC (SELV), ±1 %; 4.2...6 V adjustable		12 V DC (SELV), ±1 %; 12...15 V adjustable	
Output current	3 A (+40 °C); 2.5 A (+55 °C)		1 A (+50 °C); 0.8 A (+60 °C)	
Mains failure bridging time	min. 30 ms (115 V AC); min. 180 ms (230 V AC)		min. 20 ms (115 V AC); min. 150 ms (230 V AC)	
Ripple	max. 20 mV rms		max. 50 mV rms	
Spikes	max. 120 mV p-p		max. 300 mV p-p	
Short-circuit and overload protection	yes			
LED display	LED (green) for output voltage			
Parallel usage/serial usage	no/yes (max. 2 units)			
General data				
Standards	(EN 60950-1), (EN 61204-3), (EN 55022 B), (EN 61000-3-2)			
Relative humidity	5...95 %, no condensation			
Efficiency	80 %		77 %	
Temperature range	0...+40 °C, to +55 °C derating (storage temperature -25...+85 °C)		0...+50 °C, to +60 °C derating (storage temperature -25...+85 °C)	
Mounting method	DIN-rail mountable TH35 (EN 60715)			

Dimension drawing



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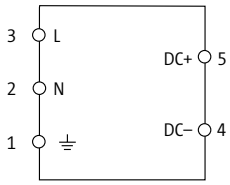
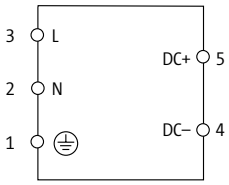
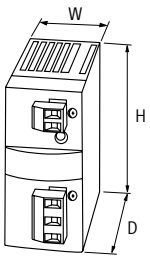
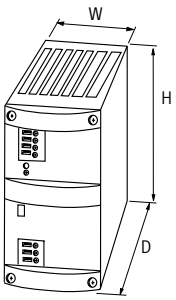
Notes

MURR ELEKTRONIK
stay connected

Single-phase, primary switched

– stable output voltage, (short-circuit and overload protected)

	MCS-B	**MCS-B**
	OUTPUT: 12 V DC ± 1% Current: 2.5 A	OUTPUT: 24 V DC ± 1% Current: 5 A
		
Circuit diagram		
		
Order Data	**H×W×D/kg** **Art-No.**	**H×W×D/kg** **Art-No.**
12 V DC/2.5 A	76×38×80/0.2 **85373**	
24 V DC/5 A		115×54×125/0.5 – cULus, cURus, GL **85163**
Accessories		**Art-No.**
Mounting plate 40 mm		**89851**
Input		
Input voltage	95...265 V AC; 110...300 V DC	100...265 V AC
Input current	0.56 A (115 V AC); 0.31 A (230 V AC)	2 A (110 V AC); 1.16 A (230 V AC)
Inrush current after 1 ms	max. 20 A	max. 30 A
External fuse	max. 10 A	
Frequency	50/60 Hz	
Output		
Output voltage	12 V DC (SELV), ±1 %; 12...15 V adjustable	24 V DC (SELV), ±1 %; 22...28 V adjustable
Output current	2.5 A (+40 °C); 2.1 A (+55 °C)	5 A (+40 °C); 4 A (+55 °C)
Mains failure bridging time	min. 20 ms (115 V AC); min. 110 ms (230 V AC)	min. 10 ms (110 V AC); min. 80 ms (230 V AC)
Ripple	max. 50 mV rms	max. 20 mV rms
Spikes	max. 120 mV p-p	max. 100 mV p-p
Short-circuit and overload protection	yes	
LED display	LED (green) for output voltage	
Parallel usage/serial usage	no/yes (max. 2 units)	max. 5 units/max. 2 units
General data		
Standards	(EN 60950-1), (EN 61204-3), (EN 55022 B), (EN 61000-3-2)	(EN 60950-1), (EN 61204-3), (EN 55011 A)
Relative humidity	5...95 %, no condensation	
Efficiency	82 %	86 % (115 V AC); 87 % (230 V AC)
Temperature range	0...+40 °C, to +55 °C derating (storage temperature -25...+85 °C)	0...+40 °C, to +70 °C derating (storage temperature -25...+85 °C)
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Dimension drawing		
		

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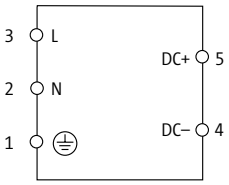
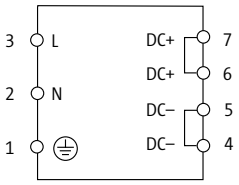
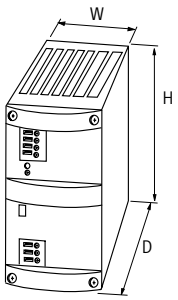
Notes

POWER SUPPY UNITS

Single-phase, primary switched

– stable output voltage, (short-circuit and overload protected)

Approvals: c UL us Listed

	MCS-B	**MCS-B**
	OUTPUT: 24 V DC ± 1%	OUTPUT: 24 V DC ± 1%
	Current: 7.5 A	Current: 10 A
		
Circuit diagram		
		
Order Data	**H×W×D/kg** **Art-No.**	**H×W×D/kg** **Art-No.**
24 V DC/7.5 A	115×54×145/0.7 **85164**	
24 V DC/10 A		128×68×165/0.8 – cURus, GL **85165**
Accessories		**Art-No.**
Screw mounting set		**89514**
Input		
Input voltage	100...265 V AC	
Input current	2.9 A (115 V AC); 1.6 A (230 V AC)	3.4 A (115 V AC); 2.2 A (230 V AC)
Inrush current after 1 ms	max. 37 A	max. 40 A
External fuse	max. 10 A	max. 16 A
Frequency	50/60 Hz	
Output		
Output voltage	24 V DC (SELV), ±1 %; 22...28 V adjustable	
Output current	7.5 A (+40 °C), 6 A (+55 °C)	10 A (+40 °C); 8 A (+55 °C)
Mains failure bridging time	min. 14 ms (115 V AC); min. 80 ms (230 V AC)	min. 15 ms (115 V AC); min. 115 ms (230 V AC)
Ripple	max. 20 mV rms	
Spikes	max. 100 mV p-p	
Short-circuit and overload protection	yes	
LED display	LED (green) for output voltage	
Parallel usage/serial usage	max. 5 units/max. 2 units	
General data		
Standards	(EN 60950-1), (EN 61204-3), (EN 55011 A)	
Relative humidity	5...95 %, no condensation	
Efficiency	87 %	83 % (115 V AC); 85 % (230 V AC)
Temperature range	0...+40 °C, to +70 °C derating (storage temperature -25...+85 °C)	
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Dimension drawing		
		

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Notes

MURR ELEKTRONIK
stay connected

Single-phase, primary switched

– stable output voltage, (short-circuit and overload protected)

Approvals: cULus cULus Listed

MCS

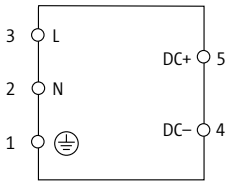
OUTPUT: 12 V DC ± 1%
Current: 5 A



MCS

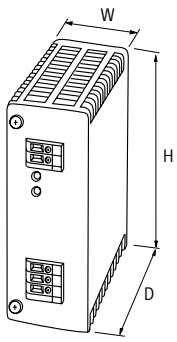
OUTPUT: 5 V DC ± 1%
Current: 6 A

Circuit diagram



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
12 V DC/5 A	108×42×98/0.4	**85040**		
5 V DC/6 A			108×42×98/0.4	**85041**
Input				
Input voltage	90...265 V AC; 110...300 V DC		100...240 V AC	
Input current	1.1 A (115 V AC); 0.6 A (230 V AC)		0.5 A (115 V AC); 0.3 A (230 V AC)	
Inrush current after 1 ms	max. 28 A		max. 22 A	
External fuse	max. 10 A			
Frequency	50/60 Hz			
Output				
Output voltage	12 V DC (SELV), ±1 %; 10...15 V adjustable		5 V DC (SELV), ±1 %, 4...6 V adjustable	
Output current	5 A (+55 °C); 6 A (+45 °C)		6 A (+60 °C); 7.5 A (+50 °C)	
Mains failure bridging time	min. 10 ms (115 V AC); min. 70 ms (230 V AC)		min. 12 ms (115 V AC); min. 90 ms (230 V AC)	
Ripple	max. 20 mV rms		max. 10 mV rms	
Spikes	max. 200 mV p-p		max. 50 mV p-p	
Short-circuit and overload protection	yes			
LED display	LED (green) for output voltage			
Parallel usage/serial usage	no/yes (max. 2 units)			
General data				
Standards	(EN 60950-1), (EN 61204-3), (EN 55022 B), (EN 61000-3-2)			
Relative humidity	5...95 %, no condensation			
Efficiency	85 %		80 %	
Temperature range	0...+55 °C (storage temperature -25...+85 °C)		0...+60 °C (storage temperature -25...+85 °C)	
Mounting method	DIN-rail mountable TH35 (EN 60715)			

Dimension drawing



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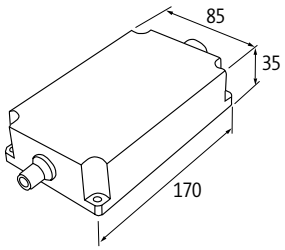
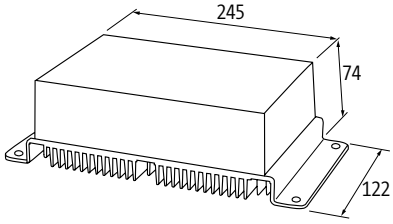
Notes

POWER SUPPY UNITS

Single-phase, primary switched

– stable output voltage, (short-circuit and overload protected)

	Evolution67	**Evolution67**	**Evolution67**
	OUTPUT: 24 V DC ± 2% Current: 3.8 A	OUTPUT: 24 V DC ± 2% Current: 8 A	OUTPUT: 24 V DC Current 2 × 3.8 A galvanically separated
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
24 V DC/3.8 A	**85673**		
24 V DC/8 A		**85674**	
24 V DC/2 × 3.8 A			**85675**
Input			
Input voltage	100...240 V AC	90...264 V DC	100...240 V AC
Input current	2 A (115 V AC); 1 A (240 V AC)	2.4 A (115 V AC); 1.2 A (230 V AC)	2 A (115 V AC); 1 A (230 V AC)
External fuse	max. 10 A (C)		
Inrush current after 1 ms	–	max. 9 A	
Frequency	50/60 Hz		
Output			
Output voltage	24 V DC (SELV), ±2 %		
Output current	3.8 A (+50 °C); 2.3 A (+70 °C)	8 A (+60 °C); 6.4 A (+70 °C)	2 × 3.8 A (+50 °C); 2 × 2.3 A (+70 °C)
Mains failure bridging time	min. 50 ms (230 V AC); 3.8 A (24 V DC)	min. 50 ms (230 V AC); 8 A (24 V DC)	min. 50 ms (230 V AC); 3.8 A (24 V DC)
Powerboost	–	+150 % (min. 4 seg.)	–
Ripple	max. 1 %		
Spikes	max. 240 mV p-p		
LED display	LED (green): OK		
General data			
Standards	(EN 60950-1), (EN 61204-3), (EN 55011 A), (EN 61000-3-2)		
Relative humidity	5...95 %, no condensation		
Protection	IP67 inserted and tightened (EN 60529)		
Efficiency	90 %	89 %	
Temperature range	-25...+70 °C (storage temperature -40...+85 °C)	-25...+60 °C (storage temperature -40...+85 °C)	-25...+70 °C (storage temperature -40...+85 °C)
Connection	IN: M12, C-coded; OUT: 7/8"		
Mounting method	screw fixing, M5		
Dimension drawing			
			

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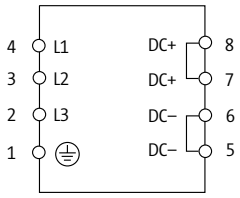
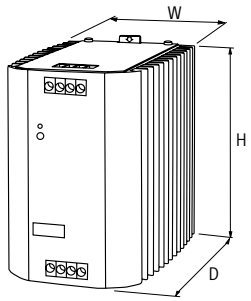
Notes			

2-/3-phase

– stable output voltage, (short-circuit and overload protected)

Approvals: cULus Listed, GL

	Evolution	Evolution	Evolution	Evolution
	OUTPUT: 24 V DC ± 1%	OUTPUT: 24 V DC ± 1%	OUTPUT: 24 V DC ± 1%	OUTPUT: 24 V DC ± 1%
	Current: 5 A	Current: 10 A	Current: 20 A	Current: 40 A
				
Circuit diagram				
				
Order Data	**H×W×D/kg** **Art-No.**	**H×W×D/kg** **Art-No.**	**H×W×D/kg** **Art-No.**	**H×W×D/kg** **Art-No.**
24 V DC/5 A	132×83×98/1.0 **85000**			
24 V DC/10 A		132×93×114/1.3 **85001**		
24 V DC/20 A			132×113×136/2.0 **85002**	
24 V DC/40 A				132×164×142/3.0 **85004**
Input				
Input voltage	3 × 324...572 V AC/480...745 V DC			
Input current	3 × 0.3 A	3 × 0.8 A	3 × 1.3 A	3 × 2.4 A
Inrush current after 1 ms	max. 10 A	max. 15 A	max. 19 A	–
External fuse	max. 3 × 10 A		max. 3 × 20 A	
Frequency	50/60 Hz			
Output				
Output voltage	24 V DC (SELV), ±1 %; 22...28 V adjustable			
Output current	5 A (+55 °C); 3 A (+70 °C)	10 A (+55 °C); 6.5 A (+70 °C)	20 A (+55 °C); 15.8 A (+70 °C)	40 A (+55 °C); 30 A (+70 °C)
Powerboost	+150 % (min. 4 seg.)			
Mains failure bridging time	min. 30 ms (400 V AC)	min. 19 ms (400 V AC)		
Ripple	max. 50 mV rms			
Spikes	max. 100 mV p-p			
LED display	LED (green): OK; LED (red): overload			
Parallel usage/serial usage	max. 5 units/max. 2 units			
General data				
Standards	(EN 60950-1), (EN 61204-3), (EN 55022 B), (EN 61000-3-2)		(EN 60950-1), (EN 61204-3), (EN 55011 A)	
Temperature range	-25...+70 °C (storage temperature -40...+85 °C)			
Relative humidity	5...95 %, no condensation			
Efficiency	86 %	90 %		
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Protection	IP20			
Dimension drawing				
				

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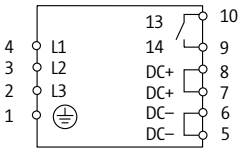
Notes

POWER SUPPY UNITS

2-/3-phase

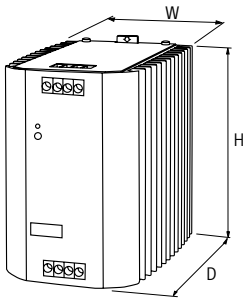
– stable output voltage, (short-circuit and overload protected)

Approvals: c UL us Listed, GL

	Evolution+	Evolution+	Evolution+	Evolution+
	OUTPUT: 24 V DC ± 1%	OUTPUT: 24 V DC ± 1%	OUTPUT: 24 V DC ± 1%	OUTPUT: 24 V DC ± 1%
	Current: 5 A	Current: 10 A	Current: 20 A	Current: 40 A
				
Circuit diagram				
				

Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
24 V DC/5 A	132×83×98/1.0	**85640**						
24 V DC/10 A			132×93×114/1.2	**85641**				
24 V DC/20 A					132×113×136/2.0	**85642**		
24 V DC/40 A							132×164×142/3.0	**85644**
Input								
Input voltage	3 × 324...572 V AC/480...745 V DC							
Input current	3 × 0.45 A		3 × 0.8 A		3 × 1.3 A		3 × 2.4 A	
Inrush current after 1 ms	max. 10 A		max. 15 A		max. 19 A		–	
External fuse	max. 3 × 10 A				max. 3 × 20 A			
Frequency	50/60 Hz							
Output								
Output voltage	24 V DC (SELV), ±1 %; 22...28 V adjustable							
Output current	5 A (+55 °C); 3 A (+70 °C)		10 A (+55 °C); 6.5 A (+70 °C)		20 A (+55 °C); 15.8 A (+70 °C)		40 A (+55 °C); 30 A (+70 °C)	
Powerboost	+150 % (min. 4 seg.)							
Mains failure bridging time	min. 30 ms (400 V AC)		min. 19 ms (400 V AC)					
Ripple	max. 50 mV rms							
Spikes	max. 100 mV p-p							
LED display	LED (green): OK; LED (red): overload							
Parallel usage/serial usage	max. 5 units/max. 2 units							
Alarm output	electronic relay max. 30 V DC/0.1 A, group alarm							
General data								
Standards	(EN 60950-1), (EN 61204-3), (EN 55022 B), (EN 61000-3-2)				(EN 60950-1), (EN 61204-3), (EN 55011 A)			
Temperature range	-25...+70 °C (storage temperature -40...+85 °C)							
Relative humidity	5...95 %, no condensation							
Protection	Circuit board with protective varnish							
Efficiency	86 %		90 %					
Mounting method	DIN-rail mountable TH35 (EN 60715)							
Protection	IP20							

Dimension drawing



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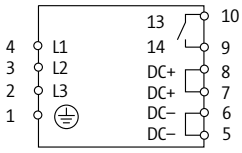
Notes

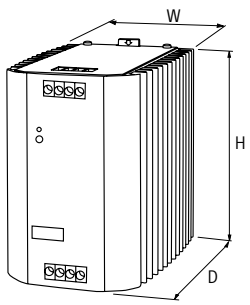
2-/3-phase

– stable output voltage, (short-circuit and overload protected)

	Evolution	**Evolution+**	**Evolution+**	**Evolution+**
	OUTPUT: 12 V DC ± 1% Current: 20 A	OUTPUT: 48 V DC Current: 5 A	OUTPUT: 48 V DC Current: 10 A	OUTPUT: 48 V DC Current: 20 A
				
Circuit diagram				
				

Order Data	**H×W×D/kg**	**Art-No.**	**H×W×D/kg**	**Art-No.**	**H×W×D/kg**	**Art-No.**	**H×W×D/kg**	**Art-No.**
12 V DC/20 A	132×93×114/1.3	**85016**						
48 V DC/5 A			132×93×114/1.4	**85009**				
48 V DC/10 A					132×113×136/2.0	**85010**		
48 V DC/20 A							132×164×142/3.0	**85011**
Input								
Input voltage	3 × 324...572 V AC/480...745 V DC							
Input current	3 × 0.8 A				3 × 1.3 A		3 × 1.9 A	
Inrush current after 1 ms	max. 15 A		max. 9 A		max. 23 A		–	
External fuse	max. 3 × 10 A		max. 3 × 20 A					
Frequency	50/60 Hz							
Output								
Output voltage	12 V DC (SELV), ±1 %; 12...13.5 V adjustable		48 V DC (SELV), ±1 %; 48...56 V adjustable					
Output current	20 A (+55 °C); 15.8 A (+70 °C)		5 A (+55 °C); 3.73 A (+70 °C)		10 A (+55 °C); 8 A (+70 °C)		20 A (+55 °C); 15 A (+70 °C)	
Powerboost	+150 % (min. 4 seg.)							
Mains failure bridging time	min. 19 ms (400 V AC)		min. 17 ms (400 V AC)		min. 24 ms (400 V AC)		min. 17 ms (400 V AC)	
Ripple	max. 50 mV rms							
Spikes	max. 100 mV p-p							
LED display	LED (green): OK; LED (red): overload							
Parallel usage/serial usage	max. 5 units/max. 4 units		max. 5 units/no					
Alarm output	electronic relay max. 30 V DC/0.1 A, group alarm							
General data								
Standards	(EN 60950-1), (EN 61204-3), (EN 55022 B), (EN 61000-3-2)				(EN 60950-1), (EN 61204-3), (EN 55011 A)			
Temperature range	-25...+70 °C (storage temperature -40...+85 °C)							
Relative humidity	5...95 %, no condensation							
Efficiency	90 %		91.3 %		92.3 %		92.5 %	
Protection	–		Circuit board with protective varnish					
Mounting method	DIN-rail mountable TH35 (EN 60715)							
Protection	IP20							

Dimension drawing



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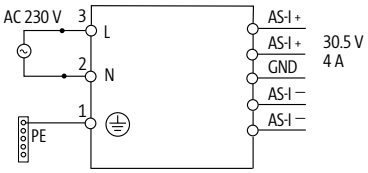
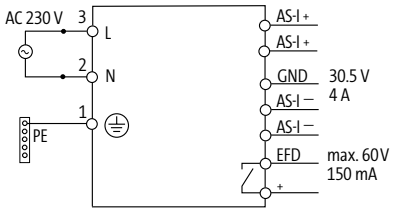
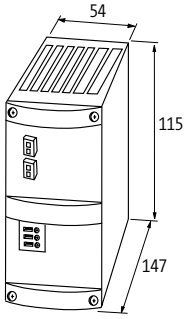
Notes

POWER SUPPY UNITS

Single-phase

– AS-Interface

Approvals:

	MCS-A 4	**MCS-A 4 EFD**
	OUTPUT: 30.5 V DC Current: 4 A	OUTPUT: 30.5 V DC Current: 4 A with EFD (earth fault detection)
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
30.5 V DC/4 A	**85381**	**85382**
Accessories		**Art-No.**
Mounting plate 65 mm		**89853**
Input		
Input voltage	95...265 V AC	
Input current	2.1 A	
Inrush current after 1 ms	max. 35 A (230 V AC)	
External fuse	max. 10 A (T)	
Frequency	50/60 Hz	
Output		
Output voltage	30.5 V DC (SELV), ±2 %	
Output current	max. 4.0 A (+40 °C); 3.4 A (+55 °C)	
Output rating	122 W	
Mains failure bridging time	min. 14 ms (110 V AC); min. 80 ms (230 V AC)	
Ripple	max. 20 mV rms	
LED display	LED (green) for output voltage	
Output filter	Filter acc. to AS-Interface specification	
General data		
Standards	(EN 60950-1), (EN 61204-3), (EN 55022 B)	
Temperature range	-10...+40 °C, to +55 °C derating (storage temperature -25...+85 °C)	
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Efficiency	83 % (110 V AC); 85 % (240 V AC)	
AS-Interface	Unit complies to AS-Interface specification for power supplies (PELV)	
Dimension drawing		
		

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Notes

Mounting accessories			Art-No.
	**Mounting plate 40 mm**		
	for side mounting	for MCS and MCS-B	**89851**
	for side mounting	for MCS	**89852**
	for side mounting	for MCS, MCS-B and MCS-A	**89853**
	**Label plates**		
	KES 20 × 8 (white)	(10 pieces/2 plates)	**996067**
	**DIN-Rail Clip**		
	DIN-rail mountable TH35 (EN 60715)		**85148**



BUFFER MODULES / REDUNDANCY MODULES

- **Stable power supply**
- **Safe processes**
- **Increased machine availability**

SAFE, INTELLIGENT, COST EFFECTIVE

Murrelektronik offers a wide range of buffer modules that bridge voltage fluctuations for 38 seconds at 10 A or up to several minutes at 1 A. They are equipped with ultra capacitors instead of lead batteries like conventional uninterruptible power systems (UPS). This makes sure they are maintenance-free and cost-effective because you never have to change the batteries in Murrelektronik's buffer modules.

Overview of Buffer Modules

	Seconds									Minutes					
Load Current	0.2	0,5	1	3.6	4	7	16	21	38	1	2	4	3	5	6
1 A	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
3 A	●	●	●	●	●	●	●	●	●	●	●				
5 A	●	●	●	●	●	●	●	●	●	●					
10 A	●	●	●	●	●	●	●	●	●						
20 A	●	●	●	●	●	●	●								
40 A	●	●	●	●											

- MB Cap 20 A/0.2 s
- MB Cap Ultra 3 A/7 s
- MB Cap Ultra 10 A/38 s
- Emparro Cap 20 A/1.0 s
- MB Cap Ultra 20 A/16 s
- MB Cap Ultra 40 A/3.6 s

To ensure that machines run at maximum capacity, power supply systems are often designed redundantly with two power supply units. Murrelektronik's redundancy modules decouple independent power supply units and generate a redundant 24 V DC control voltage.

Buffer Modules / Redundancy Modules



Buffer Modules
• Maintenance-free ultra capacitors

Page 1.4.1



Redundancy Modules
• Active
• Passive

Page 1.4.4

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Buffer modules	MB Cap Ultra 3/24 7s 7 s (3 A); 21 s (1 A)	MB Cap Ultra expansion module 3/24 12s 12 s (3 A); 36 s (1 A)
Approvals: c UL us Listed		
Circuit diagram		
Order Data	**Art-No.**	**Art-No.**
24 V DC/3 A	**85460**	use with Art.-Nr. 85460 **85462**
Input		
Input voltage	20.4...26.4 V DC	0...26.4 V DC
Input current	3 A	
Loading time	min. 25 s	–
Output		
Output voltage	23 V DC ±2 %	0...26.4 V DC
Output current	max. 3 A (+60 °C)	
Buffer time	7 s (3 A); 21 s (1 A)	12 s (3 A); 36 s (1 A)
General data		
Standards	(EN 60950), (EN 50178) SELV/PELV	
Temperature range	-20...+60 °C (storage temperature -20...+60 °C)	
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Efficiency	90 %	
Dimension drawing		
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Notes		

BUFFER MODULES / REDUNDANCY MODULES

Buffer modules	MB Cap Ultra 10/24 38s	MB Cap Ultra 20/24 16s	MB Cap Ultra 40/24 170s
	38 s (10 A); 380 s (1 A)	16 s (20 A); 320 s (1 A)	3.6 s (40 A); 170 s (1 A)
Approvals: c UL us Listed			
Circuit diagram			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
24 V DC/10 A	**85467**		
24 V DC/20 A		**85468**	
24 V DC/40 A			**85469**
Input			
Input voltage	10.5...15 V DC; 24...27 V DC	24...26.4 V DC	21.6...26.4 V DC
Input current	10 A	20 A	40 A
Inrush current	max. 35 A/2 ms	max. 36.5 A	
Loading time	typ. 100 s; max. 210 s	typ. 40 s; max. 500 s	typ. 140 s; max. 300 s
Output			
Output voltage	11.3 V DC ±4 %; 23.3 V DC ±2 %	23.3 V DC ±2 %	25.5...19 V DC ±2 %
Output current	max. 10 A (+60 °C)	max. 20 A (+60 °C)	max. 40 A (+60 °C)
Buffer time	38 s (10 A); 380 s (1 A)	16 s (20 A); 320 s (1 A)	3.6 s (40 A); 170 s (1 A)
General data			
Standards	(EN 60950), (EN 50178) SELV/PELV	(EN 60950-1), (EN 61204-3), (EN 55011 A)	(EN 61000-6-2), (EN 61000-6-4)
Temperature range	-20...+60 °C (storage temperature -20...+60 °C)		
Mounting method	DIN-rail mountable TH35-7.5/TH35-15 (EN 60715)		
Efficiency	90 %		
Dimension drawing			

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Notes

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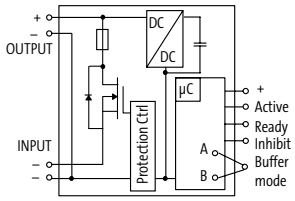
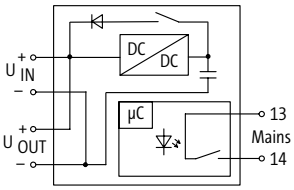
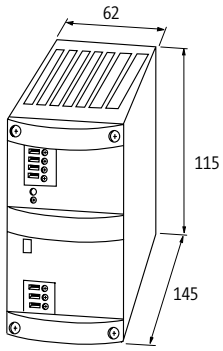
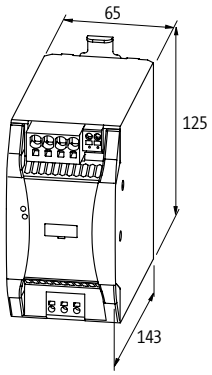
Buffer modules	MB Cap 20/24 4s 0.2 s (20 A); 4 s (1 A)	Emparro Cap 20/24 40s 1.0 s (20 A); 40 s (1 A)
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
24 V DC/20 A	cULus	**85394**	**85458**
Input		
Input voltage	23...30 V DC (SELV/PELV)	21.6...26.4 V DC
Input current	85 mA	20 A
Inrush current	–	max. 25 A
Protection of voltage spikes	max. 35 V DC	–
Loading time	20...45 s	max. 75 s
Loading current	max. 500 mA	max. 3 A
Output		
Output voltage	24 V DC, 22...28 V DC	25.5...19 V DC ±2 %
Output current	max. 20 A (+70 °C)	max. 20 A
Current limit	26 A	65 A
Buffer time	–	1.0 s (20 A); 40 s (1 A)
Ripple	max. 200 mV rms	–
Parallel circuit	possible	–
General data		
Standards	(EN 61000-6-2), (EN 61000-6-3), (EN 55022) category B, (EN 60950-1) SELV	(EN 61000-6-2), (EN 61000-6-4)
Temperature range	0...+70 °C (storage temperature -25...+85 °C)	-40...+60 °C (storage temperature -40...+60 °C)
Mounting method	DIN-rail mountable TH35 (EN 60715)	DIN-rail mountable TH35-7.5/TH35-15 (EN 60715)
Efficiency	95 %	min. 90 %
Dimension drawing		
		
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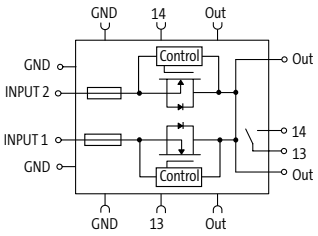
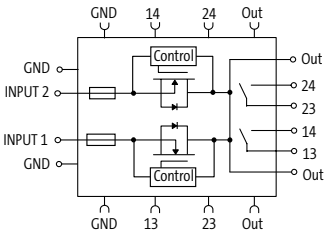
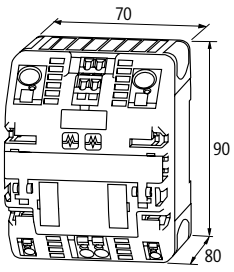
Notes		

Redundancy modules	MB Redundancy Balance 2 × 20/24	MB Redundancy Balance 2 × 20/24 Auto-Balancing (50/50)
Approvals: cULus Listed, GL		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
24 V DC/2 × 20 A/1 × 40 A	**85495**	**85496**
Accessories		**Art-No.**
Bridge system 10 pcs.		**9000-41034-0000001**
Bridge system VE 1		**9000-41034-0000002**
Label plates		**996067**
Input		
Input voltage	24 V DC (18...30 V DC)	
Input current	2 × 20 A	
Total current	max. 40 A	
Protection against reverse polarization	max. 30 V DC	
Auto-Balancing (50/50)	no	yes
Output		
Output voltage	24 V DC (18...30 V DC)	
Output current (40 A)	(-25...+60 °C) continuous	
Output current (52 A)	(-25...+40 °C)	(-25...+40 °C) without balance
Output current (26 A)	(-25...+40 °C) for redundancy operation	
LED display	LED (red/green)	
Alarm output	potential free (relay contact) for input voltage	potential free (relay contact) for input voltage/ load distribution
General data		
Standards	(EN 61000-6-2), (EN 61000-6-3)	
Bridging concept	two sides, with spring clamp terminals or bridge set (max. 40 A)	
Relative humidity	5...95 %, no condensation	
Efficiency	99.5 %	
Temperature range	-25...+60 °C (storage temperature -40...+85 °C)	
Connection	Spring clamp terminals	
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Dimension drawing		
Murrelektronik Online Shop **onlineshop.murrelektronik.com**/en		
Notes		

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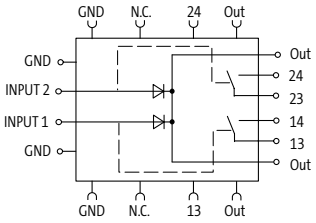
Redundancy modules

MB Diode



Approvals: cULus Listed

Circuit diagram

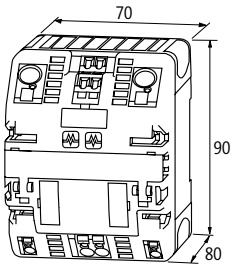


Order Data	Art-No.
24 V DC/2 × 20 A/1 × 40 A	85396

Accessories	Art-No.
Bridge system 10 pcs.	9000-41034-0000001
Bridge system VE 1	9000-41034-0000002
Label plates	996067

Input	
Input voltage	24 V DC (21...30 V DC)
Input current	2 × 20 A/1 × 40 A
Total current	max. 40 A
Protection against reverse polarization	Internal protection against reverse polarization up to 60 V DC
Auto-Balancing (50/50)	no
Output	
Output voltage	24 V DC (21...30 V DC)
Output current	20 A (-25...+55 °C); 40 A (-25...+40 °C)
Overload	at 20 A +50 % for 4 s
LED display	LED (green)
Alarm output	potential free alarm output per channel (relay contact)
General data	
Standards	(EN 61000-6-2), (EN 61000-6-3)
Bridging concept	two sides, with spring clamp terminals or bridge set (max. 40 A)
Relative humidity	5...95 %, no condensation
Power loss	U (approx. 0.5 V) × I
Efficiency	97 %
Temperature range	-25...+55 °C (20 A); -25...+40 °C (40 A); (storage temperature -25...+85 °C)
Connection	Spring clamp terminals
Mounting method	DIN-rail mountable TH35 (EN 60715)

Dimension drawing



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Notes



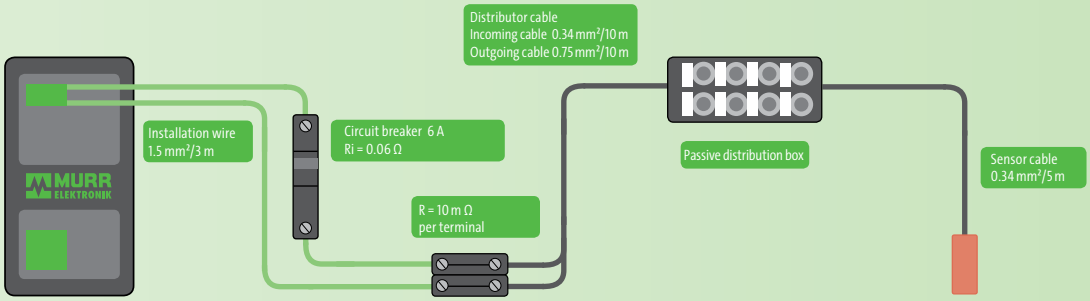
MICO
INTELLIGENT POWER DISTRIBUTION

- **Monitor**
- **Detect**
- **React**

FIRST CLASS POWER DISTRIBUTION

MICO is the intelligent power distribution module from Murrelektronik for 24 V DC. It monitors currents, indicates when approaching the maximum load and make targeted circuit isolations during overload or short circuit conditions. This makes sure systems run at maximum capacity.

EXAMPLE: Why don't circuit breakers trigger reliably in a 24 V DC system?



Specific resistance of copper (ρ)		= 0.0178 (Ω x mm² / m)
Total loop resistance		= 1.32 Ω
Calculation of maximum current flow (Limited by loop resistance)	$I = \frac{U}{R} = \frac{24\ V}{1.32\ \Omega}$	= **18.18 A**

Required tripping current for the 6 A type C circuit breaker

$14 \times I_{Nenn} = 14 \times 6\ A =$ **84 A**

Tripping current		max. Current flow
84 A	>	18.18 A

MICO



MICO CLASSIC
- Adjustable current ranges
- Channels with remote switch on function
- Group alarm output

Page 1.5.3



MICO+
- Adjustable current ranges
- Channels with remote switch on/off function
- Preventive diagnostics

Page 1.5.7



MICO BASIC
- Preset current ranges
- Small size

Page 1.5.7



MICO FUSE
- Socket for glass tube fuses

Page 1.5.10

Over current protection device

– adjustable current ranges

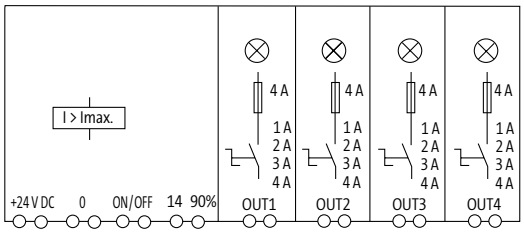
– Early warning (90%)

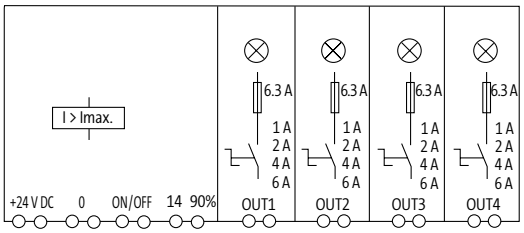
Approvals:

	MICO+ 4.4	MICO+ 4.6
	4 channels	4 channels



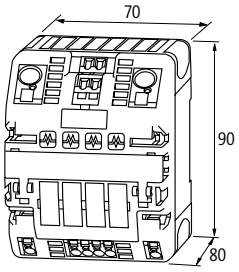
Circuit diagram





Order Data	Art-No.	Art-No.
1 A, 2 A, 3 A, 4 A	**9000-41084-0100400**	
1 A, 2 A, 4 A, 6 A		**9000-41084-0100600**
Technical Data		
Operating voltage	24 V DC (18...30 V DC)	
Current adjustment	1 A, 2 A, 3 A, 4 A, by countersinked rotary switch, sealed	1 A, 2 A, 4 A, 6 A, by countersinked rotary switch, sealed
Group alarm output	max. 20 mA; high: all channels ON; low: not all channels ON	
Inrush capacity	max. 20 mF (per channel)	
Remote start (ON)	10...30 V DC	
Remote start (OFF)	10...30 V DC	
Impulse length	min. 20 ms	
Early warning (90%)	max. 20 mA; high: one channel over 90%; low: all channels under 90%	
General data		
Connection	Spring clamp terminals	
Input terminals	2 × 16 mm²	
Output terminals	per output 2 × 1.5 mm²	
Alarm terminals	2.5 mm²	
Bridging concept	two sides, with spring clamp terminals or bridge set (max. 40 A)	
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Temperature range	0...+55 °C (storage temperature -40...+80 °C)	

Dimension drawing



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Notes

INTELLIGENT POWER DISTRIBUTION

Over current protection device

– adjustable current ranges

– Early warning (90%)

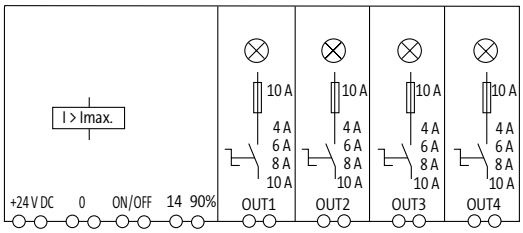
Approvals:

MICO+ 4.10

4 channels



Circuit diagram

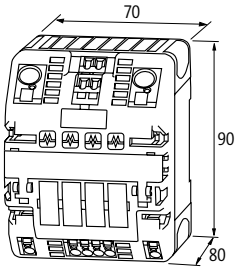


Order Data	Art-No.
4 A, 6 A, 8 A, 10 A	9000-41084-0401000

Technical Data	
Operating voltage	24 V DC (18...30 V DC)
Current adjustment	4 A, 6 A, 8 A, 10 A, by countersinked rotary switch, sealed
Group alarm output	max. 20 mA; high: all channels ON; low: not all channels ON
Inrush capacity	max. 20 mF (per channel)
Remote start (ON)	10...30 V DC
Remote start (OFF)	10...30 V DC
Impulse length	min. 20 ms
Early warning (90%)	max. 20 mA; high: one channel over 90%; low: all channels under 90%

General data	
Connection	Spring clamp terminals
Input terminals	2 × 16 mm²
Output terminals	per output 2 × 1.5 mm²
Alarm terminals	2.5 mm²
Bridging concept	two sides, with spring clamp terminals or bridge set (max. 40 A)
Mounting method	DIN-rail mountable TH35 (EN 60715)
Temperature range	0...+55 °C (storage temperature -40...+80 °C)

Dimension drawing



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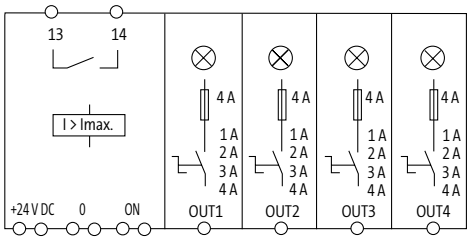
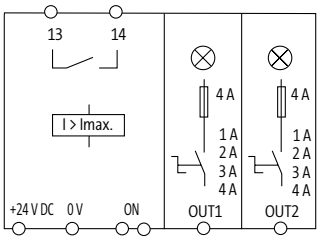
Notes

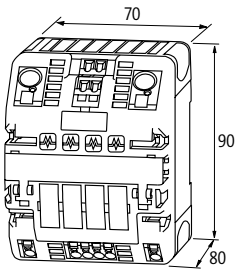
Over current protection device	MICO 4.4 4 channels	MICO 2.4 2 channels
Approvals:		
Circuit diagram		
Order Data	**Art-No.**	**Art-No.**
1 A, 2 A, 3 A, 4 A	GL **9000-41034-0100400**	**9000-41042-0100400**
Technical Data		
Operating voltage	24 V DC (18...30 V DC)	
Current adjustment	1 A, 2 A, 3 A, 4 A, by countersinked rotary switch, sealed	
Inrush capacity	max. 20 mF (per channel)	
Group alarm output	potential free alarm output 30 V AC/DC, 100 mA	
Remote start (ON)	10...30 V DC	
Impulse length	min. 20 ms	
General data		
Connection	Spring clamp terminals	
Input terminals	2 × 16 mm²	1 × 16 mm²
Output terminals	per output 1 × 4 mm²	
Alarm terminals	2.5 mm²	
Bridging concept	two sides, with spring clamp terminals or bridge set (max. 40 A)	one side, with spring clamp terminals or bridge set (max. 40 A)
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Temperature range	0...+55 °C (storage temperature -40...+80 °C)	
Dimension drawing		

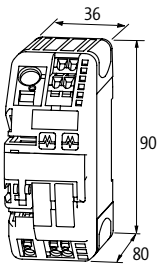












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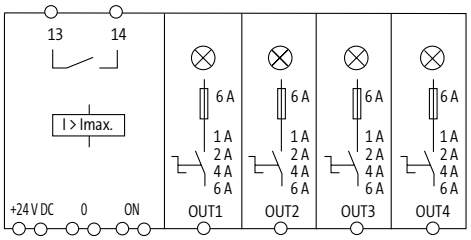
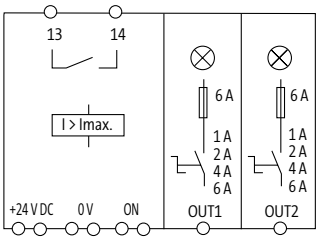
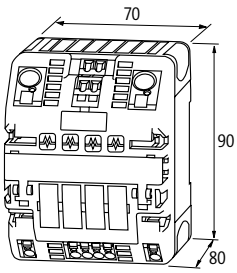
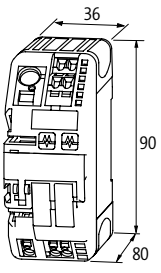
Notes

INTELLIGENT POWER DISTRIBUTION

Over current protection device

Approvals:

	MICO 4.6	**MICO 2.6**
	4 channels	2 channels
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
1 A, 2 A, 4 A, 6 A	GL **9000-41034-0100600**	**9000-41042-0100600**
Technical Data		
Operating voltage	24 V DC (18...30 V DC)	
Current adjustment	1 A, 2 A, 4 A, 6 A, by countersinked rotary switch, sealed	
Inrush capacity	max. 20 mF (per channel)	
Group alarm output	potential free alarm output 30 V AC/DC, 100 mA	
Remote start (ON)	10...30 V DC	
Impulse length	min. 20 ms	
General data		
Connection	Spring clamp terminals	
Input terminals	2 × 16 mm²	1 × 16 mm²
Output terminals	per output 1 × 4 mm²	
Alarm terminals	2.5 mm²	
Bridging concept	two sides, with spring clamp terminals or bridge set (max. 40 A)	one side, with spring clamp terminals or bridge set (max. 40 A)
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Temperature range	0...+55 °C (storage temperature -40...+80 °C)	
Dimension drawing		
		

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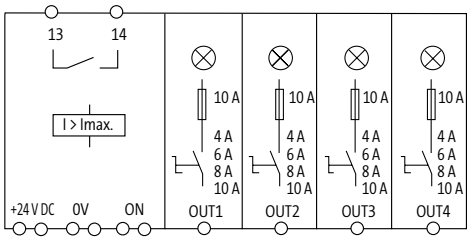
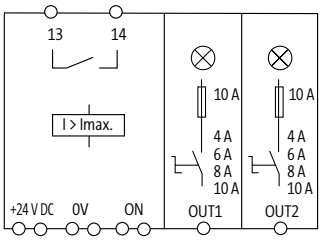
Notes

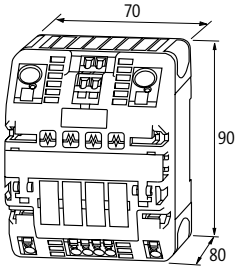
Over current protection device	MICO 4.10 4 channels	MICO 2.10 2 channels
Approvals:		
Circuit diagram		
Order Data	**Art-No.**	**Art-No.**
4 A, 6 A, 8 A, 10 A	GL **9000-41034-0401000**	**9000-41042-0401000**
Technical Data		
Operating voltage	24 V DC (18...30 V DC)	
Current adjustment	4 A, 6 A, 8 A, 10 A, by countersinked rotary switch, sealed	
Inrush capacity	max. 20 mF (per channel)	
Group alarm output	potential free alarm output 30 V AC/DC, 100 mA	
Remote start (ON)	10...30 V DC	
Impulse length	min. 20 ms	
General data		
Connection	Spring clamp terminals	
Input terminals	2 × 16 mm²	1 × 16 mm²
Output terminals	per output 1 × 4 mm²	
Alarm terminals	2.5 mm²	
Bridging concept	two sides, with spring clamp terminals or bridge set (max. 40 A)	one side, with spring clamp terminals or bridge set (max. 40 A)
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Temperature range	0...+55 °C (storage temperature -40...+80 °C)	
Dimension drawing		

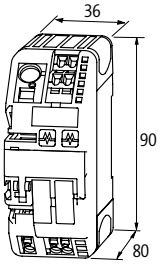












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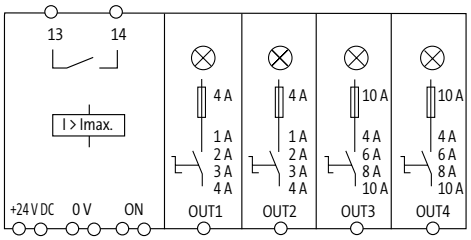
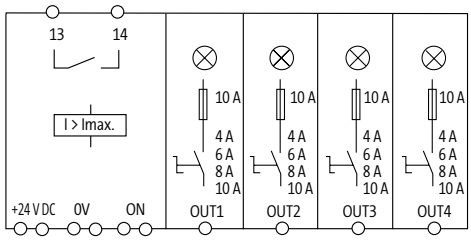
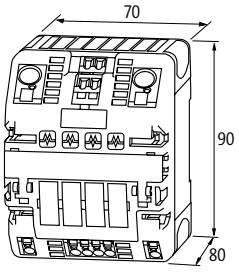
Notes

INTELLIGENT POWER DISTRIBUTION

Over current protection device

Approvals:

	MICO 4.4.10 ACTUATOR-SENSOR	**MICO 4.10 SPEED START**
		4 channels optimized start-up behavior
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
1 A, 2 A, 3 A, 4 A; 4 A, 6 A, 8 A, 10 A	**9000-41034-0101000**	
4 A, 6 A, 8 A, 10 A		**9000-41034-0401005**
Technical Data		
Operating voltage	24 V DC (18...30 V DC)	
Current adjustment	1 A, 2 A, 3 A, 4 A; 4 A, 6 A, 8 A, 10 A, by countersinked rotary switch, sealed	4 A, 6 A, 8 A, 10 A, by countersinked rotary switch, sealed
Inrush capacity	max. 20 mF (per channel)	max. 30 mF (per channel)
Group alarm output	potential free alarm output 30 V AC/DC, 100 mA	
Remote start (ON)	10...30 V DC	
Impulse length	min. 20 ms	
General data		
Connection	Spring clamp terminals	
Input terminals	2 × 16 mm²	
Output terminals	per output 1 × 4 mm²	
Alarm terminals	2.5 mm²	
Bridging concept	two sides, with spring clamp terminals or bridge set (max. 40 A)	
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Temperature range	0...+55 °C (storage temperature -40...+80 °C)	
Dimension drawing		
		

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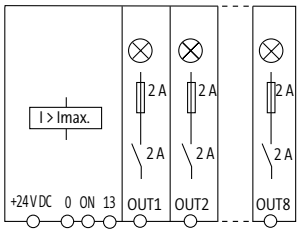
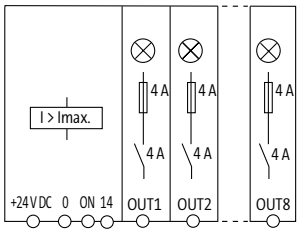
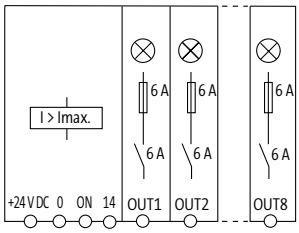
Notes

Over current protection device

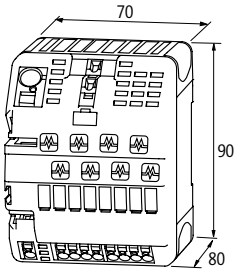
– preset tripping current

Approvals:

	MICO BASIC 8.2	**MICO BASIC 8.4**	**MICO BASIC 8.6**
	8 channels	8 channels	8 channels
			
Circuit diagram			
			

Order Data	**Art-No.**	**Art-No.**	**Art-No.**
2 A	**9000-41068-0200000**		
4 A		**9000-41068-0400000**	
6 A			**9000-41068-0600000**

Technical Data			
Operating voltage	24 V DC (18...30 V DC)		
Current adjustment	2 A	4 A	6 A
Group alarm output	max. 20 mA; high: all channels ON; low: not all channels ON		
Inrush capacity	max. 20 mF (per channel)		
Remote start (ON)	10...30 V DC		
Impulse length	min. 20 ms		
General data			
Input terminals	1 × 16 mm²		
Output terminals	per output 1 × 4 mm²		
Alarm terminals	2.5 mm²		
Bridging concept	one side, with spring clamp terminals or bridge set (max. 40 A)		
Temperature range	0...+55 °C (storage temperature -40...+80 °C)		
Connection	Spring clamp terminals		
Mounting method	DIN-rail mountable TH35 (EN 60715)		
Dimension drawing			



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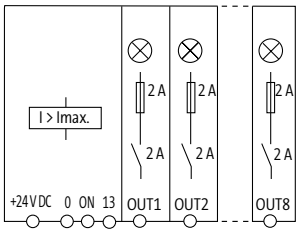
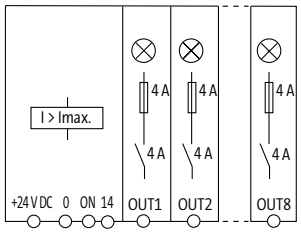
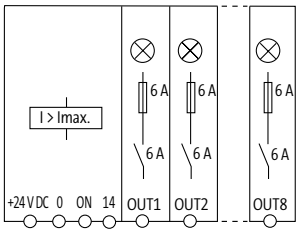
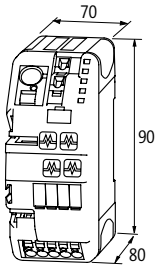
Notes

INTELLIGENT POWER DISTRIBUTION

Over current protection device

– preset tripping current

Approvals:

	MICO BASIC 4.2	MICO BASIC 4.4	MICO BASIC 4.6
	4 channels	4 channels	4 channels
			
Circuit diagram			
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
2 A	**9000-41064-0200000**		
4 A		**9000-41064-0400000**	
6 A			**9000-41064-0600000**
Technical Data			
Operating voltage	24 V DC (18...30 V DC)		
Current adjustment	2 A	4 A	6 A
Inrush capacity	max. 20 mF (per channel)		
Group alarm output	max. 20 mA; high: all channels ON; low: not all channels ON		
Remote start (ON)	10...30 V DC		
Impulse length	min. 20 ms		
General data			
Connection	Spring clamp terminals		
Input terminals	1 × 16 mm²		
Output terminals	per output 1 × 4 mm²		
Alarm terminals	2.5 mm²		
Bridging concept	one side, with spring clamp terminals or bridge set (max. 40 A)		
Mounting method	DIN-rail mountable TH35 (EN 60715)		
Temperature range	0...+55 °C (storage temperature -40...+80 °C)		
Dimension drawing			
			

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Notes

Over current protection device

– preset tripping current

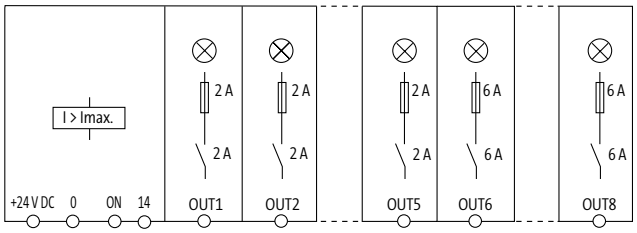
MICO BASIC 5.2/3.6

8 channels



Approvals:

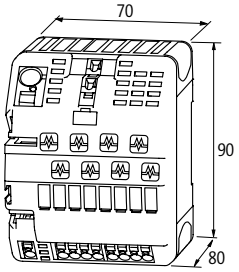
Circuit diagram



Order Data	Art-No.
	9000-41068-0200600

Technical Data	
Operating voltage	24 V DC (18...30 V DC)
Current adjustment	5 × 2 A; 3 × 6 A
Inrush capacity	max. 20 mF (per channel)
Group alarm output	max. 20 mA; high: all channels ON; low: not all channels ON
Remote start (ON)	10...30 V DC
Impulse length	min. 20 ms
General data	
Connection	Spring clamp terminals
Input terminals	1 × 16 mm²
Output terminals	per output 1 × 4 mm²
Alarm terminals	2.5 mm²
Bridging concept	one side, with spring clamp terminals or bridge set (max. 40 A)
Mounting method	DIN-rail mountable TH35 (EN 60715)
Temperature range	0...+55 °C (storage temperature -40...+80 °C)

Dimension drawing



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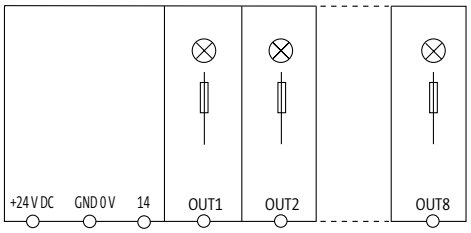
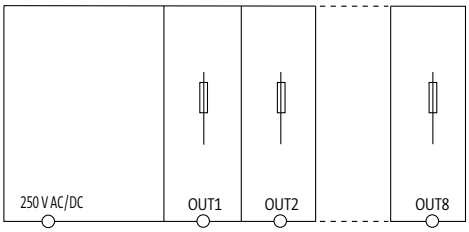
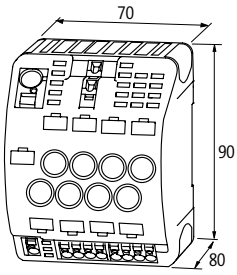
Notes

Socket for glass tube fuses	MICO FUSE 24 LED 8 channels	MICO FUSE 250 8 channels
Approvals:		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
24 V DC	**9000-41078-0600001**	
max. 250 V AC/DC		**9000-41078-0600002**
Technical Data		
Operating voltage	24 V DC (18...30 V DC)	max. 250 V AC/DC
Operating current	max. 6 A (40 °C)	
Total current	max. 40 A	
Group alarm output	max. 20 mA; high: all channels ON; low: not all channels ON	–
General data		
Connection	Spring clamp terminals	
Input terminals	1 × 16 mm²	
Output terminals	1 × 0.5...4 mm²	
Alarm terminals	2.5 mm²	–
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Temperature range	-25...+55 °C	
Dimension drawing		
		

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Notes

Accessories			Art-No.
	**Bridge system**		
		Quantity: 1 piece	**9000-41034-0000002**
		Quantity: 10 pcs.	**9000-41034-0000001**
	Shortened buttons		
	1 set (4 pcs.)		**9000-41034-0000003**
	**Label plates**		
	KES 20 × 8 (white)	10 pieces/2 plates	**996067**
	KMR 5 × 10 (white)	(64 pieces/4 plates)	**996078**
	**Glass automotive fuse**		
	2 A (T)		**9000-41078-0000002**
	4 A (T)		**9000-41078-0000004**
	6 A (T)		**9000-41078-0000006**
	Fuse cap		
			9000-41078-0000010



CONVERTERS / RECTIFIERS

- **Compact design**
- **Galvanic separation**
- **Switch mode models**

SMALL VOLTAGE CONVERTERS

Voltages in control systems often have to be converted. The DC/DC converters in the MDD series do this perfectly! It doesn‘t matter if you need 5, 10, 12 or 24 volts – Murrelektronik has the right product.

If there is only AC voltage available, the NG rectifier series can convert into DC voltage.
All models can be conveniently mounted in the control cabinet on DIN rail.

AC/DC and DC/DC Converters



MDD, GLS, GSS, NG, NT
• Output current range: 0.5...4 A

Page 1.6.1

Rectifiers



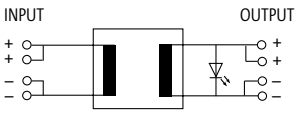
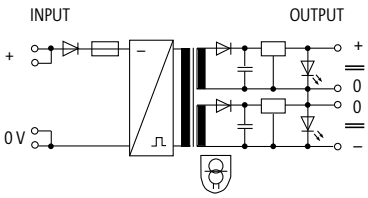
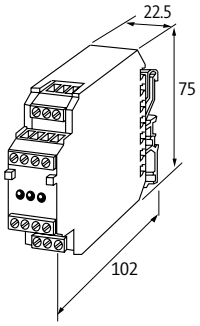
NG
• Output current range: 2.6...10 A

Page 1.6.3

MURR ELEKTRONIK
stay connected

Swiched mode

– with galvanic isolation

	MDD	MDD	MDD	MDD	MDD
	OUTPUT: 24 V DC Current: 0.3 A	OUTPUT: 12 V DC Current: 0.7 A	OUTPUT: 5 V DC Current: 1.5 A	OUTPUT: ±10 V DC Current: 2 × 0.25 A	OUTPUT: ±15 V DC Current: 2 × 0.25 A
					
Circuit diagram					
					
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
24 V DC/0.3 A	**85655**				
12 V DC/0.7 A		**85656**			
5 V DC/1.5 A			**85657**		
±10 V DC/2 × 250 mA				**85658**	
±15 V DC/2 × 250 mA					**85659**
Input					
Input voltage	24 V DC				
Input current	0.6 A			0.85 A	
Input fuse (external)	2 A (T)			–	
Input fuse (internal)	1.5 A (T)				
Output					
Output fuse	short-circuit and overload protected, restart after overload by removing power supply				
Output voltage	24 V DC (SELV), ±2 %	12 V DC (SELV), ±2 %	5 V DC (SELV), ±2 %	±10 V DC (SELV), ±5 %	±15 V DC (SELV), ±5 %
Output current	max. 0.3 A	max. 0.7 A	max. 1.5 A	max. 2 × 250 mA	
Ripple	max. 0.2 % eff				
General data					
Standards	(EN 61204-3)				
Test isolation voltage	4 kV (input/output)				
Temperature range	0...+50 °C, no condensation				
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)				
Dimension drawing					
					

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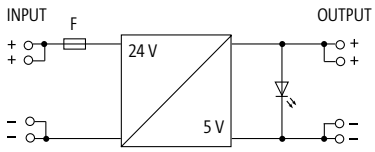
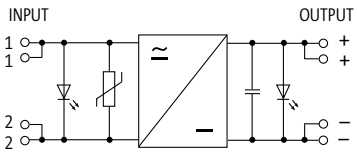
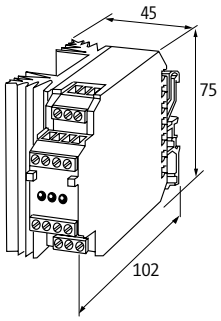
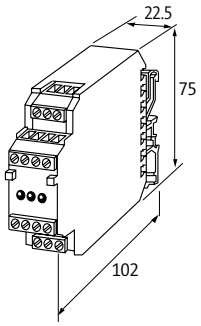
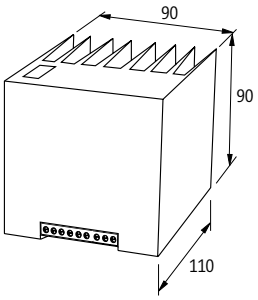
Notes

DC/DC converters

– AC/DC converters

	GLS	**GSS**	**NT**
	OUTPUT regulated: 5 V DC Current: 1.2 A	OUTPUT switched mode: 5 V DC Current: 4 A	OUTPUT: 5...35 V DC Current: 3.5 A
			
Circuit diagram			
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
5 V DC/1.2 A	**85600**		
5 V DC/4 A		**85650**	
5...35 V DC/3.5 A			**85660**
Input			
Input voltage	24 V DC (+10/-15 %)	15...40 V DC	10...32 V AC; 12...42 V DC
Input current	1.2 A	1 A, 4 A (24 V DC)	max. 3 A
Input fuse (internal)	2 A (T)		6.3 A (T)
Frequency	–		50/60 Hz
Output			
Output voltage	5 V DC (SELV), ±5 %		5...35 V DC (SELV), Uout-max. = Uin -5 V
Output current	max. 1.2 A	max. 4 A	max. 3.5 A
Ripple	max. 0.2 % eff		max. 300 mV rms
Output fuse	short-circuit protected		
General data			
Temperature range	-20...+60 °C, no condensation		
Mounting method	DIN-rail mountable TH35 (EN 60715)		
Dimension drawing			
			

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Notes

Rectifier modules

– Single-phase

– IP00

NG 2

INPUT: max. 41 V AC



NG 5

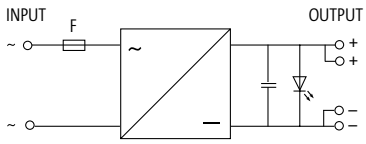
INPUT: max. 41 V AC

NG 10

INPUT: max. 29 V AC

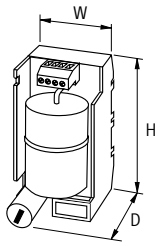


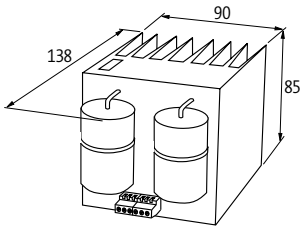
Circuit diagram



Order Data	H×W×D	Art-No.	H×W×D	Art-No.	H×W×D	Art-No.
24 V DC/2.6 A	86×45×92 mm	**85700**				
24 V DC/5 A			90×68×87 mm	**85710**		
24 V DC/10 A						**85730**
Input						
Input voltage	max. 5...44 V AC				max. 29 V AC	
Input current	max. 2.6 A; 1.8 A (+60 °C)		max. 5 A; 4 A (+60 °C)		max. 10 A	
Frequency	45...65 Hz				50/60 Hz (or as additional smoothing for DC)	
Input fuse (external)	–		8 A (T), 5 × 20 mm		16 A (T), 5 × 20 mm	
Input fuse (internal)	3.15 A (T), 5 × 20 mm		–			
Output						
Output voltage	U-IN × 1.16/max. 60 V DC				U-IN × 1.16/max. 39 V DC	
Output current	max. 2.6 A; 1.8 A (+60 °C)		max. 5 A; 4 A (+60 °C)		max. 10 A	
Ripple	max. 5 % rms					
Output filter	smoothed with smoothing capacitor and LED					
General data						
Temperature range	-20...+60 °C					
Mounting method	DIN-rail mountable TH35 (EN 60715)					

Dimension drawing





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Notes



MODLINK MSVD – CONTROL CABINET POWER OUTLETS

- **Safe**
- **Easy to install**
- **Meet international standards**

KEEP IT SAFE – EVEN IN THE CONTROL CABINETS

Using components temporarily in the control cabinet require right power outlets. Murrelektronik has the right tools: a wide range of power outlets for different countries.

Components that still carry voltage after they are shut down need to be specially marked (according to DIN VDE 0105-1 and IEC 204-1 / EN 60504-1 / DIN VDE 0113 Part 1). These power outlets are orange.

Control Cabinet Power Outlets



German standard (VDE)
- for DIN-rail mounting acc. to EN 60715
- with screw terminals or spring clamp terminals

Page 1.7.1



French Standard (UTE)
- for DIN-rail mounting acc. to EN 60715
- with screw terminals or spring clamp terminals

Page 1.7.1



American Standard (NEMA 5-15)
- for DIN-rail mounting acc. to EN 60715
- with screw terminals
- LED display

Page 1.7.2



Different international standards
- for DIN-rail mounting acc. to EN 60715

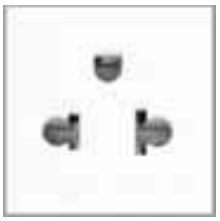
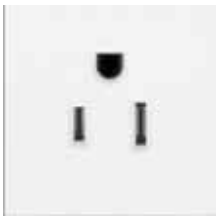
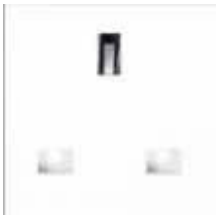
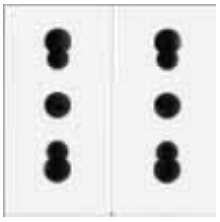
Page 1.7.3

CONTROL CABINET POWER OUTLETS

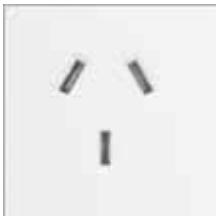
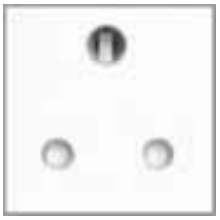
German standard (VDE)			Art-No.
	**Germany (VDE) white** Screw terminals: max. 2 × 6 mm² Operating voltage: max. 250 V AC	VDE	**67900**
	**Germany (VDE) white** Screw terminals: max. 2 × 6 mm² Operating voltage: max. 250 V AC LED (yellow)	VDE	**67901**
	**Germany (VDE) yellow** Screw terminals: max. 2 × 6 mm² Operating voltage: max. 250 V AC	VDE	**67950**
	**Germany (VDE) orange** Screw terminals: max. 2 × 2.5 mm² (AWG 14) Operating voltage: max. 250 V AC	VDE	**4000-72000-0140000**
	**Germany (VDE) white** Spring clamp terminals: max. 2 × 2.5 mm² (AWG 14) Operating voltage: max. 250 V AC	VDE	**4000-72000-0160000**
French standard (UTE)			**Art-No.**
	**France (UTE-NF) white** Screw terminals: max. 2 × 6 mm² Operating voltage: max. 250 V AC	UTE	**67910**
	**France (UTE-NF) white** Screw terminals: max. 2 × 6 mm² Operating voltage: max. 250 V AC LED (yellow)	UTE	**67911**

CONTROL CABINET POWER OUTLETS

French standard (UTE)			Art-No.
	**France (UTE-NF) white** Screw terminals: max. 2 × 4 mm² Operating voltage: max. 250 V AC	UTE	**4000-72000-3010000**
	**France (UTE-NF) red** Screw terminals: max. 2 × 2.5 mm² (AWG 14) Operating voltage: max. 250 V AC	UTE	**4000-72000-0130000**
	**France (UTE-NF) orange** Screw terminals: max. 2 × 2.5 mm² (AWG 14) Operating voltage: max. 250 V AC	UTE	**4000-72000-0150000**
American standard			**Art-No.**
	**USA (NEMA 5-15)** Screw terminals: max. 2.5 mm² (AWG 14) Operating voltage: max. 127 V AC LED (yellow)	cURus	**676166**
	**USA (NEMA 5-15)** Screw terminals: max. 2.5 mm² (AWG 14) Operating voltage: max. 127 V AC LED (yellow)	Connection turned cURus	**676152**
	**USA (2 × NEMA-GFCI 5-15)** Screw terminals: max. 6 mm² Operating voltage: max. 127 V AC max. 15 A LED (yellow)	(Ground Fault Circuit Interrupter) cURus	**67980**
	**USA (2 × NEMA-GFCI 5-20)** Screw terminals: max. 6 mm² Operating voltage: max. 125 V AC max. 20 A LED (yellow)	(Ground Fault Circuit Interrupter) cURus	**67981**

American standard			Art-No.
	**USA (2 × NEMA 5-15)** Screw terminals: max. 6 mm² max. 15 A Operating voltage: max. 125 V AC	cURus	**67982**
	**USA (2 × NEMA 5-20)** Screw terminals: max. 6 mm² max. 20 A Operating voltage: max. 125 V AC	cURus	**67983**
International standards			**Art-No.**
	**EURO/ USA (white)** Screw terminals: max. 2 × 2.5 mm² (AWG 14) Operating voltage: EURO: max. 250 V AC, USA: max. 127 V AC		**4000-72000-0100000**
	**USA (NEMA 5-15) white** Screw terminals: max. 2 × 2.5 mm² (AWG 14) Operating voltage: max. 125 V AC		**4000-72000-0040000**
	**England (white)** Screw terminals: max. 2 × 4 mm² Operating voltage: max. 250 V AC	BS	**4000-72000-0060000**
	**England (orange)** Screw terminals: max. 2 × 4 mm² Operating voltage: max. 250 V AC	BS	**4000-72000-0190000**
	**Italy (white)** Screw terminals: max. 2 × 2.5 mm² (AWG 14) Operating voltage: max. 250 V AC	Double CEI 23-16	**4000-72000-0070000**

CONTROL CABINET POWER OUTLETS

International standards			Art-No.
	**Italy (white)**		
	Screw terminals: max. 2 × 2.5 mm² (AWG 14) Operating voltage: max. 250 V AC	VDE/CEI 23-16	**4000-72000-0180000**
	**Denmark (white)**		
	Spring clamp terminals: max. 2 × 2.5 mm² (AWG 14) Operating voltage: max. 250 V AC		**4000-72000-0170000**
	**Swiss (white)**		
	Spring clamp terminals: max. 2 × 1.5 mm² (AWG 16) Operating voltage: max. 250 V AC		**4000-72000-0120000**
	**Australia (white)**		
	Screw terminals: max. 2 × 4 mm² Operating voltage: max. 240 V AC		**4000-72000-0090000**
	**India (white)**		
	Screw terminals: max. 2 × 4 mm² Operating voltage: max. 240 V AC	IS 1293	**4000-72000-3210000**
	**China (white)**		
	Screw terminals: max. 2 × 4 mm² Operating voltage: max. 250 V AC	CCC	**4000-72000-3250000**



EMC FILTERS
FOR MAXIMUM SAFETY

- **Meets EMC guidelines**
- **Increases interference protection**
- **Decreases interference emissions**

KEEP IT SAFE – EVEN IN THE CONTROL CABINETS

Mains filters are used to reduce interference without affecting the supply. Murrelektronik's filters decrease incoming interference, which can affect sensitive equipment, and also decrease outgoing interference from the equipment they are connected to, which could damage the mains supply. Typical sources of continuous interference are switch mode power supplies, motors and phase controllers.

These sources are made up of inductive and capacitive components and work the best when their impedance is matched to the source of the interference. In regards to grounding, it's important to have a low impedance. Ideally, the filter should be as close as possible to the point where the cable enters the cabinet. If that's not possible, then shielded cables should be used between the filter and the entry point. Ground straps should be as short as possible and connection surfaces should be free from paint, etc.

Single-phase



MEF 1/1 – one-stage
- Operating voltage: max. 250 V AC/DC, 0...60 Hz
- Nominal current: 10...20 A

Page 1.8.1



MEF 1/2 SY and MEF 1/2 AS – two-stage
- Operating voltage: max. 250 V AC/DC, 0...60 Hz
- Nominal current: 10...16 A

Page 1.8.2

Three-phase



MEF 3/1 N – one-stage
- Operating voltage: max. 3 x 440 V AC
- Nominal current: 3...20 A

Page 1.8.4



MEF 3/1 N HD – one-stage
- Operating voltage: max. 3 x 500 V AC
- Nominal current: 10...135 A

Page 1.8.5



MEF 3/1 and MEF 3/2 – one and two-stage
- Operating voltage: max. 3 x 500 V AC / 3 x 600 V AC
- Nominal current: 8...180 A

Page 1.8.6

MURR ELEKTRONIK
stay connected

1-phase, 1-stage

– DIN-rail mountable

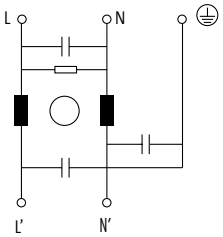
Approvals: cULus PCT

MEF 1/1

for universal applications



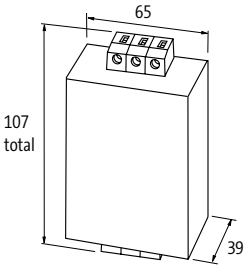
Circuit diagram



Order Data	Art-No.
10 A	**10415**
20 A	**10416**

Technical Data	
Operating voltage	max. 250 V AC/300 V DC
Operating frequency	50...60 Hz
Consumption at 250 V AC	max. 5 mA
Overload current	18 × (IN t) max. 0.5 ms; 1.5 × (IN t) max. 1 min. (1 × per hour)
General data	
Climatic category	25/085/21 (EN 60068-1)
Test isolation voltage	L - N: 2.7 kV DC, 2 s; L - L: 2.1 kV DC, 2 s (EN 60939-2)
Connection	Screw connection, touch protected
Mounting method	DIN-rail mountable TH35 (EN 60715)

Dimension drawing



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Notes

EMC FILTERS

1-phase, 2-stage

– DIN-rail mountable

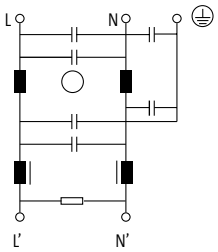
Approvals:

MEF 1/2 SY

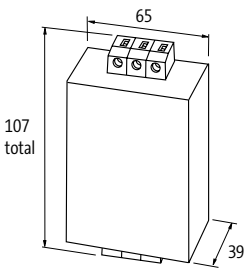
against symmetrical interferences



Circuit diagram



Order Data		Art-No.
1 A		**10460**
2 A		**10461**
3 A		**10462**
4 A		**10463**
6 A		**10464**
16 A		**10466**
Technical Data		
Operating voltage	max. 250 V AC/300 V DC	
Operating frequency	50...60 Hz	
Overload current	18 × (IN t) max. 0.5 ms; 1.5 × (IN t) max. 1 min. (1 × per hour)	
Consumption at 250 V AC	max. 5 mA	
General data		
Climatic category	25/085/21 (EN 60068-1)	
Test isolation voltage	L - N: 2.7 kV DC, 2 s; L - L: 2.1 kV DC, 2 s (EN 60939-2)	
Connection	Screw connection, touch protected	
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Description		
Functional description	The single phase 2-stage EMC filters MEF 1/2 are used in the range 0.1...30 MHz to suppress cable carried interference on mains and control cables. The best filter performance is achieved by using short connection wires (suggestion: earth connection < 10 cm) and the largest possible diameter. The EMC filters work bi-directionally (in both directions). The filters are for demanding applications. The filters are designed for use with fixed modules. One step of the filter is always for the suppression of asymmetrical interferences (magnetically compensated suppression). The second step is, dependant on application for symmetrical or asymmetrical interferences.	
Application	symmetrical interferences: units with high repetitions of the switching processes, - switch mode P.S.U.s, - phase angle controller, - supply of universal motors, - behind transformers	
Dimension drawing		



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Notes

MURR ELEKTRONIK
stay connected

1-phase, 2-stage

– DIN-rail mountable

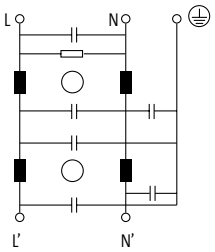
Approvals: cULus

MEF 1/2 AS

against asymmetrical interferences

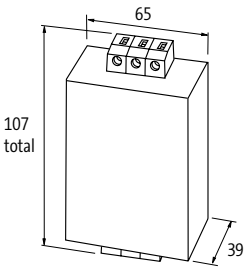


Circuit diagram



Order Data		**Art-No.**
3 A		**10470**
6 A		**10471**
10 A		**10472**
Technical Data		
Operating voltage	max. 250 V AC/300 V DC	
Operating frequency	50...60 Hz	
Consumption at 250 V AC	max. 5 mA	
Overload current	18 × (IN t) max. 0.5 ms; 1.5 × (IN t) max. 1 min. (1 × per hour)	
General data		
Climatic category	25/085/21 (EN 60068-1)	
Test isolation voltage	L - N: 2.7 kV DC, 2 s; L - L: 2.1 kV DC, 2 s (EN 60939-2)	
Connection	Screw connection, touch protected	
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Description		
Functional description	The single phase 2-stage EMC filters MEF 1/2 are used in the range 0.1...30 MHz to suppress cable carried interference on mains and control cables. The best filter performance is achieved by using short connection wires (suggestion: earth connection < 10 cm) and the largest possible diameter. The EMC filters work bi-directionally (in both directions). The filters are for demanding applications. The filters are designed for use with fixed modules. One step of the filter is always for the suppression of asymmetrical interferences (magnetically compensated suppression). The second step is, dependant on application for symmetrical or asymmetrical interferences.	
Application	asymmetrical interferences: - units with high switching frequency and repetition, - switch mode P.S.U.s, - in DC mains, - in front of transformers, - for frequency inverters	

Dimension drawing



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Notes

EMC FILTERS

3-phase, 1-stage

– DIN-rail mountable

– with neutral

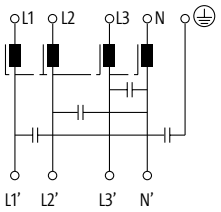
Approvals:

MEF 3/1 N

for universal applications

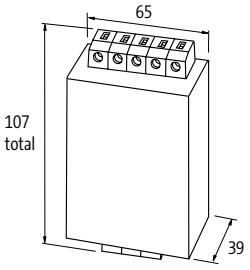


Circuit diagram



Order Data		Art-No.
3 A		**10510**
6 A		**10511**
10 A		**10512**
20 A		**10513**
Technical Data		
Operating voltage	max. 4 × 440 V AC	
Operating frequency	50...60 Hz	
Consumption at 250 V AC	max. 3 mA	
Overload current	18 × (IN t) max. 0.5 ms; 1.5 × (IN t) max. 1 min. (1 × per hour)	
General data		
Climatic category	25/085/21 (EN 60068-1)	
Test isolation voltage	L - N: 2.7 kV DC, 2 s; L - L: 2.1 kV DC, 2 s (EN 60939-2)	
Connection	Screw connection, touch protected	
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Description		
Functional description	The 3-phase and one-stage EMC filters MEF 3/1 are used in the range 0.1...30 MHz and dampen interferences found in cables from the mains, supply units and control systems. They are suitable for TN-S, TN-C-S, and TT networks. The best results are obtained with short connection cables (suggestion: earth connection < 10 cm) of the largest possible cross-section. The EMC filters are bi-directional. They reduce symmetrical and asymmetrical interferences that regularly appear with electronically controlled three phase units through mains influences.	

Dimension drawing



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Notes

MURR ELEKTRONIK
stay connected

3-phase, 1-stage

– with neutral

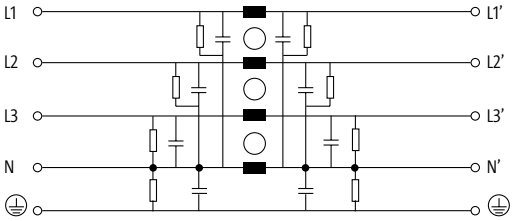
MEF 3/1 N HD

with increased damping



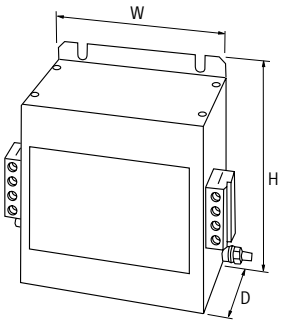
Approvals:

Circuit diagram



Order Data	**H×W×D/kg**	**Art-No.**
10 A	153×130×100/1.0	**10571**
18 A	153×130×100/1.0	**10572**
36 A	153×130×100/1.1	**10574**
72 A	153×118×125/1.6	**10575**
100 A	170×180×140/3.4	**10577**
135 A	170×180×140/4.5	**10578**
Accessories		**Art-No.**
Ground strap 16 mm²		**4000-71001-1620006**
Ground strap 35 mm²		**4000-71001-3520006**
Technical Data		
Operating voltage	max. 3 × 500 V AC	
Operating frequency	50...60 Hz	
Consumption at 250 V AC	max. 15 mA	
Overload current	18 × (IN t) max. 0.5 ms; 1.5 × (IN t) max. 1 min. (1 × per hour)	
General data		
Climatic category	25/085/21 (EN 60068-1)	
Test isolation voltage	L - N: 3.3 kV DC, 2 s; L - L: 3.1 kV DC, 2 s	
Mounting method	screw fixing, M6	
Description		
Functional description	The 3-phase and one-stage EMC filters MEF 3/1 are used in the range 0.1...30 MHz and dampen interferences found in cables from the mains, supply units and control systems. They are suitable for TN-S, TN-C-S, and TT networks. The best results are obtained with short connection cables (suggestion: earth connection < 10 cm) of the largest possible cross-section. The EMC filters are bi-directional. They reduce symmetrical and asymmetrical interferences that regularly appear with electronically controlled three phase units through mains influences.	

Dimension drawing



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Notes

EMC FILTERS

3-phase, 1-stage

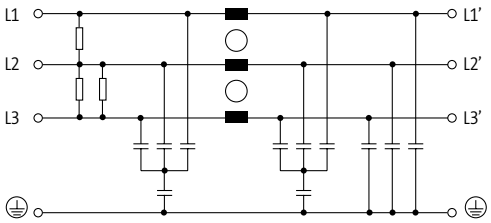
– Space saving book form

MEF 3/1



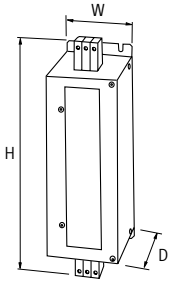
Approvals: cULus

Circuit diagram



Order Data	H×W×D/kg	Art-No.
8 A	250×90×100/1.3 – GOST	**10531**
16 A	250×90×100/1.3 – GOST	**10532**
25 A	250×90×100/1.3 – GOST	**10533**
36 A	250×90×100/1.5	**10534**
50 A	250×90×100/1.7 – GOST	**10535**
80 A	270×85×135/2.2 – GOST	**10537**
110 A	270×90×150/3.2 – GOST	**10538**
180 A	380×120×170/5.1 – GOST	**10539**
Accessories		**Art-No.**
Ground strap 16 mm²		**4000-71001-1620006**
Ground strap 35 mm²		**4000-71001-3520006**
Technical Data		
Operating voltage	max. 3 × 600 V AC	
Operating frequency	50...60 Hz	
Overload current	18 × (IN t) max. 0.5 ms; 1.5 × (IN t) max. 1 min. (1 × per hour)	
Consumption at 250 V AC	max. 10 mA	
General data		
Climatic category	25/085/21 (EN 60068-1)	
Test isolation voltage	L - N: 3.3 kV DC, 2 s; L - L: 3.1 kV DC, 2 s	
Connection	Screw connection, touch protected	
Mounting method	screw fixing	
Description		
Functional description	The 3-phase and 1-/2-stage EMC filters MEF 3/1-3/2 are used in the range 0.1...30 MHz and dampen interferences found in cables from the mains, supply units and control systems. They are suitable for TN-C- and IT mains. The best results are obtained with short connection cables (suggestion: earth connection < 10 cm) of the largest possible cross-section. The EMC filters are bi-directional. They reduce symmetrical and asymmetrical interferences that often occur with frequency converters and switch mode power supplies.	

Dimension drawing



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Notes

MURR ELEKTRONIK
stay connected

3-phase, 2-stage

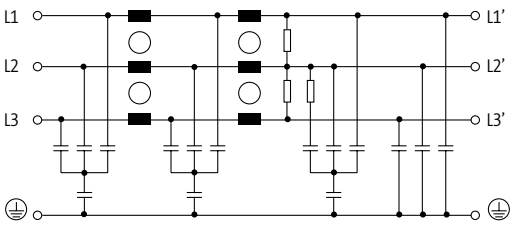
– Space saving book form

MEF 3/2



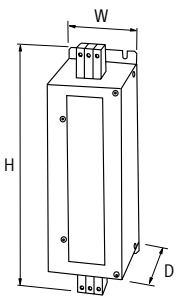
Approvals:

Circuit diagram



Order Data	H×W×D/kg	Art-No.
8 A	226×50×140/1.7	**10550**
12 A	226×50×140/1.7	**10551**
16 A	226×50×140/1.7	**10552**
25 A	226×50×140/1.7	**10553**
36 A	226×50×140/1.7	**10554**
50 A	295×70×177/3.7	**10555**
80 A	295×70×177/5.1	**10556**
Accessories		**Art-No.**
Ground strap 16 mm²		**4000-71001-1620006**
Ground strap 35 mm²		**4000-71001-3520006**
Technical Data		
Operating voltage	max. 3 × 500 V AC	
Operating frequency	50...60 Hz	
Overload current	18 × (IN t) max. 0.5 ms; 1.5 × (IN t) max. 1 min. (1 × per hour)	
Consumption at 250 V AC	max. 15 mA	
General data		
Climatic category	25/085/21 (EN 60068-1)	
Test isolation voltage	L - N: 3.3 kV DC, 2 s; L - L: 3.1 kV DC, 2 s	
Connection	Screw connection, touch protected	
Mounting method	screw fixing	
Description		
Functional description	The 3-phase and 1-/2-stage EMC filters MEF 3/1-3/2 are used in the range 0.1...30 MHz and dampen interferences found in cables from the mains, supply units and control systems. They are suitable for TN-C- and IT mains. The best results are obtained with short connection cables (suggestion: earth connection < 10 cm) of the largest possible cross-section. The EMC filters are bi-directional. They reduce symmetrical and asymmetrical interferences that often occur with frequency converters and switch mode power supplies.	

Dimension drawing



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Notes



EMC SUPPRESSORS
SMALL DEVICE, BIG IMPACT

- **Meets EMC guidelines**
- **Reduces voltage peaks**
- **Prevents coil short circuits**

MURRELEKTRONIK SOLVES YOUR INTERFERENCE PROBLEMS

- Optimum interference results by adjusting your inductive load
- Prefabricated modules make it easy to install – reliably mounted every time
- Prevents operative failures and outages and increases availability
- Long service life of contacts and switching elements lower maintenance costs

THE RIGHT SUPPRESSION FOR ALL STANDARD INDUCTIVE LOADS

For Contactors

- Integrated system solutions for all standard contactors
- Universal suppressors for contactors or relays that snap in or stick to the mounting surface

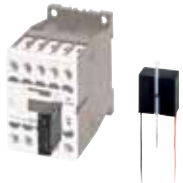
For Motors

- Suppression directly next to the interference source or inside the motor terminal box
- Motor connector has 10 poles and an earth connection point with integrated suppressor module and pre-wired cable
- Integrated system solutions for direct connection to the contactor
- Universal suppressors snap in next to the motor contactor

For Valves

- Suppressors are simply mounted between valve base and valve plug instead of the flat gasket

EMC Suppressors



For Contactors
ABB, General Electric, Eaton, Omron, Rockwell A. B., Schneider-Telemecanique, Siemens

Universal Suppressors

Page 1.9.1



For Motors – Installation on the Motor
RC 3 U, RC 3 R, RC 3 ST

Page 1.9.14



For Motors – Installation in the Cabinet
RC 3 BUR, HRC 3 AS, RC 3 RT

Page 1.9.17



For Valves
Form A, B, BI, C, CI

Page 1.9.18

EMC SUPPRESSORS

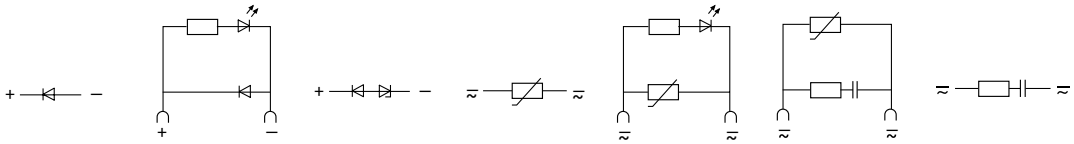
Suppressors for contactors

ABB ASEA BROWN BOVERI

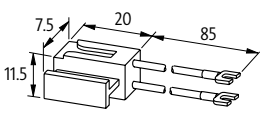
Approvals:

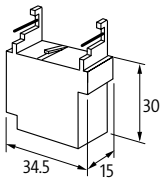
	BC	A 16	A 110
			

Circuit diagram



		BC	A 16	A 110
Appropriate contactors				
		B 6, BC 6, VB 6, KC 6	A 9...A 16	A 26...A 110
Ordering data		**Art.-No.**	**Art.-No.**	**Art.-No.**
Voltage	Suppression	Approval	Approval	Approval
24 ...240 V DC	Diode		**26440**	
24 V DC	Diode + LED			
	Diode/Z-Diode			
24 V AC/DC	VDR	CSA **26277**		
	VDR + LED			
	RC			
48 V DC	Diode/Z-Diode			
48 V AC/DC	VDR	CSA **26278**		
	RC			
110 V AC/DC	VDR			
	VDR + LED			
	VDR-RC			
	RC		CSA **21172**	CSA **21173**
230 V AC/DC	VDR	CSA **26079**		
	VDR + LED			
	VDR-RC			
	VDR-RC + LED			
	RC		CSA **21172**	CSA **21173**
400 V AC/DC	VDR			
	RC			
415 V AC/DC	RC			
Technical data				
Damping factor		~1,5 x U_N		
Temperature range		-20...+70 °C		
Material		plastic, flame retardant (UL 94)		
Connection wires		self-securing cable forks	plug contact	
Dimension drawing				





Notes

EMC SUPPRESSORS

Suppressors for contactors

Approvals:

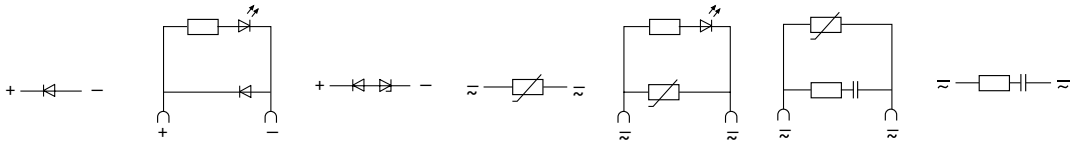
M



CL



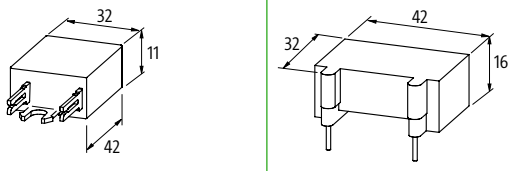
Circuit diagram



		M	CL00, 01, 02, 25	CL03, 04, 45	CL05...10
Appropriate contactors					
Ordering data		**Art.-No.**	**Art.-No.**	**Art.-No.**	**Art.-No.**
Voltage	Suppression				
24 ...240 V DC	Diode	**2000-68300-110 0000**	**2000-69100-110 0000**	**2000-69200-110 0000**	
24 V DC	Diode + LED				
	Diode/Z-Diode				
24 V AC/DC	VDR	**2000-68300-440 0000**	**2000-69100-440 0000**	**2000-69200-440 0000**	**2000-69100-440 0000**
	VDR + LED				
	RC	**2000-68300-430 0000**	**2000-69100-430 0000**	**2000-69200-430 0000**	**2000-69101-430 0000**
48 V DC	Diode/Z-Diode				
48 V AC/DC	VDR	**2000-68300-440 0000**	**2000-69100-440 0000**	**2000-69200-440 0000**	**2000-69100-440 0000**
	RC	**2000-68300-430 0000**	**2000-69100-430 0000**	**2000-69200-430 0000**	**2000-69101-430 0000**
110 V AC/DC	VDR		**2000-69100-740 0000**	**2000-69200-740 0000**	**2000-69100-740 0000**
	VDR + LED				
	VDR-RC				
	RC		**2000-69100-730 0000**		
230 V AC/DC	VDR		**2000-69100-242 0000**	**2000-69200-242 0000**	
	VDR + LED				
	VDR-RC				
	VDR-RC + LED				
	RC			**2000-69200-232 0000**	**2000-69101-232 0000**
400 V AC/DC	VDR		**2000-69100-542 0000**	**2000-69200-542 0000**	**2000-69100-542 0000**
	RC				
415 V AC/DC	RC				

Technical data	
Damping factor	~1,5 x U_N
Temperature range	-20...+70 °C
Material	plastic, flame retardant (UL 94)
Connection wires	plug contact

Dimension drawing



Notes

Art.-No. 2000-69200-110 0000 – also for CL05...10 DC-coils.

MURR ELEKTRONIK
stay connected

Suppressors for contactors

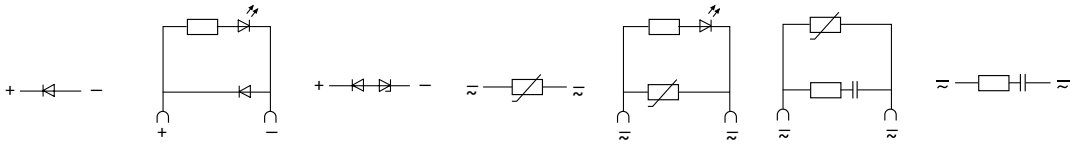
EATON
Powering Business Worldwide

Approvals:

X-Start



Circuit diagram



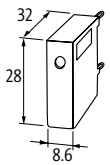
Appropriate contactors

		DIL M7...15 DIL MP20, DIL A	DIL M17...32	DIL M40...95
Ordering data		**Art.-No.**	**Art.-No.**	**Art.-No.**
Voltage	Suppression			
24 ...240 V DC	Diode			
24 V DC	Diode + LED			
	Diode/Z-Diode			
24 V AC/DC	VDR			
	VDR + LED	**26013**	**26015**	
	RC			
48 V DC	Diode/Z-Diode			
48 V AC	VDR + LED	**26013**	**26015**	
	RC			
110 V AC/DC	VDR			
	VDR + LED	**26014**		
	VDR-RC			
	RC	**20007**	**20008**	**20009**
230 V AC/DC	VDR			
	VDR + LED	**26014**		
	VDR-RC			
	VDR-RC + LED			
	RC	**20007**	**20008**	**20009**
400 V AC/DC	VDR			
	RC			

Technical data

Damping factor	~1,5 x U_N
Temperature range	-20...+70 °C
Material	plastic, flame retardant (UL 94)
Connection wires	plug contact

Dimension drawing



Notes

LED indicator for 24 V DC without suppression available on request.

EMC SUPPRESSORS

Suppressors for contactors

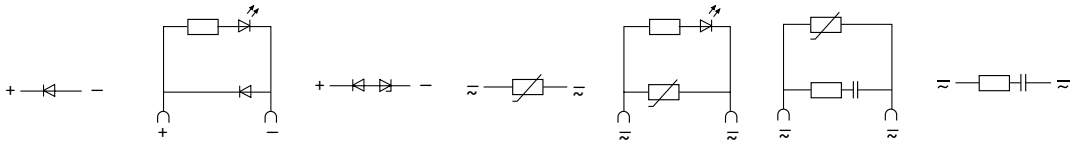
Powering Business Worldwide

Approvals:

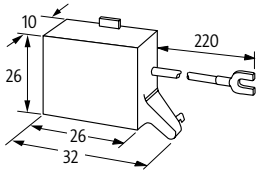


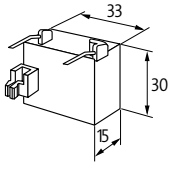


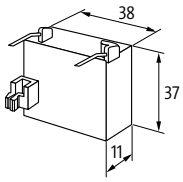
Circuit diagram



Appropriate contactors		DIL E...	DIL 3 - 4...M DIL 3 H, DIL 4 H	DIL 0 -2...M DIL R...
Ordering data		**Art.-No.**	**Art.-No.**	**Art.-No.**
Voltage	Suppression			Approval
24 ...240 V DC	Diode			**26080**
24 V DC	Diode + LED			
	Diode/Z-Diode			**26081**
24 V AC/DC	VDR			
	VDR + LED			
	RC			
48 V DC	Diode/Z-Diode			
48 V AC/DC	VDR			
	RC			
110 V AC/DC	VDR			
	VDR + LED			
	VDR-RC			
	RC	**21054**	**21073**	**21028**
230 V AC/DC	VDR	**26086**		
	VDR + LED			
	VDR-RC			
	VDR-RC + LED			
	RC	**21054**	**21073**	**21028**
400V AC/DC	VDR			
	RC			
Technical data				
Damping factor		~1,5 x U_N		
Temperature range		-20...+70 °C		
Material		plastic, flame retardant (UL 94)		
Connection wires		self-securing cable forks	plug contact	
Dimension drawing				







Notes

EMC SUPPRESSORS

Suppressors for contactors

OMRON

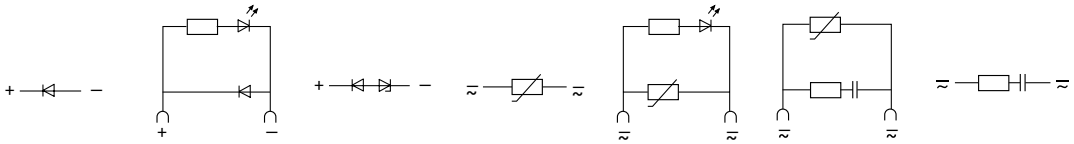
Approvals:







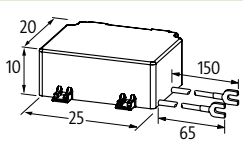
Circuit diagram

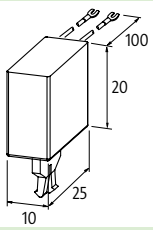


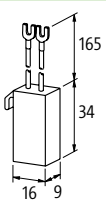
Appropriate contactors				
		J7KNA	J7KN	J7KN
Ordering data		**Art.-No.**	**Art.-No.**	**Art.-No.**
Voltage	Suppression			Approval
24 ...240 V DC	Diode			
24 V DC	Diode + LED			
	Diode/Z-Diode			
24 V AC/DC	VDR			cURus / CSA **26400**
	VDR + LED			
	RC	**2000-68800-230 0000**	**2000-69000-230 0000**	
48 V DC	Diode/Z-Diode			
48 V AC	VDR			cURus / CSA **26401**
	RC			
110 V AC/DC	VDR			
	VDR + LED			
	VDR-RC			
	RC	**2000-68800-730 0000**		
230 V AC/DC	VDR			cURus / CSA **26403**
	VDR + LED			
	VDR-RC			
	VDR-RC + LED			
	RC	**2000-68800-232 0000**		
400 V AC/DC	VDR			cURus / CSA **26404**
	RC			

Technical data	
Damping factor	~1,5 x U_N
Temperature range	-20...+70 °C
Material	plastic, flame retardant (UL 94)
Connection wires	self-securing cable forks

Dimension drawing







Notes

Further types on request.

EMC SUPPRESSORS

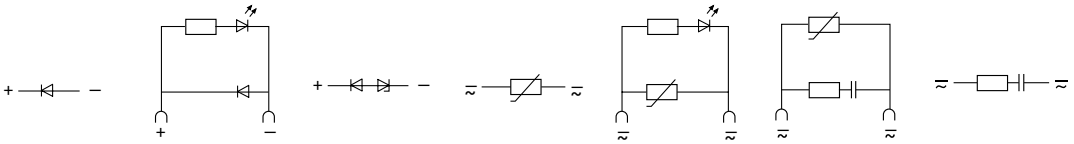
Suppressors for contactors

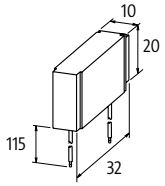
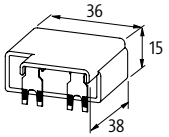
ALLEN-BRADLEY

Approvals:

	I00-M	I00-C
		

Circuit diagram



		I00-M		I00-C	
Appropriate contactors					
		I00 M		I00-C09...C85	
Ordering data			**Art.-No.**		**Art.-No.**
Voltage	Suppression	Approval		Approval	
24 ...240 V DC	Diode			cURus / CSA	**2000-68200-110 0000**
24 V DC	Diode + LED				
24 V AC/DC	Diode /Z-Diode				
	RC			cURus / CSA	**2000-68200-430 0000**
	VDR	cURus / CSA	**26375**	cURus / CSA	**2000-68200-440 0000**
48V AC/DC	RC			cURus / CSA	**2000-68200-430 0000**
	VDR			cURus / CSA	**2000-68200-440 0000**
110V AC/DC	VDR			cURus / CSA	**2000-68200-740 0000**
	VDR + LED				
	VDR-RC				
	RC			cURus / CSA	**2000-68200-132 0000**
230 V AC/DC	VDR	cURus / CSA	**26378**	cURus / CSA	**2000-68200-242 0000**
	VDR + LED				
	VDR-RC				
	VDR-RC + LED				
	RC	cURus / CSA	**21143**	cURus / CSA	**2000-68200-132 0000**
400V AC/DC	RC			cURus / CSA	**2000-68200-532 0000**
	VDR			cURus / CSA	**2000-68200-542 0000**
Technical data					
Damping factor		~1,5 x U_N			
Temperature range		-20...+70 °C			
Material		plastic, flame retardant (UL 94)			
Connection wires		ferrule ends		plug contact	
Dimension drawing					
					
Notes					

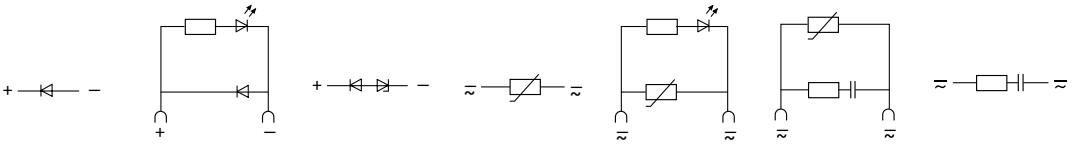
EMC Suppressors

MURR ELEKTRONIK
stay connected

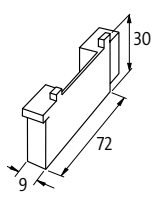
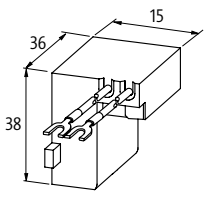
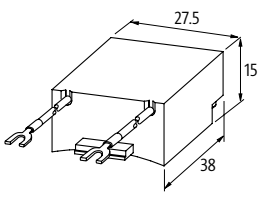
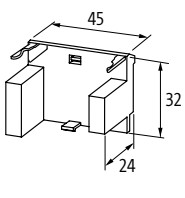
Suppressors for contactors

Schneider Electric

Approvals:

	TeSys	TeSys	TeSys	D
				
Circuit diagram	 Diode; Diode + LED; Diode/Z-Diode; VDR; VDR + LED; VDR-RC; RC			
Appropriate contactors	LC 1 D09...D38 LC 1 DT20, DT40, LC 2 D09...D38 AC-coil		LC 1 D09...D38 LC 1 DT20, DT40, LC 2 D09...D38 DC-coil	CA 2 DN, CA 3 DN serie„d“ LC 1 DT20, DT40, LC 2 D09...D38

Ordering data		**Art.-No.**	Approval	**Art.-No.**	Approval	**Art.-No.**	**Art.-No.**
Voltage	Suppression						
24 ...240 V DC	Diode				cURus	**2000-69300-110 0000**	**26481**
24 V DC	Z-Diode	**26476**			cURus	**2000-69300-520 0000**	
24 V AC/DC	VDR		cURus	**2000-69400-440 0000**	cURus	**2000-69300-440 0000**	
	RC		cURus	**2000-69400-430 0000**	cURus	**2000-69300-430 0000**	**21070**
30...250 V DC	Z-Diode						
48 V AC/DC	VDR		cURus	**2000-69400-440 0000**	cURus	**2000-69300-440 0000**	
	VDR + LED						
	RC		cURus	**2000-69400-430 0000**	cURus	**2000-69300-430 0000**	**21070**
110V AC/DC	VDR		cURus	**2000-69400-740 0000**	cURus	**2000-69300-740 0000**	
	VDR + LED						
	RC	**21063**	cURus	**2000-69400-730 0000**	cURus	**2000-69300-730 0000**	**21071**
230V AC/DC	VDR		cURus	**2000-69400-242 0000**	cURus	**2000-69300-242 0000**	
	VDR + LED						
	VDR-RC + LED						
	RC	**21063**	cURus	**2000-69400-232 0000**	cURus	**2000-69300-232 0000**	**21060**
	RC + LED						
400V AC/DC	VDR		cURus	**2000-69400-542 0000**			
	RC		cURus	**2000-69400-532 0000**			

Technical data				
Damping factor	~1,5 x U_N			
Temperature range	-20...+70 °C			
Material	plastic, flame retardant (UL 94)			
Connection wires	plug contact	self-securing cable forks	self-securing cable forks	plug contact
Dimension drawing				
Notes				

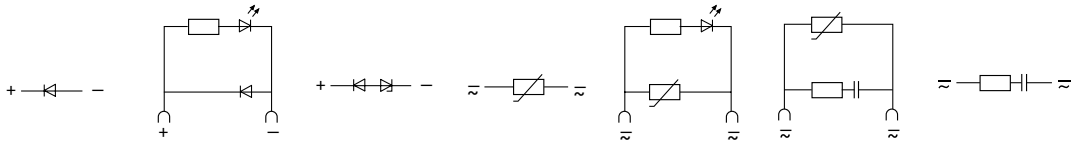
Suppressors for contactors

SIEMENS

Approvals:

	S00	S0
		

Circuit diagram



Appropriate contactors

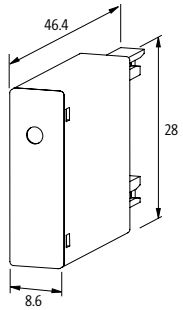
	S00	S0
	3 RT 20.15/16/17/18	3 RT 20.25/26/27/28

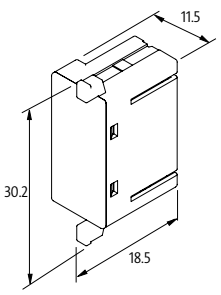
Ordering data		**Art.-No.**	**Art.-No.**
Voltage	Suppression		
24 ...240 V DC	Diode	**2000-68500-110 0000**	
24 V DC	Diode + LED		**2000-68400-201 0000**
	Diode/Z-Diode		
24 V AC/DC	VDR	**2000-68500-440 0000**	**2000-68400-440 0000**
	VDR + LED	**2000-68500-441 0000**	**2000-68400-441 0000**
	RC	**2000-68500-430 0000**	**2000-68400-430 0000**
48 V AC/DC	VDR		
	RC	**2000-68500-430 0000**	**2000-68400-430 0000**
110 V AC/DC	VDR	**2000-68500-740 0000**	**2000-68400-740 0000**
	VDR + LED	**2000-68500-741 0000**	**2000-68400-741 0000**
	VDR-RC		
	RC	**2000-68500-730 0000**	**2000-68400-730 0000**
230V AC/DC	VDR	**2000-68500-242 0000**	**2000-68400-242 0000**
	VDR + LED	**2000-68500-247 0000**	
	RC	**2000-68500-232 0000**	**2000-68400-232 0000**
400V AC/DC	VDR	**2000-68500-542 0000**	**2000-68400-542 0000**
	RC	**2000-68500-532 0000**	**2000-68400-532 0000**

Technical data

Damping factor	~1,5 x U_N
Temperature range	-20...+70 °C
Material	plastic, flame retardant (UL 94)
Connection wires	plug contact

Dimension drawing





Notes

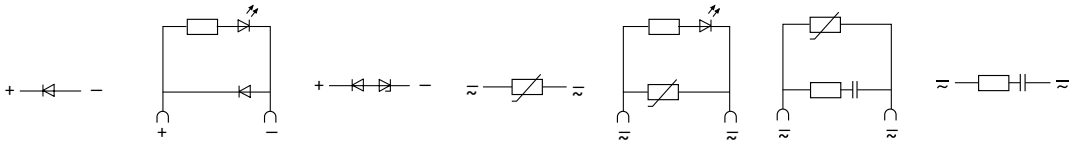
Suppressors for contactors

SIEMENS

Approvals:

	S2	S3	S6 - S12
			

Circuit diagram



Appropriate contactors

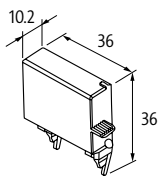
	S2	S3	S6 - S12
	3 RT 1.3/1.4		3 RT 1.5/6/7

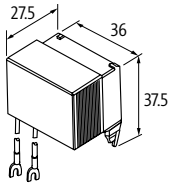
Ordering data		S2 Approval	S2 Art.-No.	S3 Approval	S3 Art.-No.	S6 - S12 Art.-No.
Voltage	Suppression					
24 V DC	Diode + LED					
	Diode + Z-Diode + LED					
	Diode/Z-Diode			UR / CSA	**26521**	
24 V AC/DC	VDR			UR / CSA	**26524**	
	VDR + LED					
	VDR-RC	UR / CSA	**21215**			**21220**
48 V DC	Diode/Z-Diode					
48 V AC/DC	VDR					
	VDR-RC					**21220**
110 V AC/DC	VDR					
	VDR + LED					
	VDR-RC					
	RC					
230 V AC/DC	VDR			UR / CSA	**26526**	
	VDR + LED					
	VDR-RC					
	RC	UR / CSA	**21217**			**21222**
400 V AC/DC	VDR					

Technical data

	S2	S3	S6 - S12
Damping factor	~1,5 x U_N		
Temperature range	-20...+70 °C		
Material	plastic, flame retardant (UL 94)		
Connection wires	plug contact		45 mm with cable forks

Dimension drawing





Notes

Suppressors for contactors		S0 4		S0 1		3 TF/L-3 TF	
SIEMENS							
Approvals:							
Circuit diagram							
		Diode		Diode + LED		Diode/Z-Diode	
		VDR		VDR + LED		VDR-RC	
		RC					
Appropriate contactors							
		3 TH 3/4		3 TH 3/4/8, 3 TF 30...45		3 TH 2, 3 TF 2	
		3 TF 30...35, 3 TF 40...45		3 TB 40...3 TB 44		3 TH 20, 3 TF 20	
Ordering data		**Art.-No.**		**Art.-No.**		**Art.-No.**	
Voltage	Suppression	Approval		Approval		Approval	
24...240 V DC	Diode		**26588**	UR / CSA	**26283**	cURus / CSA	**26036**
24V DC	Diode + LED					cURus / CSA	**26530**
	Diode/Z-Diode			UR / CSA	**26051**	cURus / CSA	**26034**
24V AC/DC	VDR	CSA	**26576**				
	VDR + LED						
	RC			UR / CSA	**22050**		
48V DC	Diode/Z-Diode						
48V AC/DC	VDR	CSA	**26576**			cURus / CSA	**26038**
	RC			UR / CSA	**22051**		
110 V AC/DC	VDR						
	VDR + LED						
	VDR-RC						
	RC			UR / CSA	**22051**		
230 V AC/DC	VDR	CSA	**26578**	UR / CSA	**26317**	cURus / CSA	**26039**
	VDR + LED						
	VDR-RC						
	RC			UR / CSA	**22052**		
	RC			UR / CSA	**22054**		
400 V AC/DC	VDR						
	RC			UR / CSA	**22054**		
Technical data							
Damping factor		~1,5 x U_N					
Temperature range		-20...+70 °C					
Material		plastic, flame retardant (UL 94)					
Connection wires		self-securing cable forks				plug contact	
Dimension drawing							
Notes							

MURR ELEKTRONIK
stay connected

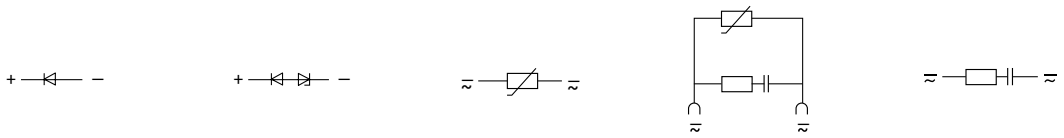
Suppressors

– universal

	AO	AD	CF
			

Approvals:

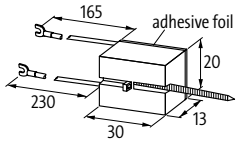
Circuit diagram

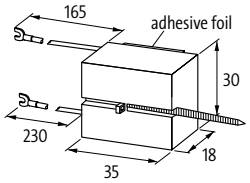


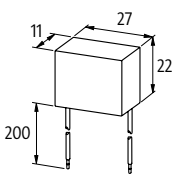
Appropriate contactors									
		universal		universal		universal			
Ordering data			**Art.-No.**		**Art.-No.**		**Art.-No.**	**sugg. coil valves**	
Voltage	Suppression	Approval		Approval		Approval		AO	AD	CF
Max. 240 V DC	Diode	CSA	**26001**					15 W		
24 V DC	Z-Diode	CSA	**26120**	CSA	**26073**			25 W	75 W	
24 V AC/DC	VDR	cURus / CSA	**26180**	CSA	**26720**			50 VA/W	200 VA/W	
	RC					CSA	**20680**			20 VA
48 V AC/DC	VDR	cURus / CSA	**26181**					70 VA/W		
	RC	cURus / CSA	**20001**	cURus / CSA	**20013**			15 VA	15 VA	
110 V AC/DC	VDR	cURus / CSA	**26182**	CSA	**26722**			100 VA/W	200 VA/W	
	VDR-RC									
	RC									
230 V AC/DC	VDR	cURus / CSA	**26183**	CSA	**26723**			200 VA/W	200 VA/W	
	VDR	cURus / CSA	**26184**					200 VA/W		
	RC			CSA	**20014**	CSA	**20682**		25 VA	20 VA
	RC	cURus / CSA	**20002**	cURus / CSA	**20010**	CSA	**20683**	15 VA	75 VA	20 VA
	RC			cURus / CSA	**20011**	CSA	[2]**20687**		100 VA	50 VA
400 V AC/DC	VDR			CSA	**26724**				200 VA/W	
	RC	cURus / CSA	**20004**	cURus / CSA	**20012**	CSA	**20688**	15 VA	100 VA	50 VA
	RC									

Technical data			
Damping factor	ca. 1,5		
Temperature range	-20...+70 °C		
Material	plastic, flame retardant (UL 94)		
Connection wires	self-securing cable forks		flexible connection wires

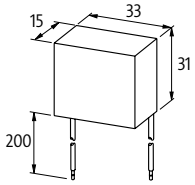
Dimension drawing







Form 1



[2] Form 2

Notes

Art.-No. 26184 – up to 300 V AC/DC

EMC SUPPRESSORS

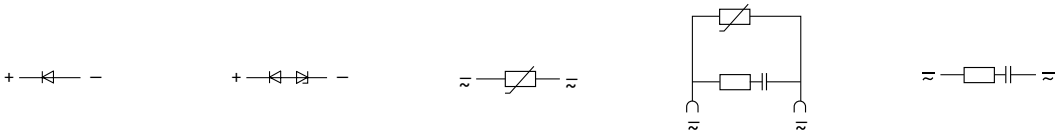
Suppressors

– universal

	H	RC-BUG 2	BU + UB
			

Approvals:

Circuit diagram



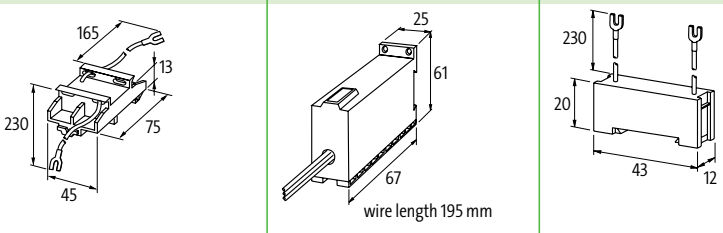
Appropriate contactors

		universal		universal		universal				
Ordering data			**Art.-No.**		**Art.-No.**		**Art.-No.**	**sugg. coil valves**		
Voltage	Suppression	Approval		Approval		Approval		H	RC-BUG 2	BU + UB
24 ...240 V DC	Diode	CSA	**26097**			CSA	**26020**	25 W		50 W
24 V DC	Z-Diode	CSA	**26095**			CSA	**26130**	25 W		50 W
24 V AC/DC	VDR	cURus / CSA	**26090**			cURus / CSA	**26150**	50 VA/W		50 VA/W
	RC									
48 V AC/DC	VDR									
	RC	CSA	**20100**					15 VA		
110 V AC/DC	VDR									
	VDR-RC									
	RC			CSA	**26613**				146 VA	
230 V AC/DC	VDR									
	VDR			CSA	**26619**	cURus / CSA	**26155**		100 VA/W	200 VA/W
	RC	CSA	**20101**	CSA	**26614**	CSA	**20031**	15 VA	146 VA	25 VA
	RC	CSA	**20102**			CSA	**20033**	25 VA		25 VA
	RC	CSA	**20103**			CSA	**20034**	75 VA		25 VA
400 V AC/DC	VDR									
	RC			CSA	**26615**	CSA	**20032**		146 VA	25 VA
	RC			CSA	**26616**				146 VA	

Technical data

Damping factor	ca. 1,5	
Temperature range	-20...+70 °C	
Material	plastic, flame retardant (UL 94)	
Mounting method	DIN-rail mounting (EN 60715)	with adapter ASA Art.-No. 20900, DIN-rail mounting (EN 60715)
Connection wires	self-securing cable forks	

Dimension drawing



Notes

Art.-No. 20034 – without adapter, can be directly snapped onto DIN-rail, ASA adapter Art.-No. 20900 included in delivery.

Art.-No. 26616 – up to 600 V AC/DC

EMC SUPPRESSORS

Suppressors for motors

Mounting methods:

– on the motor terminal box
– inside the motor terminal box
– inside the distribution box
– on 35 mm DIN-rail acc. to EN 60715

Approvals:

RC 3 U

With M16 x 1,5



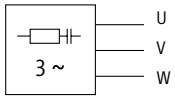
RC 3 BU



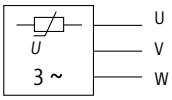
RC 3 BUG



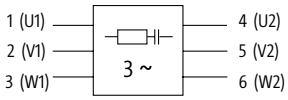
Circuit diagram



RC



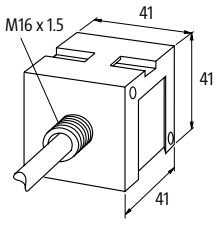
VDR



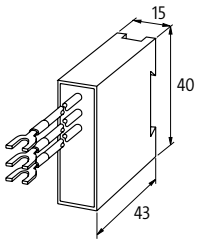
RC-(1) per phase

Ordering data		Art.-No.	Art.-No.	Art.-No.
Voltage	Motor rating	Suppression/Approval	Suppression/Approval	Suppression/Approval
3 x 400 V AC	4 kW	RC **23022**	RC/cURus **23050**	RC **23104**
	4 kW			VDR **23100**
	4 kW		VDR/cURus **23115**	RC
	7,5 kW		VDR/cURus **23115**	RC **23104**
	10 kW	RC **23011**	VDR/cURus **23118**	RC **23106**
	10 kW	RC-per phase **23043**		
	20 kW		VDR/cURus **23118**	
3 x 575 V AC	4 kW		RC/cURus **23050**	
	7,5 kW	RC/cURus **23035**		RC **23104**
	20 kW			VDR **23102**
	45 kW			RC-per phase **23103**
3 x 690 V AC	4 kW		RC/v **23056**	RC **23104**
	7,5 kW			RC **23104**
	20 kW			

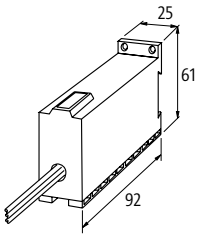
Technical data			
Frequency	for RC: 50...60 Hz for VDR: 10...400 Hz		
Material	plastic, flame retardant (UL 94)		
Potting compound	2-component epoxy		
Temperature range	-20...+60 °C		
Connection method	approx. 500 mm PVC cable	approx. 200 mm single core	approx. 500 mm single core
	3 x 0,75 mm² or 7 x 0,75 mm²	0,35 mm²; **Art.-No. 23056** 0,5 mm²	1 mm²
		with self-securing M4 cable forks M4	



For DIN-rail mounting use
2 x **Art.-No. 20900** adapter feet



For DIN-rail mounting use
1 x **Art.-No. 20900** adapter feet



For DIN-rail mounting use
2 x **Art.-No. 20900** adapter feet

Notes

Do not use RC motor suppressors on variable frequency drives.
1 x **Art.-No. 23103, 23043** required per phase.

EMC SUPPRESSORS

Suppressors for motors

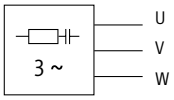
Mounting methods:

– with M16 x 1.5 and M20 x 1.5
– on the motor terminal box with plug connectors

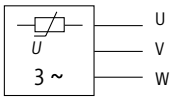
Approvals:

	RC 3 R	**RC 3 R**	**RC 3 RG**
	With M16 x 1.5 screw	With M16 x 1.5 screw	With M20 x 1.5 screw
			

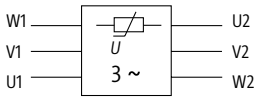
Circuit diagram



RC



VDR

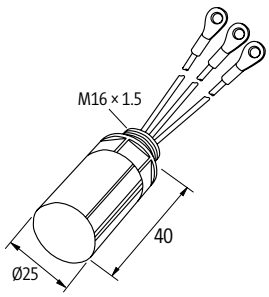


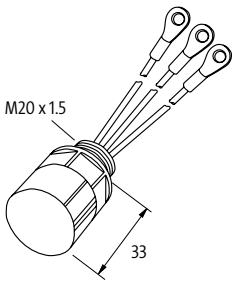
VDR-(1) per phase

Ordering data			**Art.-No.**		**Art.-No.**		**Art.-No.**
Voltage	Motor rating	Suppression/Approval		Suppression/Approval		Suppression/Approval	
3 x 400 V AC	4 kW	VDR/cURus	**23170**	VDR/cURus	**23175**	RC/cURus	**23141**
	4 kW						
	4 kW						
	7,5 kW	VDR	**23171**				
	10 kW					VDR	**23142**
	20 kW					VDR	**23144**
3 x 575 V AC	4 kW	VDR/cURus	**23172**			RC/cURus	**23141**
	7,5 kW	VDR/cURus	**23173**				
	10 kW					VDR/cURus	**23145**
	20 kW					VDR/cURus	**23146**
	20 kW					VDR per phase	**23147**
3 x 690 V AC	7,5 kW	VDR	**23174**				
	20 kW					VDR	**23149**

Technical data			
Frequency	for RC: 50...60 Hz for VDR: 10...400 Hz		
Material	plastic, flame retardant (UL 94)		
Potting compound	2-component epoxy		
Temperature range	-20...+60 °C		
Connection method	approx. 100 mm single core		approx. 150 mm single core
	0,5 mm²		1 mm²
Ring terminals	isolated M6	isolated M4	isolated M6

Dimension drawing





Notes

Do not use RC motor suppressors on variable frequency drives.
Art.-No. 23174 – wire diameter 1.5 mm².

EMC SUPPRESSORS

Suppressors for motors

Mounting methods:

– on the motor terminal box with plug connectors

Approvals:

RC 3 ST

Connector with cable and integrated motor suppression
Cable outlet in the back

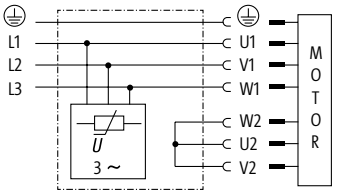


RC 3 ST

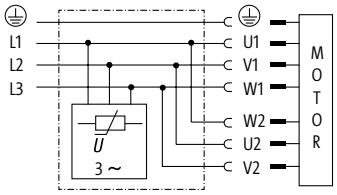
Connector with cable and integrated motor suppression
Cable outlet (right angle)



Circuit diagram



Varistor-suppression (star)



Varistor-suppression (delta)

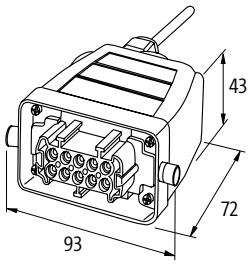
Ordering data

Voltage	Motor rating	Cable length	Suppression	Art.-No.	Suppression	Art.-No.
max.	5,5 kW	5 m	VDR/star	**236139**	VDR/star	**236148**
3 x 575 V AC	5,5 kW	8 m	VDR/star	**236141**		
	5,5 kW	10 m	VDR/star	**236142**	VDR/star	**236149**

Technical data

Frequency	10...400 Hz	
Plug connector	females, 10-pole + PE	
Housing	aluminium pressure diecasting	
Temperature range	-20...+60 °C	
Connection method	PUR cable black, 4 x 1.5 mm²; numbered wires, halogen free	PUR cable black, 4 x 1.5 mm2 ; numbered wires, DESINA® compliant

Dimension drawing



(without compression gland)

Notes

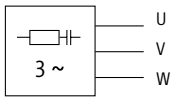
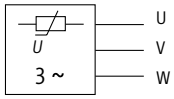
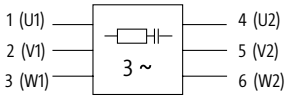
EMC SUPPRESSORS

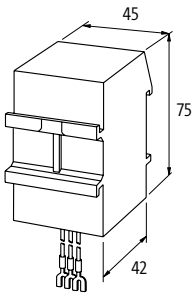
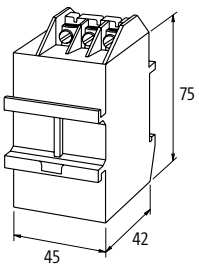
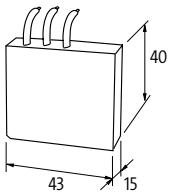
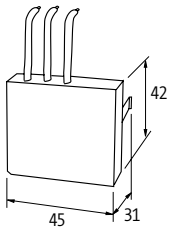
Suppressors for motors

Mounting methods:

- **on 35 mm DIN-rail acc. to EN 60715**
- **bolted together, stacked**
- **DIN-rail mounting under the control gear**

Approvals:

	HRC 3	**HRC 3 K**	**RC 3 BUC**	**RC 3 BUC**
			Connects onto Siemens SIRIUS 3 RT 20 contactors, with screw terminal	Connects onto Siemens SIRIUS 3 RT 20 contactors, with spring clamp terminal
				
Circuit diagram				
	 RC	 VDR	 RC-(1) per phase	

Ordering data		**Art.-No.**	**Art.-No.**	**Art.-No.**	**Art.-No.**
Voltage	Motor rating	Suppression/Approval	Suppression/Approval	Suppression/Approval	Suppression/Approval
3 x 400 V AC	4 kW	RC/cURus **23004**	RC **23005**		
	4 kW	RC/cURus **233463**			
	5,5 kW			RC/cURus **236082**	
	7,5 kW				RC/cURus **23220**
	10 kW	RC/cURus **23002**	RC **23003**		
	20 kW	RC-per phase/cURus **23009**			
	20 kW	VDR/cURus **23015**			
3 x 500 V AC +10 %	4 kW	RC/cURus **23000**	RC **23001**		
3 x 575 V AC	5,5 kW			RC/cURus **236082**	
	7,5 kW	RC/cURus **23006**	RC **23007**		
	7,5 kW	RC/cURus **230563**			RC/cURus **23220**
	10 kW	VDR/cURus **23016**			
	20 kW		RC **23018**		
3 x 690 V AC	10 kW	RC **23017**			
Technical data					
Frequency		for RC: 50...60 Hz, for VDR: 10...400 Hz			
Material		plastic, flame retardant (UL 94)			
Potting compound		2-component epoxy			
Temperature range		-20...+60 °C			
Connection method		approx. 250 mm s. core	3-pole terminal	wire (solid core)	wire with ferrule ends
		(Art.-No. 23000: 300 mm)	2 x (0,75...2,5 mm²)	2,0 mm²	2,0 mm²
		0,5 mm² (Art.-No. 23000: 1,5 mm²)	M4		
		with self-securing M4 cable forks			
Dimension drawing					
					
Notes					
		Do not use RC motor suppressors on variable frequency drives.			
		Art.-No. 233463 and **230563** – with ferrule ends.			

EMC SUPPRESSORS

Suppressors for motors

Mounting methods:

- **DIN-rail mounting under the control gear**
- **fixes onto contactors**
- **available with integrated coil suppression**

Approvals:

HRC 3 AS

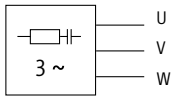


RC 3 RT

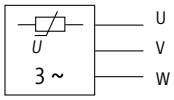
Connects onto Siemens SIRIUS 3 RT 10, 3 RT 20 contactors with screw terminal



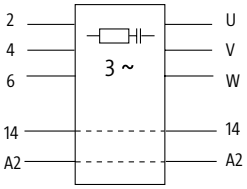
Circuit diagram



RC



VDR



Appropriate contactors

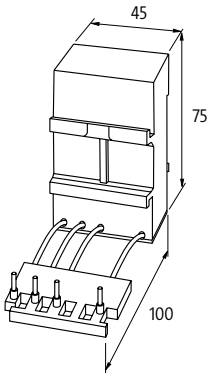
Motor contactors up to 5.5 kW from Siemens, Moeller, Sprecher + Schuh etc.	Siemens 3 RT 10

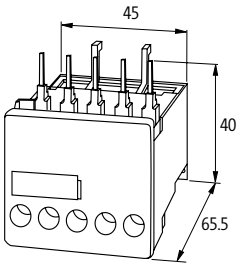
Ordering data		**Art.-No.**	**Art.-No.**	**Art.-No.**
Voltage	Motor rating	Suppression motor + coil	Suppression motor + coil	Suppression/approval
3 x 400 V AC	5,5 kW	RC **23160**	VDR **23163**	RC/cURus / CSA **23180**
	5,5 kW	RC + Diode **23151**		
3 x 575 V AC	5,5 kW	RC **23161**	VDR **23164**	RC/cURus / CSA **23181**
	5,5 kW		VDR + Diode **23157**	

Technical data

Suppression coil	for RC: 230 V AC/20 VA, for RC + Diode: 24...230 V DC/36 W	
Frequency	for RC: 50...60 Hz, for VDR: 10...400 Hz	
Material	plastic, flame retardant (UL 94)	
Temperature range	-20...+60 °C	
Connection method	ferrules, load side securely fixed	fits directly into SIRIUS contactors, size 00

Dimension drawing





Notes

Do not use RC motor suppressors on variable frequency drives.

EMC SUPPRESSORS

Suppressors for valves

– with LED
– with suppression

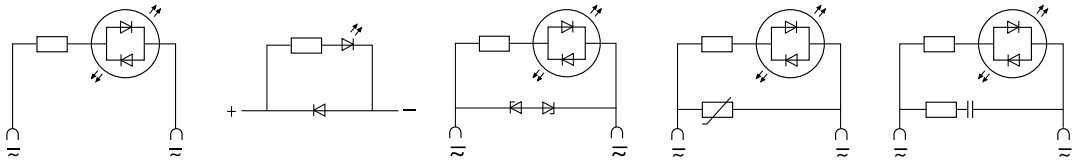
VBS
Form A
Pin spacing 18 mm
EN 175301-803 (ISO 4400)



LBS
Form BI Industrial Standard
Pin spacing 11 mm



Circuit diagram



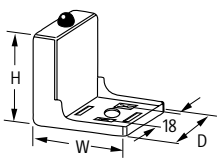
LED | LED + Diode | LED + Zener Diode | LED + VDR | LED + RC

Ordering data		Art.-No.	Art.-No.			
Voltage	Suppression			Switch off delay time [ms]	Switch off voltage peak [V]	Valve hold-on rating [W/VA]
24 V DC	LED + Diode	[1]**3124021**	**3124221**	200	1	50
24 V AC/DC	LED	[1]**3124015**	**3124215**	–	–	50
	LED + Z-Diode	[1]**3124033**	**3124233**	20	55	100
	LED + VDR	[1]**3124048**	**3124248**	15	45	50
	LED + RC	**3124068**		20	105	10
	LED + RC		**3124269**	20	70	20
48 V AC/DC	LED	[1]**3124017**		–	–	50
	LED + VDR	[1]**3124052**		10	75	100
	LED + RC	[2]**3124071**		20	90	30
110 V AC/DC	LED	**3124018**		–	–	50
	LED + VDR	**3124046**		10	235	100
	LED + RC	**3124070**		20	250	10
	LED + RC	[2]**3124072**		20	250	25
230 V AC/DC	LED	**3124016**	**3124216**	–	–	50
	LED + VDR	**3124049**	**3124249**	15	360	100
	LED + RC	**3124063**	**3124263**	20	300	10
	LED + RC	[2]**3124064**		20	300	25

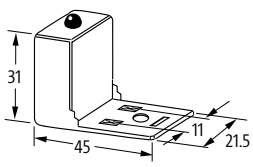
Technical data

Supply indicator	LED yellow
Contact material	silvered bronze
Protection	IP65 when fully mounted
Material	polyamide black, flame retardant, temperature resistant up to 130 °C
Temperature range	-20...+60 °C

Dimension drawing



Housing H x W x D: 37 x 45 x 30 mm
[1]Housing H x W x D: 37 x 39 x 30 mm
[2]Housing H x W x D: 37 x 53 x 33 mm
0° and 180° version on request



Note PIN arrangement (PE at cable outlet of connector)
180° version on request

Notes

Do not use plug gasket when fitting adapter. Other LED colors on request.
For double valves the VA 2 series is suitable (please inquire). At Art.-No. **3124021** and **3124221** polarity dependent

EMC SUPPRESSORS

Suppressors for valves

– with LED
– with suppression

DAB/PBS

Form B/BI
Pin spacing 10/11 mm
EN 175301-803 (ISO 6952)

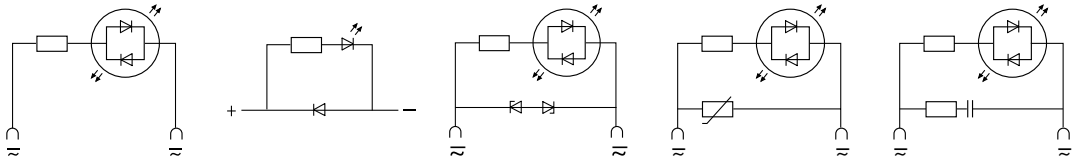


MVK/MVT

Form C/CI
Pin spacing 8/9.4 mm
EN 175301-803 (ISO 6952)



Circuit diagram



LED | LED + Diode | LED + Zener Diode | LED + VDR | LED + RC

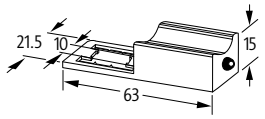
Ordering data

Voltage	Suppression	Art.-No. EN 175301-803 (ISO 6952) Form B	Art.-No. Form BI	Art.-No. EN 175301-803 (ISO 6952) Form C	Art.-No. Form CI	Switch off delay time [ms]	Switch off voltage peak [V]	Valve hold-on rating [W/VA]
24 V DC	LED + Diode	**3124871**	**3124121**			200	1	50
24 V AC/DC	LED	**3124875**	**3124115**	**3124811**	**3124815**	–	–	50
	LED + Z-Diode	**3124873**	**3124133**	**3124833**	**3124832**	20	55	100
	LED + VDR		**3124148**			15	45	50
	LED + RC		**3124169**			20	70	20
110 V AC/DC	LED + RC		**3124170**			20	250	10
230 V AC/DC	LED		**3124116**			–	–	50
	LED + VDR					15	360	100
	LED + RC		**3124163**			20	300	10

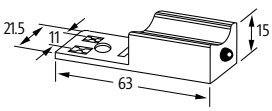
Technical data

Supply indicator	LED yellow
Contact material	silvered bronze
Protection	IP65 when fully mounted
Material	polyamide black, flame retardant, temperature resistant up to 130 °C
Temperature range	-20...+60 °C

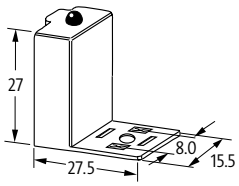
Dimension drawing

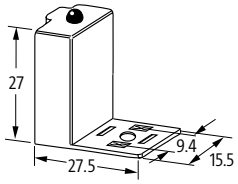


Suitable for 0° and 180° installation



Note PIN arrangement
(PE at cable outlet of connector)
180° version on request





0° and 180° version on request

Notes

Do not use plug gasket when fitting adapter. Other LED colors on request. Right-angle housing version with 10 mm pin spacing (DAR/DARU), on request. At Art.-No. **3124871** and **3124121** polarity dependent.



RELAYS / SAFETY RELAYS
INCREDIBLY VERSATILE

- **Over 600 different modules ready for all applications**
- **Push-In technology, spring clamps or screw terminals available**
- **Worldwide approvals**

TWICE AS SMALL, TWICE AS FAST!

Each system includes different kinds of active interface modules. Relay modules are used to separate two different potential levels. The control side is galvanically isolated from the load/contact side and should be protected from the wrong voltage. These interfaces adjust the different signal levels to work with the existing system.

With MIRO SAFE+, Murrelektronik offers safe switching devices for a wide range of safe industrial applications. They are the perfect solution to reach high safety standards – up to performance level e (PLe) according to EN 13849-1. **With MIRO SAFE+ you can design many different safety applications like: emergency stops, guard doors, two hand monitoring, light curtains, and safety magnet switch monitoring.**

Relays



Relay 6.2 mm
• Output relay
• Input relay

Page 1.10.1



Relay 12.4 mm
• Output relay
• Input relay

Page 1.10.8



Relay 22.5 mm
• Output relay
• Input relay

Page 1.10.17



Accessories

Page 1.10.29

Safety Relays



Safety Relay 22.5 / 45 mm
• MIRO SAFE+

Page 1.10.21

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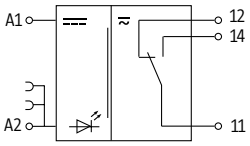
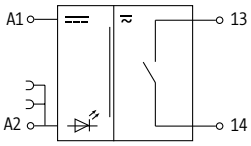
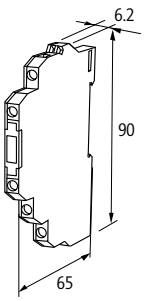
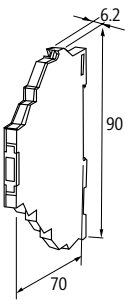
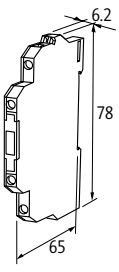
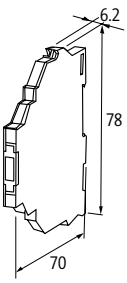
Terminal relay

– with bridge system

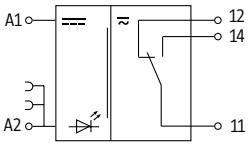
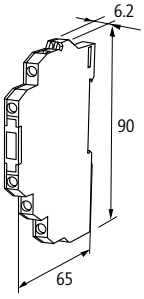
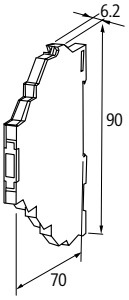
Approvals: cULus cCSAus

	MIRO 6.2 Output relay 1 NO/NC contact Screw terminals	**MIRO 6.2** Output relay 1 NO/NC contact Spring clamp terminals	**MIRO 6.2** Output relay 1 NO contact Screw terminals	**MIRO 6.2** Output relay 1 NO contact Spring clamp terminals
				
Circuit diagram				
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
12 V DC (10...15 V DC - 20 mA)	**52050**	**6652050**		
24 V DC (19.2...30 V DC - 14 mA)	CCC **52000**	CCC **6652000**	CCC **52002**	CCC **6652002**
24 V DC (19.2...30 V DC - 17 mA)	CCC **52001**	CCC **6652001**	CCC **52015**	CCC **6652015**
Switching capacity (EN 60947-5-1)				
AC-12	6 A (24 V AC; 110 V AC; 230 V AC)			
AC-15	3 A (24 V AC; 110 V AC; 230 V AC)			
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)			
Input				
LED display	LED (green)			
Output				
Switching voltage	max. 250 V AC/DC			
Switching current per output	max. 6 A			
Min. load current	10 mA (12 V DC)			
Power rating (voltage dependent)	max. 1500 VA/120 W			
Switching frequency	max. 10 Hz			
Contact material	Ag Sn O2			
Energize/release/contact bounce time	10/15/1.5 ms			
General data				
Mech./ elect. life	20.000.000 switching cycles/load dependent			
Test isolation voltage	4 kV; safe separation (EN 60947-1)			
Temperature range	-20...+55 °C			
Mounting method	DIN-rail mountable (EN 60715)			
Dimension drawing				
				
Murrelektronik Online Shop **onlineshop.murrelektronik.com**/en				
Notes				
	For inductive loads we recommend EMC suppressors connected parallel to the coil			

Terminal relay

– with bridge system

Approvals:

	MIRO 6.2	MIRO 6.2
	Output relay 1 NO/NC contact Screw terminals	Output relay 1 NO/NC contact Spring clamp terminals
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
48 V DC (40...53 V DC - 12 mA)	**52020**	**6652020**
110 V AC/DC (95...121VAC/DC - 4 mA)	**52030**	**6652030**
230 V AC/DC (195...253 V AC/DC - 3 mA)	CCC **52040**	CCC **6652040**
Switching capacity (EN 60947-5-1)		
AC-12	6 A (24 V AC; 110 V AC; 230 V AC)	
AC-15	3 A (24 V AC; 110 V AC; 230 V AC)	
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)	
Input		
LED display	LED (green)	
Output		
Switching voltage	max. 250 V AC/DC	
Switching current per output	max. 6 A	
Min. load current	10 mA (12 V DC)	
Power rating (voltage dependent)	max. 1500 VA/120 W	
Switching frequency	max. 10 Hz	
Contact material	Ag Sn O2	
Energize/release/contact bounce time	10/15/1.5 ms	
General data		
Mech./ elect. life	20.000.000 switching cycles/load dependent	
Test isolation voltage	4 kV; safe separation (EN 60947-1)	
Temperature range	-20...+55 °C	
Mounting method	DIN-rail mountable (EN 60715)	
Dimension drawing		
		
Murrelektronik Online Shop **onlineshop.murrelektronik.com**/en		
Notes		
	For inductive loads we recommend EMC suppressors connected parallel to the coil	

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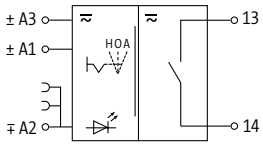
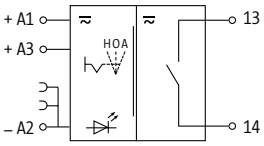
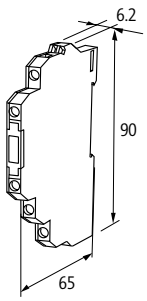
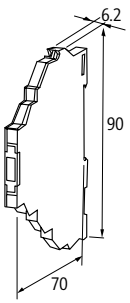
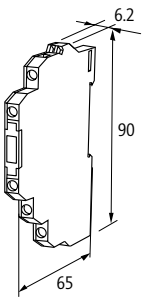
Terminal relay

– with bridge system

– Hand-0-Auto

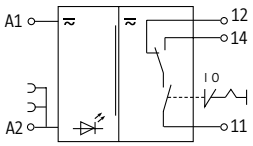
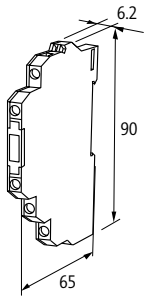
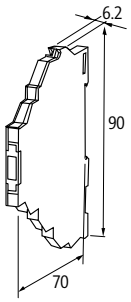
	MIRO 6.2 Output relay 1 NO contact Screw terminals	**MIRO 6.2** Output relay 1 NO contact Spring clamp terminals	**MIRO 6.2** Output relay 1 NO contact Screw terminals
			
Circuit diagram			
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
24 V AC/DC (19.2...30 V AC/DC - 17 mA)	cURus, cCSAus, CCC **52007**	cURus, cCSAus, CCC **6652007**	
24 V AC/DC (19.2...28 V AC/DC - 7 mA)			**526010**
Switching capacity (EN 60947-5-1)			
AC-12	6 A (24 V AC; 110 V AC; 230 V AC)		
AC-15	3 A (24 V AC; 110 V AC; 230 V AC)		
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)		
Input			
LED display	LED (green)		LED (green): auto mode; LED (red): manual mode
Output			
Switching voltage	max. 250 V AC/DC		
Switching current per output	max. 6 A		
Min. load current	10 mA (12 V DC)		
Power rating (voltage dependent)	max. 1500 VA/120 W		
Switching frequency	max. 10 Hz		
Contact material	Ag Sn O2		
Energize/release/contact bounce time	10/15/1.5 ms		8/20/2 ms
General data			
Mech./ elect. life	20.000.000 switching cycles/load dependent		
Test isolation voltage	4 kV; safe separation (EN 60947-1)		
Temperature range	-20...+55 °C		
Mounting method	DIN-rail mountable (EN 60715)		
Dimension drawing			
			
Murrelektronik Online Shop **onlineshop.murrelektronik.com**/en			
Notes			
	For inductive loads we recommend EMC suppressors connected parallel to the coil		

Terminal relay

– with bridge system

– Isolation function in output circuit

Approvals:

	MIRO 6.2 Output relay 1 NO/NC contact Screw terminals	**MIRO 6.2** Output relay 1 NO/NC contact Spring clamp terminals
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
24 V AC/DC (19.2...30 V AC/DC - 17 mA)	**52010**	**6652010**
Switching capacity (EN 60947-5-1)		
AC-12	6 A (24 V AC; 110 V AC; 230 V AC)	
AC-15	3 A (24 V AC; 110 V AC; 230 V AC)	
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)	
Input		
LED display	LED (green)	
Output		
Switching voltage	max. 250 V AC/DC	
Switching current per output	max. 6 A	
Min. load current	10 mA (12 V DC)	
Power rating (voltage dependent)	max. 1500 VA/120 W	
Switching frequency	max. 10 Hz	
Contact material	Ag Sn O2	
Energize/release/contact bounce time	10/15/1.5 ms	
General data		
Mech./ elect. life	20.000.000 switching cycles/load dependent	
Test isolation voltage	4 kV; safe separation (EN 60947-1)	
Temperature range	-20...+55 °C	
Mounting method	DIN-rail mountable (EN 60715)	
Dimension drawing		
		
Murrelektronik Online Shop **onlineshop.murrelektronik.com**/en		
Notes		
	For inductive loads we recommend EMC suppressors connected parallel to the coil	

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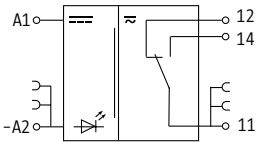
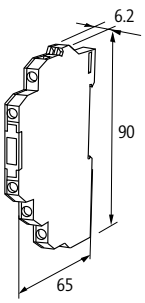
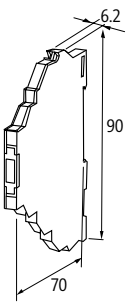
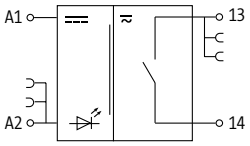
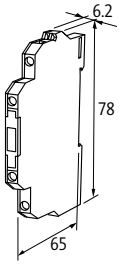
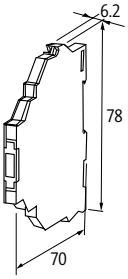
Terminal relay

Approvals:

	MIRO 6.2	MIRO 6.2
	Input relay 1 NO/NC contact Screw terminals	Input relay 1 NO/NC contact Spring clamp terminals
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
24 V DC (19.2...30 V DC - 14 mA)	**52005**	**6652005**
24 V AC/DC (19.2...30 V AC/DC - 17 mA)	**52003**	**6652003**
Switching capacity (EN 60947-5-1)		
AC-12	6 A (24 V AC; 110 V AC; 230 V AC)	
AC-15	3 A (24 V AC; 110 V AC; 230 V AC)	
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)	
Input		
LED display	LED (yellow)	
Output		
Switching voltage	max. 30 V AC/36 V DC	
Switching current per output	max. 50 mA	
Min. load current	1 mA (12 V DC)	
Power rating (voltage dependent)	max. 1500 VA/120 W	
Switching frequency	max. 10 Hz	
Contact material	Ag Sn O2 hv	
Energize/release/contact bounce time	10/15/1.5 ms	
General data		
Mech./ elect. life	20.000.000 switching cycles/load dependent	
Test isolation voltage	4 kV; safe separation (EN 60947-1)	
Temperature range	-20...+55 °C	
Mounting method	DIN-rail mountable (EN 60715)	
Dimension drawing		
		
Murrelektronik Online Shop **onlineshop.murrelektronik.com**/en		
Notes		
	For inductive loads we recommend EMC suppressors connected parallel to the coil When the max. switching voltage/current is exceeded the gold plating is destroyed. The relay will then take on the properties of an output type.	

Terminal relay

Approvals:

	MIRO 6.2	MIRO 6.2
	Input relay 1 NO contact Screw terminals	Input relay 1 NO contact Spring clamp terminals
		
Circuit diagram		
Order Data	**Art-No.**	**Art-No.**
24 V DC (19.2...30 V DC - 14 mA)	**52004**	**6652004**
Switching capacity (EN 60947-5-1)		
AC-12	6 A (24 V AC; 110 V AC; 230 V AC)	
AC-15	3 A (24 V AC; 110 V AC; 230 V AC)	
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)	
Input		
LED display	LED (yellow)	
Output		
Switching voltage	max. 30 V AC/36 V DC	
Switching current per output	max. 50 mA	
Min. load current	1 mA (12 V DC)	
Power rating (voltage dependent)	max. 1500 VA/120 W	
Switching frequency	max. 10 Hz	
Contact material	Ag Sn O2 hv	
Energize/release/contact bounce time	10/15/1.5 ms	
General data		
Mech./ elect. life	20.000.000 switching cycles/load dependent	
Test isolation voltage	4 kV; safe separation (EN 60947-1)	
Temperature range	-20...+55 °C	
Mounting method	DIN-rail mountable (EN 60715)	
Dimension drawing		
		
Murrelektronik Online Shop **onlineshop.murrelektronik.com**/en		
Notes		
	For inductive loads we recommend EMC suppressors connected parallel to the coil When the max. switching voltage/current is exceeded the gold plating is destroyed. The relay will then take on the properties of an output type.	

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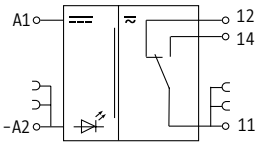
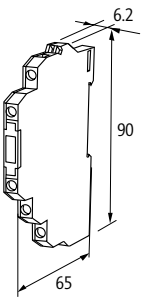
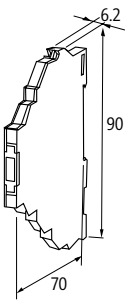
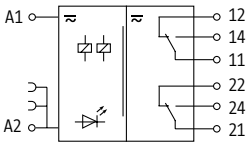
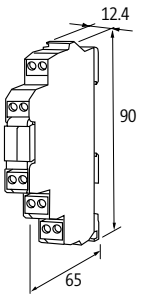
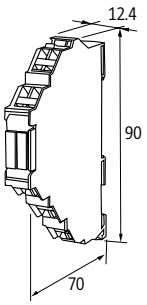
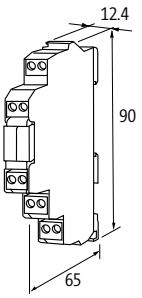
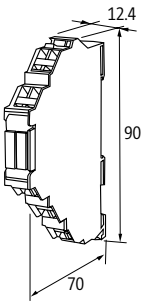
Terminal relay	MIRO 6.2 Input relay 1 NO/NC contact Screw terminals	MIRO 6.2 Input relay 1 NO/NC contact Spring clamp terminals
Approvals:		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
48 V DC (40...53 V DC - 12 mA)	**52021**	**6652021**
110 V AC/DC (95...121VAC/DC - 4 mA)	**52031**	**6652031**
230 V AC/DC (195...253 V AC/DC - 3 mA)	CCC **52041**	CCC **6652041**
Switching capacity (EN 60947-5-1)		
AC-12	6 A (24 V AC; 110 V AC; 230 V AC)	
AC-15	3 A (24 V AC; 110 V AC; 230 V AC)	
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)	
Input		
LED display	LED (yellow)	
Output		
Switching voltage	max. 30 V AC/36 V DC	
Switching current per output	max. 50 mA	
Min. load current	1 mA (12 V DC)	
Power rating (voltage dependent)	max. 1500 VA/120 W	
Switching frequency	max. 10 Hz	
Contact material	Ag Sn O2 hv	
Energize/release/contact bounce time	10/15/1.5 ms	
General data		
Mech./ elect. life	20.000.000 switching cycles/load dependent	
Test isolation voltage	4 kV; safe separation (EN 60947-1)	
Temperature range	-20...+55 °C	
Mounting method	DIN-rail mountable (EN 60715)	
Dimension drawing		
		
Murrelektronik Online Shop **onlineshop.murrelektronik.com**/en		
Notes		
	For inductive loads we recommend EMC suppressors connected parallel to the coil When the max. switching voltage/current is exceeded the gold plating is destroyed. The relay will then take on the properties of an output type.	

Terminal relay

– with bridge system

Approvals: cULus

	MIRO 12.4	MIRO 12.4	MIRO 12.4	MIRO 12.4
	Output relay 2 NO/NC contacts Screw terminals	Output relay 2 NO/NC contacts Spring clamp terminals	Input relay 2 NO/NC contacts Screw terminals	Input relay 2 NO/NC contacts Spring clamp terminals
				
Circuit diagram				
				

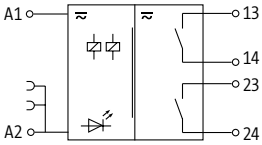
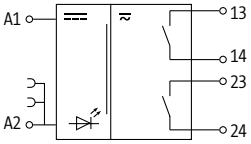
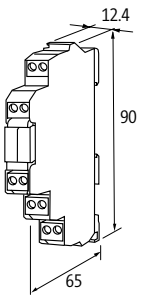
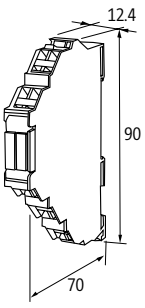
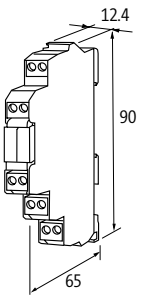
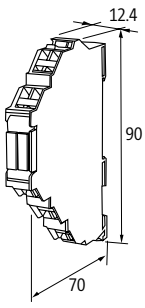
Order Data		**Art-No.**		**Art-No.**		**Art-No.**		**Art-No.**
24 V DC (19.2...30 V DC - 18 mA)	cCSAus, CCC	**52102**	cCSAus, CCC	**6652102**	CCC	**52110**	CCC	**6652110**
24 V AC/DC (19.2...30 V AC/DC - 20 mA)	CCC	**52103**	CCC	**6652103**	CCC	**52111**	CCC	**6652111**
48 V DC (40...53 V DC - 14 mA)		**52120**		**6652120**				
110 V AC/DC (95...121 V AC/DC - 7 mA)		**52130**		**6652130**		**52136**		**6652136**
230 V AC/DC (195...253 V AC/DC - 5 mA)	CCC	**52140**	CCC	**6652140**	CCC	**52146**	CCC	**6652146**
Switching capacity (EN 60947-5-1)								
AC-12	6 A (24 V AC; 110 V AC; 230 V AC)							
AC-15	3 A (24 V AC; 110 V AC; 230 V AC)							
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)							
Input								
LED display	LED (green)							
Output								
Switching voltage	max. 250 V AC/DC				max. 30 V AC/36 V DC			
Switching current per output	max. 6 A				max. 50 mA			
Min. load current	10 mA (12 V DC)				1 mA (12 V DC)			
Power rating (voltage dependent)	max. 1500 VA/120 W							
Switching frequency	max. 10 Hz							
Contact material	Ag Sn O2				Ag Sn O2 hv			
Energize/release/contact bounce time	10/15/1.5 ms							
General data								
Mech./ elect. life	20.000.000 switching cycles/load dependent							
Test isolation voltage	4 kV; safe separation (EN 60947-1)							
Temperature range	-20...+55 °C							
Mounting method	DIN-rail mountable (EN 60715)							
Dimension drawing								
				
Murrelektronik Online Shop **onlineshop.murrelektronik.com**/en				
Notes				
	For inductive loads we recommend EMC suppressors connected parallel to the coil			

MURR ELEKTRONIK
stay connected

Terminal relay

– with bridge system

Approvals:

	MIRO 12.4 Output relay 2 NO contact Screw terminals	MIRO 12.4 Output relay 2 NO contact Spring clamp terminals	MIRO 12.4 Output relay 2 NO contact Screw terminals	MIRO 12.4 Output relay 2 NO contact Spring clamp terminals
				
Circuit diagram				
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
24 V AC/DC (19.2...30 V AC/DC - 17 mA)	**52104**	**6652104**	**52106**	**6652106**
Switching capacity (EN 60947-5-1)				
AC-12	6 A (24 V AC; 110 V AC; 230 V AC)			
AC-15	3 A (24 V AC; 110 V AC; 230 V AC)			
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)			
Input				
LED display	LED (green)			
Output				
Switching voltage	max. 250 V AC/DC			
Switching current per output	max. 6 A			
Min. load current	10 mA (12 V DC)			
Power rating (voltage dependent)	max. 1500 VA/120 W			
Switching frequency	max. 10 Hz			
Contact material	Ag Sn O2			
Energize/release/contact bounce time	10/15/1.5 ms			
General data				
Mech./ elect. life	20.000.000 switching cycles/load dependent			
Test isolation voltage	4 kV; safe separation (EN 60947-1)			
Temperature range	-20...+55 °C			
Mounting method	DIN-rail mountable (EN 60715)			
Dimension drawing				
				
Murrelektronik Online Shop **onlineshop.murrelektronik.com**/en				
Notes				
	For inductive loads we recommend EMC suppressors connected parallel to the coil			

Terminal relay

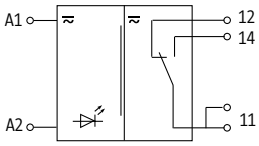
MIRO 12.4 Multi voltage

Output relay
1 NO/NC contact
Screw terminals

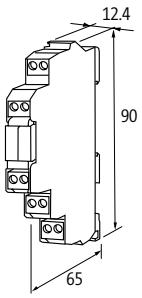


Approvals:

Circuit diagram	



Order Data		**Art-No.**
24 V AC/DC/6...27 mA		**52160**
48 V DC/6...27 mA		**52160**
110 V AC/DC/6...27 mA		**52160**
230 V AC/DC/6...27 mA		**52160**
Switching capacity (EN 60947-5-1)		
AC-12	6 A (24 V AC; 110 V AC; 230 V AC)	
AC-15	3 A (24 V AC; 110 V AC; 230 V AC)	
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)	
Input		
LED display	LED (green)	
Output		
Switching voltage	max. 250 V AC/DC	
Switching current per output	max. 6 A	
Min. load current	10 mA (12 V DC)	
Power rating (voltage dependent)	max. 1500 VA/120 W	
Switching frequency	max. 10 Hz	
Contact material	Ag Sn O2	
Energize/release/contact bounce time	10/15/1.5 ms	
General data		
Mech./ elect. life	20.000.000 switching cycles/load dependent	
Test isolation voltage	4 kV; safe separation (EN 60947-1)	
Temperature range	-20...+55 °C	
Mounting method	DIN-rail mountable (EN 60715)	
Dimension drawing		



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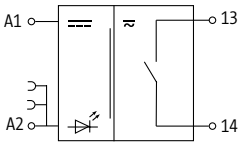
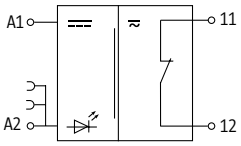
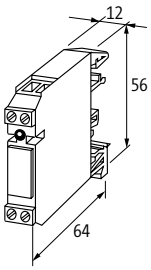
Notes	
	For inductive loads we recommend EMC suppressors connected parallel to the coil

MURR ELEKTRONIK
stay connected

Relays

– Screw terminals

	RMM	**RMM**
	Output relay 1 relay; 1 NO contact with minus plug link	Output relay 1 relay; 1 NC contact with minus plug link
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
24 V AC/DC (±10 % - 15 mA)	**51851**	**51808**
48 V AC/DC (±10 % - 10 mA)	**51850**	
Switching capacity (EN 60947-5-1)		
AC-1	5 A (24 V AC; 110 V AC; 230 V AC)	
AC-15	3 A (24 V AC; 110 V AC; 230 V AC)	
DC-13	1.5 A (24 V DC); 0.3 A (110 V DC); 0.15 A (230 V DC)	1.3 A (24 V DC); 0.3 A (110 V DC); 0.15 A (230 V DC)
Input		
Plug link (supplied)	Art.-Nr. 90960	
LED display	LED (red)	
Output		
Switching voltage	max. 250 V AC/300 V DC	
Switching current per output	max. 5 A	
Min. load current	100 mA	
Power rating (voltage dependent)	max. 1250 VA/240 W	
Switching frequency	max. 10 Hz	
Contact material	Ag Ni 0.15 hv	
Energize/release/contact bounce time	10/15/1.5 ms	
General data		
Mech./ elect. life	20.000.000 switching cycles/load dependent	
Test isolation voltage	4 kV	
Temperature range	-20...+50 °C	
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)	
Dimension drawing		
		

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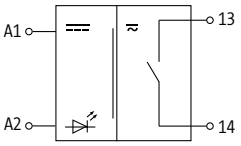
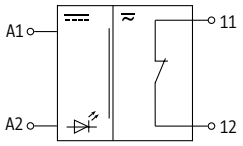
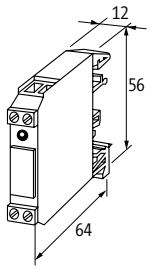
Notes

Relays

– Screw terminals

	RMM Output relay 1 relay; 1 NO contact			**RMM** Output relay 1 relay; 1 NC contact
				
Circuit diagram				
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
24 V AC/DC (±10 % - 15 mA)	**51551**			**51508**
48 V AC/DC (±10 % - 10 mA)	**51550**			
24 V AC/DC/5 mA		**512764**		
110 V AC (+10 -15 % - 3.5 mA)			**51552**	
230 V AC (+10 -15 % - 3.5 mA)			**51515**	**51562**
Switching capacity (EN 60947-5-1)				
AC-12	–	6 A (24 V AC; 110 V AC; 230 V AC)		5 A (24 V AC; 110 V AC; 230 V AC)
AC-1	5 A (24 V AC; 110 V AC; 230 V AC)	–		
AC-15	3 A (24 V AC; 110 V AC; 230 V AC)		4 A (24 V AC; 110 V AC; 230 V AC)	3 A (24 V AC; 110 V AC; 230 V AC)
DC-13	1.5 A (24 V DC); 0.3 A (110 V DC); 0.15 A (230 V DC)	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)	2 A (24 V DC); 0.25 A (110 V DC); 0.1 A (230 V DC)	1.3 A (24 V DC); 0.3 A (110 V DC); 0.15 A (230 V DC)
Input				
LED display	LED (red)	LED (green)	LED (red)	
Output				
Switching voltage	max. 250 V AC/300 V DC			
Switching current per output	max. 5 A			
Min. load current	100 mA			
Power rating (voltage dependent)	max. 1250 VA/240 W			
Switching frequency	max. 10 Hz			
Contact material	Ag Ni 0.15 hv; Ag hv			
Energize/release/contact bounce time	10/15/1.5 ms			
General data				
Mech./ elect. life	20.000.000 switching cycles/load dependent			
Test isolation voltage	4 kV			
Temperature range	-20...+50 °C			
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)			
Dimension drawing				
				
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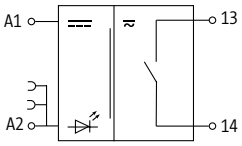
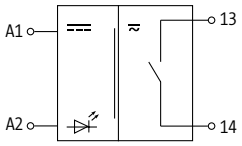
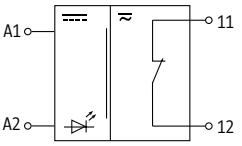
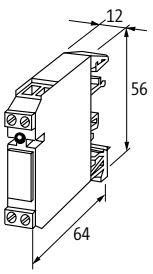
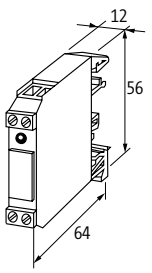
Notes				

MURR ELEKTRONIK
stay connected

Relays

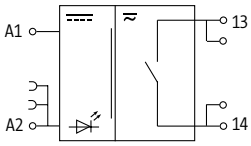
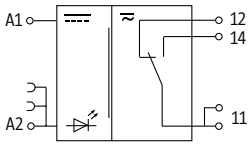
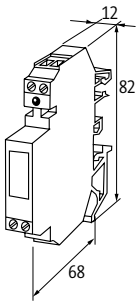
– Screw terminals

	RMME	**RMME**	**RMME**
	Input relay 1 relay; 1 NO contact with minus plug link	Input relay 1 relay; 1 NO contact	Input relay 1 relay; 1 NC contact
			
Circuit diagram			
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
24 V AC/DC (±10 % - 6 mA)	**51860**	**51560**		
48 V AC/DC (±10 % - 10 mA)		**51553**		
110 V AC (+10 -15 % - 7 mA)		**51526**		
230 V AC (+10 -15 % - 6 mA)			**51517**	
24 V AC/DC (±10 % - 15 mA)				**51571**
Switching capacity (EN 60947-5-1)				
AC-15	1 A (24 V AC); 0.5 A (125 V AC)		0.25 A (50 V AC)	3 A (24 V AC; 110 V AC; 230 V AC)
DC-13	1 A (24 V DC); 0.5 A (125 V DC)		–	1.5 A (24 V DC); 0.3 A (110 V DC); 0.15 A (230 V DC)
AC-1	–			5 A (24 V AC; 110 V AC; 230 V AC)
AC-12	–		0.5 A (50 V AC)	–
Input				
Plug link (supplied)	Art.-Nr. 90960	–		
LED display	LED (yellow)			
Output				
Switching voltage	max. 125 V AC/DC			
Switching current per output	max. 1 A			
Min. load current	1 mA			
Power rating (voltage dependent)	max. 60 VA/30 W			
Switching frequency	max. 15 Hz			
Contact material	Pd Ni-Au Rh			
Energize/release/contact bounce time	10/10/1 ms			
General data				
Mech./ elect. life	100.000.000 switching cycles/load dependent			
Test isolation voltage	1.5 kV			
Temperature range	-20...+60 °C			
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)			
Dimension drawing				
			
Murrelektronik Online Shop **onlineshop.murrelektronik.com**/en			
Notes			

Relays

– with minus plug link

– Screw terminals

	RMMD Output relay 1 relay; 1 NO contact Safe separation (IEC 61140/ EN 61140)	**RMMD** Output relay 1 relay; 1 NO contact	**RMMD** Output relay 1 relay; 1 NO/NC contact Safe separation (IEC 61140/ EN 61140)	**RMMD** Output relay 1 relay; 1 NO/NC contact with low connection current
				
Circuit diagram				
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
24 V DC (±10 % - 17 mA)	**51100**		**51120**	
230 V AC (+10 -15 % - 5 mA)		**51108**		
24 V AC/DC (±10 % - 10 mA)				**51125**
Switching capacity (EN 60947-5-1)				
AC-1	8 A (24 V AC; 110 V AC; 230 V AC)	6 A (24 V AC; 110 V AC; 230 V AC)	8 A (24 V AC; 110 V AC; 230 V AC)	
AC-15	3 A (24 V AC; 110 V AC; 230 V AC)	4 A (24 V AC; 110 V AC; 230 V AC)	3 A (24 V AC; 110 V AC; 230 V AC)	
DC-13	2.5 A (24 V DC); 0.4 A (110 V DC); 0.3 A (230 V DC)	2 A (24 V DC); 0.25 A (110 V DC); 0.1 A (230 V DC)	2.5 A (24 V DC); 0.4 A (110 V DC); 0.3 A (230 V DC)	
Input				
Plug link (supplied)	Art.-Nr. 90960	–	Art.-Nr. 90960	
LED display	LED (red)			
Output				
Switching voltage	max. 250 V AC/DC			
Switching current per output	max. 8 A	max. 6 A		max. 8 A
Min. load current	100 mA			
Power rating (voltage dependent)	max. 2000 VA/240 W			
Switching frequency	max. 10 Hz			
Contact material	Ag Ni			
Energize/release/contact bounce time	10/15/2 ms			
General data				
Mech./ elect. life	20.000.000 switching cycles/load dependent			
Test isolation voltage	5 kV	4 kV	5 kV	
Temperature range	-20...+50 °C			
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)			
Dimension drawing				
				
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Notes				

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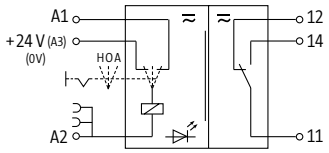
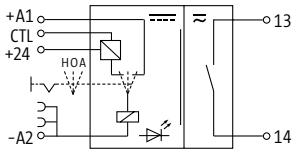
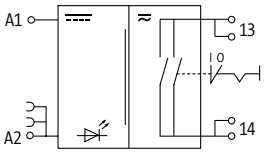
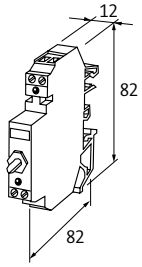
Relays

– with minus plug link

– Hand-0-Auto

– Screw terminals

	RMMDH	**RMMDH**	**RMMDH**
	Output relay 1 relay; 1 NO/NC contact	Output relay 1 relay; 1 NO contact CTL alarm output	Output relay 1 relay; 2 NO contacts Toggle switch for bridging the NO contact
			
Circuit diagram			
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
24 V AC/DC (±10 % - 16 mA)	**51152**		
24 V DC (±10 % - 16 mA)		**51153**	
24 V DC (±10 % - 10 mA)			**51101**
Switching capacity (EN 60947-5-1)			
AC-1	8 A (24 V AC; 110 V AC; 230 V AC)		3 A (24 V AC; 110 V AC; 230 V AC)
AC-15	3 A (24 V AC; 110 V AC; 230 V AC)		
DC-13	1.5 A (24 V DC); 0.3 A (110 V DC); 0.15 A (230 V DC)		
Input			
Plug link (supplied)	Art.-Nr. 90960		
LED display	LED (red)		
Output			
Switching voltage	max. 250 V AC/DC		max. 250 V AC/30 V DC
Switching current per output	max. 8 A	max. 8 A; CTL: 10 mA	max. 6 A
Min. load current	100 mA		
Power rating (voltage dependent)	max. 2000 VA/240 W		max. 750 VA/90 W
Switching frequency	max. 15 Hz		
Contact material	Ag Ni		Ag Cd 0
Energize/release/contact bounce time	10/10/2 ms		
General data			
Mech./ elect. life	30.000.000 switching cycles/load dependent		
Test isolation voltage	3 kV	4 kV	3 kV
Temperature range	-20...+50 °C		
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)		
Dimension drawing			
			

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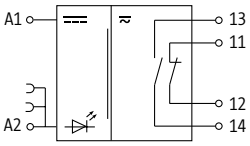
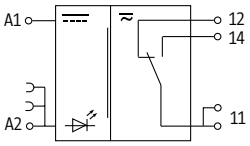
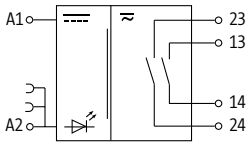
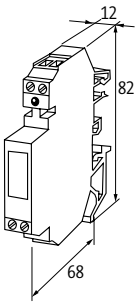
Notes

Relays

– with minus plug link

– with bridge system

– Screw terminals

	RMMDE Input relay 1 relay; 1 NO contact/1 NC contact	**RMMDE** Input relay 1 relay; 1 NO/NC contact		**RMMDE** Input relay 1 relay; 2 NO contacts
				
Circuit diagram				
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
24 V DC (±10 % - 20 mA)	**516014**			
24 V DC (±10 % - 15 mA)		**51130**		**51140**
230 V AC (+10 -15 % - 5 mA)			**51138**	
Switching capacity (EN 60947-5-1)				
AC-1	3 A (24 V AC); 2 A (230 V AC)	5 A (24 V AC; 110 V AC; 230 V AC)		2 A (24 V AC; 110 V AC; 230 V AC)
AC-15	1 A (24 V AC); 0.1 A (230 V AC)	3 A (24 V AC; 110 V AC; 230 V AC)	4 A (24 V AC; 110 V AC; 230 V AC)	1 A (24 V AC); 0.1 A (230 V AC)
DC-13	0.8 A (24 V DC); 0.01 A (230 V DC)	1.3 A (24 V DC); 0.25 A (110 V DC); 0.10 A (230 V DC)	2 A (24 V DC); 0.25 A (110 V DC); 0.1 A (230 V DC)	0.8 A (24 V DC); 0.1 A (110 V DC); 0.01 A (230 V DC)
Input				
Plug link (supplied)	Art.-Nr. 90960		–	Art.-Nr. 90960
LED display	LED (red)	LED (yellow)		
Output				
Switching voltage	max. 250 V AC/DC			
Switching current per output	max. 3 A	max. 20 mA	max. 5 A	max. 2 A
Min. load current	1 mA			5 mA
Power rating (voltage dependent)	max. 500 VA/180 W	max. 1500 VA/180 W		max. 250 VA/150 W
Switching frequency	max. 10 Hz	max. 15 Hz		
Contact material	Ag Ni 0.15 hv	Ag Ni 0.15 hv; Ag hv		Ag Au
Energize/release/contact bounce time	6/3/2 ms	10/10/1 ms		
General data				
Mech./ elect. life	20.000.000 switching cycles/load dependent	100.000.000 switching cycles/load dependent		20.000.000 switching cycles/load dependent
Test isolation voltage	2.5 kV	4 kV		1.5 kV
Temperature range	-20...+60 °C			-20...+50 °C
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)			
Dimension drawing				
				
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Notes				

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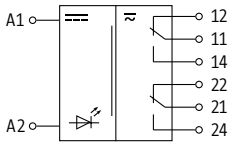
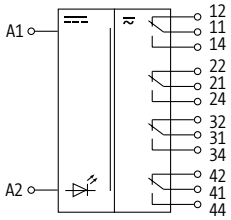
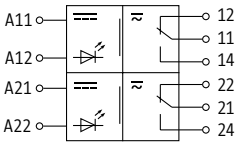
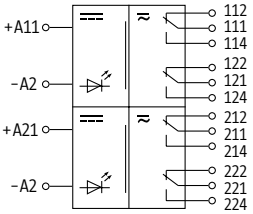
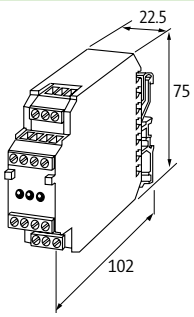
Relays **– Screw terminals**	**RM** Output relay 1 relay; 2 NO/NC contacts	**RM** Output relay 1 relay; 4 NO/NC contacts	**RM** Output relay 2 relays; each 1 NO/NC contact	**RM** Output relay 2 relays; each 2 NO/NC contacts
				
Circuit diagram				
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
24 V AC/DC (±10 % - 20 mA)	**51540**	**51410**		
230 V AC (+10 -15 % - 10 mA)		**51413**	**51412**	
24 V AC/DC (±10 % - 10 mA)			**51485**	
24 V AC/DC (±10 % - 14 mA)				**51465**
Switching capacity (EN 60947-5-1)				
AC-1	8 A (24 V AC; 110 V AC; 230 V AC)	–	8 A (24 V AC; 110 V AC; 230 V AC)	
AC-12	–	2 A (24 V AC); 0.5 A (230 V AC)	–	
AC-15	3 A (24 V AC; 110 V AC; 230 V AC)	1 A (24 V AC); 0.1 A (230 V AC)	3 A (24 V AC; 110 V AC; 230 V AC)	
DC-13	2 A (24 V DC); 0.3 A (110 V DC); 0.2 A (230 V DC)	0.8 A (24 V DC); 0.01 A (230 V DC)	1.5 A (24 V DC); 0.3 A (110 V DC); 0.15 A (230 V DC)	2 A (24 V DC); 0.3 A (110 V DC); 0.2 A (230 V DC)
Input				
LED display	LED (red)			
Output				
Switching voltage	max. 250 V AC/DC			
Switching current per output	max. 8 A	max. 2 A	max. 8 A	
Min. load current	100 mA	0.1 mA	100 mA	
Power rating (voltage dependent)	max. 1250 VA/240 W	max. 125 VA/60 W	max. 1250 VA/240 W	
Switching frequency	max. 0.1 Hz (with load)			
Contact material	Ag Ni 0.15 hv	Ag Au	Ag Sn O2	Ag Ni 0.15 hv
Energize/release/contact bounce time	10/10/2 ms	10/20/2 ms	10/10/2 ms	
General data				
Mech./ elect. life	50.000.000 switching cycles/load dependent		20.000.000 switching cycles/load dependent	
Test isolation voltage	4 kV	1.5 kV	4 kV	
Temperature range	-20...+50 °C			
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)			
Dimension drawing				
				
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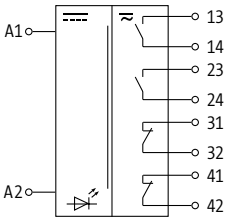
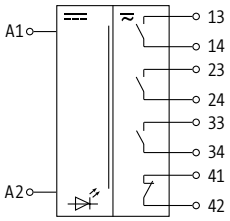
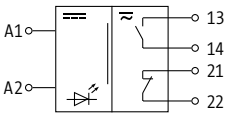
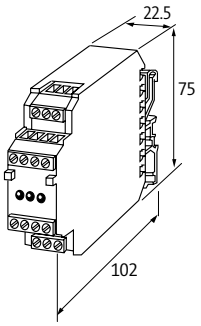
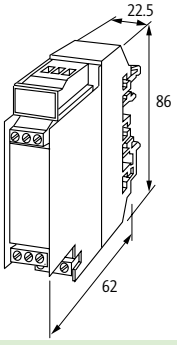
Notes				

Relays

– Screw terminals

– with force guided contacts

	RM	**RM**	**MKS**
	Output relay 1 relay; 2 NO contacts/2 NC contacts	Output relay 1 relay; 3 NO contacts/1 NC contact	Output relay 1 relay; 1 NO contact/1 NC contact
			
Circuit diagram			
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
24 V DC (±10 % - 17 mA)	**51300**	**51301**	
24 V DC (±10 % - 38 mA)			**51302**
Switching capacity (EN 60947-5-1)			
AC-1	5 A (24 V AC; 110 V AC; 230 V AC)		6 A (24 V AC; 110 V AC; 230 V AC)
DC-13	2 A (24 V DC); 0.4 A (110 V DC); 0.2 A (230 V DC)		3 A (24 V DC); 0.22 A (110 V DC); 0.1 A (230 V DC)
AC-15	4 A (24 V AC); 3 A (110 V AC); 2 A (230 V AC)		3 A (24 V AC; 110 V AC; 230 V AC)
Input			
LED display	LED (red)		LED (green)
Output			
Switching voltage	max. 250 V AC/DC		
Switching current per output	max. 5 A		max. 6 A
Min. load current	300 mA		10 mA
Power rating (voltage dependent)	max. 1000 VA/50 W		max. 1500 VA/100 W
Switching frequency	max. 0.1 Hz (with load)	max. 1 Hz	max. 5 Hz
Contact material	Ag Ni 10 hv	Ag hv; Ag Sn O2	Ag Ni 10 hv
Energize/release/contact bounce time	15/15/2 ms		15/15/1.5 ms
General data			
Mech./ elect. life	1.000.000 switching cycles/load dependent		10.000.000 switching cycles/load dependent
Test isolation voltage	2.5 kV		4 kV
Temperature range	-20...+50 °C		
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)		
Dimension drawing			
			
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Notes			

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Relaissockel

– für Steckrelais MRS

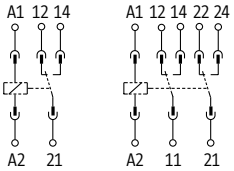
– Schraubklemmen

MRB

1 oder 2 Wechsler
Schraubklemmen



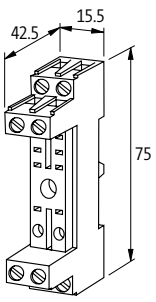
Schaltbild



Bestelldaten	**Art-Nr.**
max. 250 V AC	**51353**
Zubehör	**Art-Nr.**
Entstörmodul 24 V DC	**61340**
Entstörmodul 110/230 V AC	**61342**
Steckrelais, 1 Wechsler, 24 V DC	**61352**
Steckrelais, 1 Wechsler, 24 V AC	**61354**
Steckrelais, 1 Wechsler, 110 V AC	**61356**
Steckrelais, 1 Wechsler, 230 V AC	**61358**
Steckrelais, 2 Wechsler, 24 V DC	**61353**
Steckrelais, 2 Wechsler, 24 V AC	**61355**
Steckrelais, 2 Wechsler, 110 V AC	**61357**
Steckrelais, 2 Wechsler, 230 V AC	**61359**

Technische Daten	
Zusatzbeschaltung	aufsteckbares Entstörmodul MRE
Schaltspannung	max. 250 V AC
Schaltstrom	max. 16 A
Allgemeine Daten	
Normen	berührungsgeschützt (VBG 4) und (VDE 0106) Teil 100 und 101
Prüf-Isolationsspannung	5 kV
Anschlussart	Schraubklemmen: max. 4 mm²
Befestigungsart	schnappbar auf Tragschiene (EN 60715)

Maßskizze



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Hinweis

Safety relay

– Protection-door and emergency-stop control

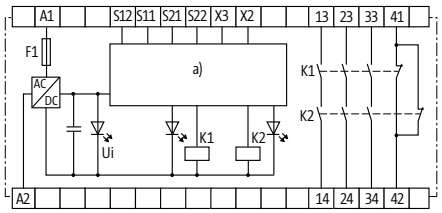
Approvals: c UL us Listed

MIRO SAFE+ Switch H 48-230

with/without start button monitoring

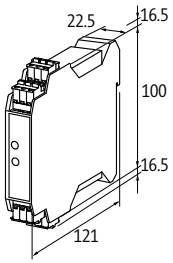


Circuit diagram



Order Data	Art-No.
3 safety contacts	3000-33113-1020012
Switching capacity (EN 60947-5-1)	
Safety contacts (STOP 0)	max. 250 V AC/6 A; min. 10 V AC/10 mA (ohm./ind.), at suitable suppression
AC-15	6 A (230 V AC) STOP0
DC-13	6 A (24 V DC) STOP0
Technical Data	
Achievable safety category to:	4/PL e (EN ISO 13849-1)
Contact material	AgSnO, self cleaning, positively driven
Input	
Input voltage	48...240 V AC
Input current	max. 2.8 VA
Output	
Switching voltage	max. 250 V AC/DC
Switching current per output	max. 6 A
Number of auxiliary contacts	1 - (41-42)
Number of alarm outputs	0
Number of safety contacts	3 - (13-14); (23-24); (33-34)
General data	
Mech./ elect. life	10.000.000 switching cycles/load dependent
Temperature range	-25...+45 °C (storage temperature -40...+85 °C)
Connection	Spring clamp plug-in terminals
Mounting method	DIN-rail mountable (EN 60715)

Dimension drawing



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Notes

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Safety relay

– Protection-door and emergency-stop control

– Light curtain control

– Safety magnetic switch control

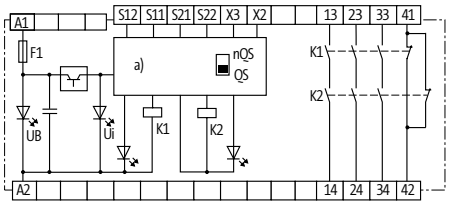
Approvals: c UL us Listed

MIRO SAFE+ Switch H L 24

with/without start button monitoring

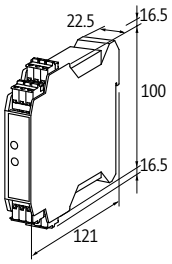


Circuit diagram



Order Data	Art-No.
3 safety contacts	3000-33113-3020012
Switching capacity (EN 60947-5-1)	
Safety contacts (STOP 0)	max. 250 V AC/8 A; min. 10 V AC/10 mA (ohm./ind.), at suitable suppression
AC-15	6 A (230 V AC) STOP 0
DC-13	6 A (24 V DC) STOP 0
Technical Data	
Achievable safety category to:	4/PL e (EN ISO 13849-1)
Contact material	AgSnO, self cleaning, positively driven
Input	
Input voltage	24 V DC (-15/+20 %), 24 V AC (-15/+10 %)
Input current	max. 4.9 VA/2.0 W
Output	
Switching voltage	max. 250 V AC/DC
Switching current per output	max. 8 A
Total current	24 A (45 °C); 18 A (55 °C); 12 A (60 °C)
Number of auxiliary contacts	1 - (41-42)
Number of alarm outputs	0
Number of safety contacts	3 - (13-14); (23-24); (33-34)
General data	
Mech./ elect. life	10.000.000 switching cycles/load dependent
Temperature range	-25...+60 °C (storage temperature -40...+85 °C)
Mounting method	DIN-rail mountable (EN 60715)

Dimension drawing



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Notes

Safety relay

– Protection-door and emergency-stop control

– Light curtain control

– Safety magnetic switch control

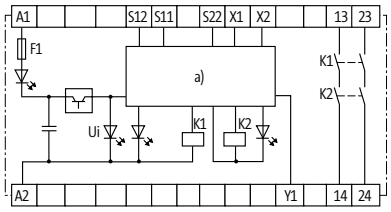
Approvals: c UL us Listed

MIRO SAFE+ Switch ECOA 24

without start button monitoring

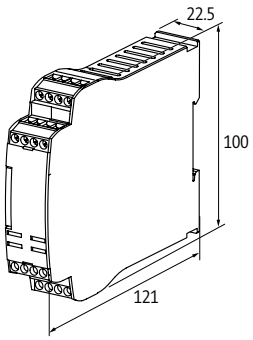


Circuit diagram



Order Data	Art-No.
2 safety contacts	3000-33113-3020005
Switching capacity (EN 60947-5-1)	
Safety contacts (STOP 0)	max. 250 V AC/6 A; min. 5 V AC/1 mA (ohm./ind.), at suitable suppression
AC-15	2 A (230 V AC) STOP 0
DC-13	1 A (24 V DC) STOP 0
Alarm outputs	100 mA (24 V DC)
Technical Data	
Achievable safety category to:	4/PL e (EN ISO 13849-1)
Contact material	AgSnO, self cleaning, positively driven
Input	
Input voltage	24 V DC (-15/+20 %), 24 V AC (-15/+10 %)
Input current	max. 5.2 VA/2.0 W
Output	
Switching voltage	max. 250 V AC/DC
Switching current per output	max. 4 A
Number of auxiliary contacts	0
Number of alarm outputs	1 - (Y1)
Number of safety contacts	2 - (13-14; 23-24)
General data	
Mech./ elect. life	10.000.000 switching cycles/load dependent
Temperature range	-25...+60 °C (storage temperature -40...+85 °C)
Connection	Screw terminals
Mounting method	DIN-rail mountable (EN 60715)

Dimension drawing



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Notes

MURR ELEKTRONIK
stay connected

Safety relay

– Protection-door and emergency-stop control

– Light curtain control

– Safety magnetic switch control

Approvals: c UL us Listed

MIRO SAFE+ Switch BA L 24

without start button monitoring

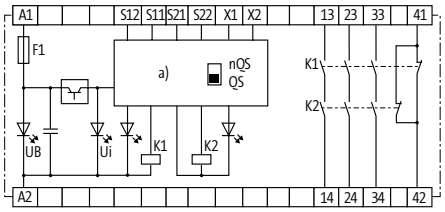


MIRO SAFE+ Switch BCS L 24

with start button monitoring

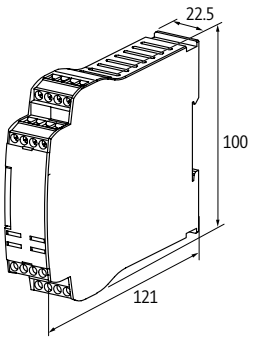


Circuit diagram



Order Data	Art-No.	Art-No.
3 safety contacts	3000-33113-3020025	3000-33113-3020020
Switching capacity (EN 60947-5-1)		
Safety contacts (STOP 0)	max. 250 V AC/8 A; min. 10 V AC/10 mA (ohm./ind.), at suitable suppression	
AC-15	6 A (230 V AC) STOP 0	
DC-13	6 A (24 V DC) STOP 0	
Technical Data		
Achievable safety category to:	4/PL e (EN ISO 13849-1)	
Contact material	AgSnO, self cleaning, positively driven	
Input		
Input voltage	24 V DC (-15/+20 %), 24 V AC (-15/+10 %)	
Input current	max. 4.9 VA/2.0 W	max. 4.4 VA/1.8 W
Output		
Switching voltage	max. 250 V AC/DC	
Switching current per output	max. 8 A	
Total current	24 A (45 °C); 18 A (55 °C); 12 A (60 °C)	
Number of auxiliary contacts	1 - (41-42)	
Number of alarm outputs	0	
Number of safety contacts	3 - (13-14); (23-24); (33-34)	
General data		
Mech./ elect. life	10.000.000 switching cycles/load dependent	
Temperature range	-25...+60 °C (storage temperature -40...+85 °C)	
Connection	Screw terminals	
Mounting method	DIN-rail mountable (EN 60715)	

Dimension drawing



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Notes

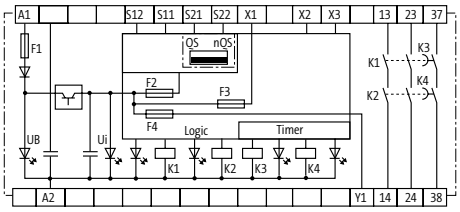
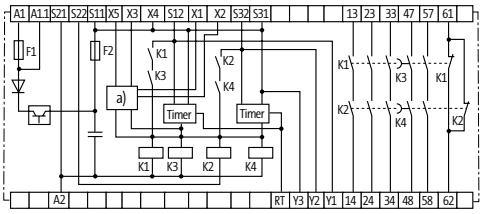
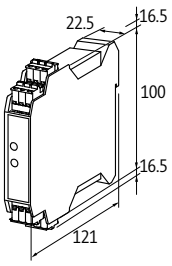
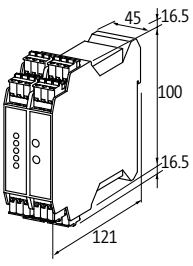
Safety relay

– Protection-door and emergency-stop control

– Light curtain control

– Safety magnetic switch control

Approvals: cULus Listed

	MIRO SAFE+ T 1 24 with/without start button monitoring	**MIRO SAFE+ T 2 24** with/without start button monitoring
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
3 safety contacts	**3000-33113-3020065**	
5 safety contacts		**3000-33113-3020060**
Switching capacity (EN 60947-5-1)		
Safety contacts (STOP 0)	max. 250 V AC/8 A; min. 5 V AC/5 mA (ohm./ind.), at suitable suppression	max. 250 V AC/8 A; min. 10 V AC/10 mA (ohm./ind.), at suitable suppression
Safety contacts (STOP 1)	max. 250 V AC/6 A; min. 10 V AC/10 mA (ohm./ind.), at suitable suppression	
AC-15	6 A (230 V AC) STOP 0; 3 A (230 V AC) STOP 1	
DC-13	5 A (24 V DC) STOP 0; 2 A (24 V DC) STOP 1	6 A (24 V DC) STOP 0; 2 A (24 V DC) STOP 1
Technical Data		
Achievable safety category to:	4/PL e (STOP 0); 3/PL d (STOP 1) - (EN ISO 13849-1)	
Contact material	AgSnO, self cleaning, positively driven	
Input		
Input voltage	24 V DC (-15/+20 %), 24 V AC (-15/+10 %)	
Input current	5.9 VA/2.4 W (with monitoring output)	max. 7.1 VA/3.2 W (with monitoring output)
Output		
Switching voltage	max. 250 V AC/DC	
Switching current per output	max. 8 A (STOP 0); max. 6 A (STOP 1)	max. 6 A
Total current (STOP 0)	–	18 A (45 °C); 15 A (55 °C); 12 A (60 °C)
Number of auxiliary contacts	0	1 - (31-32)
Total current (STOP 1)	–	12 A (45 °C); 10 A (55 °C); 8 A (60 °C)
Number of alarm outputs	1 - (Y1)	3 - (13-14); (23-24); (33-34)
Number of safety contacts	2 - (13-14), (23-24), STOP 0; 1 - (37-38), STOP 1	3 - (13-14), (23-24), (33-34), STOP 0; 2 - (47-48), (57-58), STOP 1
General data		
Mech./ elect. life	10.000.000 switching cycles/load dependent	
Temperature range	-25...+60 °C (storage temperature -40...+85 °C)	
Connection	Spring clamp plug-in terminals	
Mounting method	DIN-rail mountable (EN 60715)	
Dimension drawing		
		

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Notes

MURR ELEKTRONIK
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Safety relay

– Two hand control

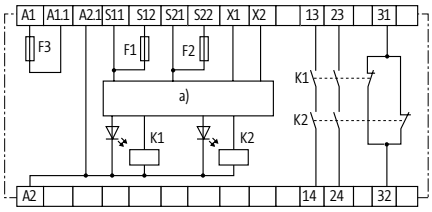
MIRO SAFE+ HAND 24

without start button monitoring



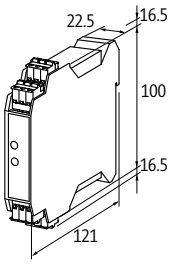
Approvals: c UL us Listed

Circuit diagram



Order Data	Art-No.
2 safety contacts	3000-33113-3020030
Switching capacity (EN 60947-5-1)	
Safety contacts (STOP 0)	max. 250 V AC/6 A; min. 10 V AC/10 mA (ohm./ind.), at suitable suppression
AC-15	6 A (230 V AC) STOP 0
DC-13	6 A (24 V DC) STOP 0
Technical Data	
Achievable safety category to:	4/PL e (EN ISO 13849-1)
Contact material	AgSnO, self cleaning, positively driven
Input	
Input voltage	24 V DC ±10 %
Input current	max. 1.2 W
Output	
Switching voltage	max. 250 V AC/DC
Switching current per output	max. 6 A
Number of auxiliary contacts	1 - (31-32)
Number of alarm outputs	0
Number of safety contacts	2 - (13-14); (23-24)
General data	
Mech./ elect. life	10.000.000 switching cycles/load dependent
Temperature range	-25...+60 °C (storage temperature -40...+85 °C)
Connection	Spring clamp plug-in terminals
Mounting method	DIN-rail mountable (EN 60715)

Dimension drawing



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Notes

Safety relay

– Protection-door control

– Pressure-sensitive mat. control

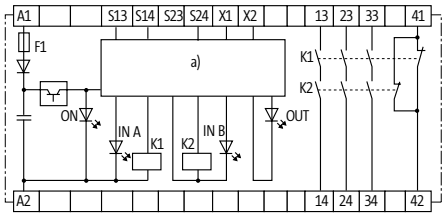
Approvals: c UL us Listed

MIRO SAFE+ STEP 24

without start button monitoring

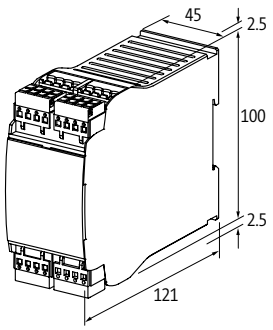


Circuit diagram



Order Data	Art-No.
3 safety contacts	3000-33113-3020050
Switching capacity (EN 60947-5-1)	
Safety contacts (STOP 0)	max. 250 V AC/8 A; min. 10 V AC/10 mA (ohm./ind.), at suitable suppression
AC-15	6 A (230 V AC) STOP 0
DC-13	6 A (24 V DC) STOP 0
Technical Data	
Achievable safety category to:	4/PL e (EN ISO 13849-1)
Contact material	AgSnO, self cleaning, positively driven
Input	
Input voltage	24 V DC (-15/+20 %), 24 V AC (-15/+10 %)
Input current	max. 3.7 VA/1.6 W (24 V DC)
Output	
Switching voltage	max. 250 V AC/DC
Switching current per output	max. 8 A
Number of auxiliary contacts	1 - (41-42)
Number of alarm outputs	0
Number of safety contacts	3 - (13-14); (23-24); (33-34)
General data	
Mech./ elect. life	10.000.000 switching cycles/load dependent
Temperature range	-25...+60 °C (storage temperature -40...+85 °C)
Connection	Spring clamp plug-in terminals
Mounting method	DIN-rail mountable (EN 60715)

Dimension drawing



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Notes

MURR ELEKTRONIK
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Expansion modules

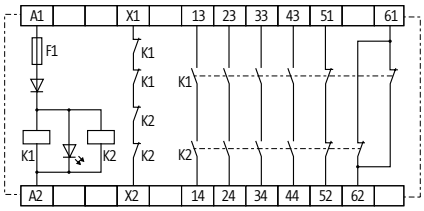
MIRO SAFE+ E 24

Expansion module

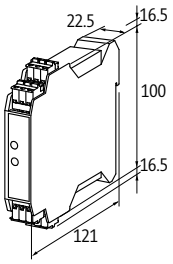


Approvals: c UL us Listed

Circuit diagram	



Order Data	**Art-No.**
4 NO	**3000-33113-3020075**
Switching capacity (EN 60947-5-1)	
Safety contacts (STOP 0)	max. 250 V AC/6 A; min. 10 V AC/10 mA (ohm./ind.), at suitable suppression
AC-15	6 A (230 V AC)
DC-13	6 A (24 V DC)
Technical Data	
Achievable safety category to:	4/PL e (EN ISO 13849-1) depending on basic module
Contact material	AgSnO, self cleaning, positively driven
Input	
Input voltage	24 V DC (-15/+20 %), 24 V AC (-15/+10 %)
Input current	max. 1.0 VA
Output	
Switching voltage	max. 250 V AC/DC
Switching current per output	max. 6 A
Number of auxiliary contacts	2 - (51-52); (61-62)
Number of alarm outputs	0
Number of contacts	4 - (13-14); (23-24); (33-34); (43-44)
General data	
Mech./ elect. life	10.000.000 switching cycles/load dependent
Temperature range	-25...+45 °C (storage temperature -40...+85 °C)
Connection	Spring clamp plug-in terminals
Mounting method	DIN-rail mountable (EN 60715)
Dimension drawing	



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Notes

Labeling accessories			Art-No.
	**ACS label plate KM 5**		
	for self marking (9 × 20 mm)		**7000-99001-0000000**
	5 × 10 mm		**90931**
	**ACS label plate KM 6/18**		
	for self marking with ADEMARK markers		**7000-99003-0000000**
	**Label plate KWI 5/15**		
	(88 pieces per plate)		**90901**

Wiring accessories			Art-No.
	**Potential plug link**		
	max. 48 V/2 A	RMM..., RMMD...	**90960**
	**Potential plug link**		
	max. 50 V/2 A	MIRO	**90961**
	**Potential rail blue**		
	10-pole, spacing 6.2 mm	MIRO 6.2 (screw terminals)	**90975**
	40-pole, spacing 12 mm	RMM..., RMMD...	**90970**
	**Potential rail red**		
	10-pole, spacing 6.2 mm	MIRO 6.2 (screw terminals)	**90976**
	40-pole, spacing 12 mm	RMM..., RMMD...	**90971**
	End caps for potential rail		
	blue	MIRO 6.2	**90980**
	red	RMM..., RMMD...	**90982**
	**Wire chain 16-pole**		
	Connection cable left and right approx. 50 cm; bk; 1 mm²	MIRO (spring clamp terminals)	**90977**

Wiring accessories			Art-No.
	Double spring clamp terminal		
	pluggable	MIRO SAFE	**3000-33010-0000000**



OPTOCOUPLERS / SEMICONDUCTORS
SWITCHING WITHOUT WEAR

- **Shortest possible switching times**
- **High switching frequencies**
- **Resistant to EMC interference**

MILLIONS OF SWITCHING CYCLES – EVEN WITH HIGH FREQUENCIES

Optocouplers and semiconductors are used to combine different signal levels or to isolate one signal from another. They are similar to a relay interface because they provide an optoelectronic signal transfer between input and output.

Optocouplers and semiconductors have a long life span because they don‘t have any mechanical components that could wear out. They are suitable for applications with high switching frequencies, even over a long time.

Some benefits of optocouplers and semiconductors:

- Silent operation
- No contact bounce
- Galvanic separation between input and output
- High resistance to shock and vibration
- High switching currents
- Low input power

Optocouplers / Semiconductors



Optocouplers
• DC applications

Page 1.11.1



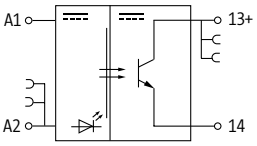
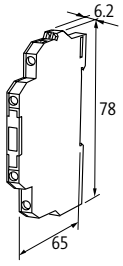
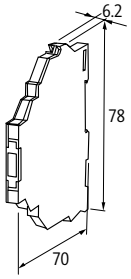
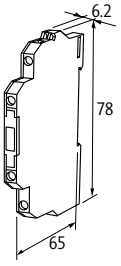
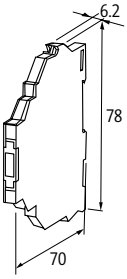
Semiconductors
• AC applications

Page 1.11.17

MURR ELEKTRONIK
stay connected

Terminal optocoupler

– with bridge system

	MIRO 6.2 Transistor 1 A Screw terminals	**MIRO 6.2** Transistor 1 A Spring clamp terminals	**MIRO 6.2** Transistor 2 A Screw terminals	**MIRO 6.2** Transistor 2 A Spring clamp terminals
				
Circuit diagram				
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
24 V DC/6 mA	**52515**	cURus **6652515**		
5 V DC/6 mA			cURus, cCSAus **52502**	cURus, cCSAus **6652502**
Input				
Voltage range ON	11...30 V DC		4...5.5 V DC	
Voltage range OFF	0...5 V DC		0...2 V DC	
Control current	6 mA			
LED display	LED (yellow)			
Output				
Switching voltage	3...48 V DC		5...48 V DC	
Switching current per output	500 µA...1 A		1 mA...2 A	
Saturation voltage (across output)	max. 0.12 V DC		max. 0.3 V DC	
Leakage current (when output is open)	max. 25 µA		max. 10 µA	
Switching time ON/OFF	1.5/1 ms (100 mA load)		1/5 ms	
Switching frequency	max. 40/4 Hz (resist./ind.)		max. 10/1 Hz (resist./ind.)	
General data				
Test isolation voltage	500 V		2.5 kV	
Temperature range	-20...+60 °C			
Mounting method	DIN-rail mountable (EN 60715)			
Housing	Black plastic, flame retardant			
Dimension drawing				
				
Notes				

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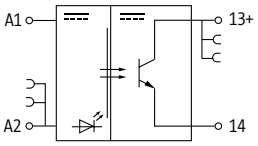
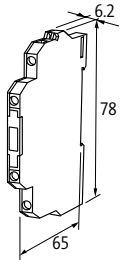
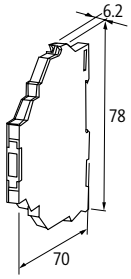
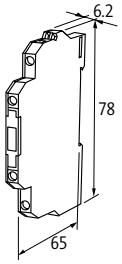
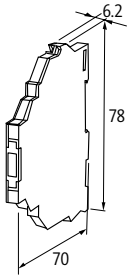
Terminal optocoupler

– with bridge system

Approvals:

	MIRO 6.2 Transistor 2 A Screw terminals	MIRO 6.2 Transistor 2 A Spring clamp terminals	MIRO 6.2 Transistor 2 A Screw terminals	MIRO 6.2 Transistor 2 A Spring clamp terminals
				
Circuit diagram				
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
24 V DC/6 mA	**52501**	**6652501**		
48 V DC/6 mA			**52505**	**6652505**
Input				
Voltage range ON	10...48 V DC		18...56 V DC	
Voltage range OFF	0...5 V DC		0...12 V DC	
Control current	6 mA			
LED display	LED (yellow)			
Output				
Switching voltage	5...48 V DC			
Switching current per output	1 mA...2 A			
Saturation voltage (across output)	max. 0.3 V DC			
Leakage current (when output is open)	max. 10 µA			
Switching time ON/OFF	1/5 ms			
Switching frequency	max. 10/1 Hz (resist./ind.)			
General data				
Test isolation voltage	2.5 kV			
Temperature range	-20...+60 °C			
Mounting method	DIN-rail mountable (EN 60715)			
Housing	Black plastic, flame retardant			
Dimension drawing				
				
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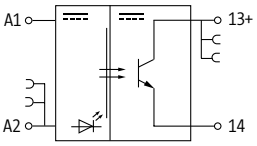
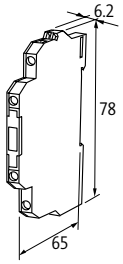
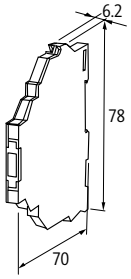
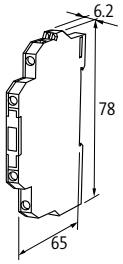
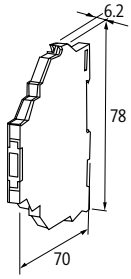
Notes				

MURR ELEKTRONIK
stay connected

Terminal optocoupler

– with bridge system

Approvals:

	MIRO 6.2 Transistor 6 A Screw terminals	**MIRO 6.2** Transistor 6 A Spring clamp terminals	**MIRO 6.2** Transistor 10 A Screw terminals	**MIRO 6.2** Transistor 10 A Spring clamp terminals
Circuit diagram				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
24 V DC/6 mA	**52519**	**6652519**		
24 V DC/10 mA			**52520**	**6652520**
Input				
Voltage range ON	10...53 V DC			
Voltage range OFF	0...5 V DC			
Control current	approx. 10 mA		10 mA	
LED display	LED (yellow)			
Output				
Switching voltage	5...48 V DC			
Switching current per output	1 mA...6 A (without derating)		1 mA...10 A	
Saturation voltage (across output)	max. 0.1 V DC		max. 0.12 V DC	
Leakage current (when output is open)	max. 25 µA			
Switching time ON/OFF	2/5 ms		2/5 ms (10 A load)	
Switching frequency	max. 1/0.1 Hz (resist./ind.)			
General data				
Test isolation voltage	2.75 kV			
Temperature range	-20...+60 °C			
Mounting method	DIN-rail mountable (EN 60715)			
Housing	Black plastic, flame retardant			
Dimension drawing				
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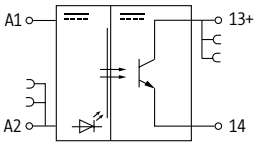
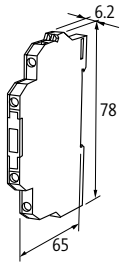
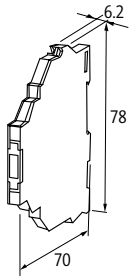
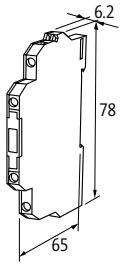
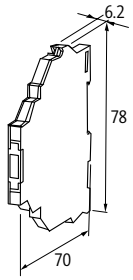
Terminal optocoupler

– with bridge system

Approvals:

	MIRO 6.2 Transistor 10 A Screw terminals	**MIRO 6.2** Transistor 10 A Spring clamp terminals	**MIRO 6.2** Transistor 0.5 A Screw terminals	**MIRO 6.2** Transistor 0.5 A Spring clamp terminals
				
Circuit diagram				
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
24 V DC/10 mA (pulse control operation)	**52521**	**6652521**		
24 V DC/6 mA			**52500**	**6652500**
Input				
Voltage range ON	10...53 V DC			
Voltage range OFF	0...5 V DC			
Control current	10 mA		6 mA	
LED display	LED (yellow)			
Output				
Switching voltage	5...48 V DC			
Switching current per output	1 mA...10 A, overload and short circuit protection switched positive		0.1 mA...0.5 A	
Saturation voltage (across output)	max. 0.12 V DC		max. 1.2 V DC	
Leakage current (when output is open)	max. 25 µA		max. 0.3 mA	
Switching time ON/OFF	2/5 ms (10 A load)		100/700 µs	
Switching frequency	max. 1 Hz		max. 500/30 Hz (resist./ind.)	
General data				
Test isolation voltage	2.75 kV		3.75 kV	
Temperature range	-20...+60 °C			
Mounting method	DIN-rail mountable (EN 60715)			
Housing	Black plastic, flame retardant			
Dimension drawing				
				
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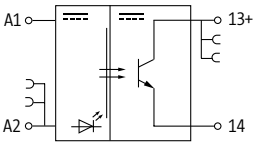
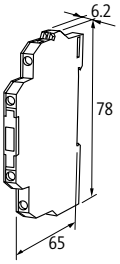
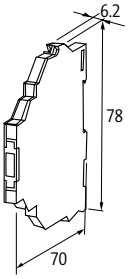
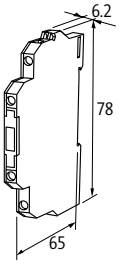
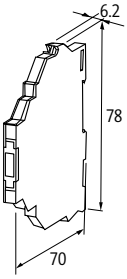
Terminal optocoupler

– with bridge system

Approvals: cULus cCSAus

	MIRO 6.2 Transistor 0.5 A Screw terminals	**MIRO 6.2** Transistor 0.5 A Spring clamp terminals	**MIRO 6.2** Transistor 0.5 A Screw terminals	**MIRO 6.2** Transistor 0.5 A Spring clamp terminals
				
Circuit diagram				
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
110 V AC/DC/6 mA	**52506**	**6652506**		
230 V AC/6 mA			**52507**	**6652507**
Input				
Voltage range ON	70...130 V AC/DC		90...250 V AC	
Voltage range OFF	0...30 V AC/DC		0...40 V AC	
Control current	6 mA		7 mA	
LED display	LED (yellow)			
Output				
Switching voltage	5...48 V DC			
Switching current per output	0.1 mA...0.5 A			
Saturation voltage (across output)	max. 1.2 V DC			
Leakage current (when output is open)	max. 0.3 mA			
Switching time ON/OFF	100/700 µs			
Switching frequency	max. 500/30 Hz (resist./ind.)			
General data				
Test isolation voltage	3.75 kV			
Temperature range	-20...+60 °C			
Mounting method	DIN-rail mountable (EN 60715)			
Housing	Black plastic, flame retardant			
Dimension drawing				
				

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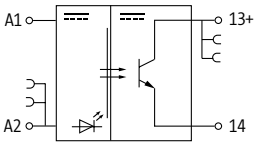
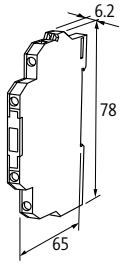
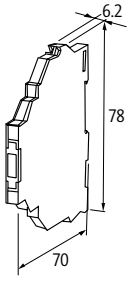
Terminal optocoupler

– with bridge system

Approvals:

	MIRO 6.2 Transistor 2 A Screw terminals	MIRO 6.2 Transistor 2 A Spring clamp terminals
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
230 V AC/6 mA	**52508**	**6652508**
Input		
Voltage range ON	90...250 V AC	
Voltage range OFF	0...30 V AC	
Control current	15 mA	
LED display	LED (yellow)	
Output		
Switching voltage	5...48 V DC	
Switching current per output	1 mA...2 A (without derating)	
Saturation voltage (across output)	max. 0.3 V DC	
Leakage current (when output is open)	max. 0.3 mA	
Switching frequency	max. 10/1 Hz (resist./ind.)	
Switching time ON/OFF	3/10 ms	
General data		
Test isolation voltage	2.5 kV	
Temperature range	-20...+60 °C	
Mounting method	DIN-rail mountable (EN 60715)	
Housing	Black plastic, flame retardant	
Dimension drawing		
		
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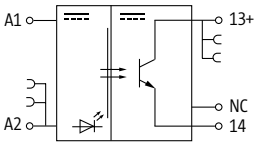
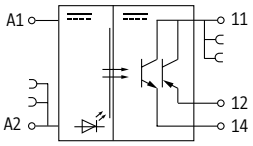
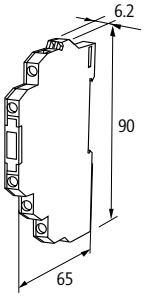
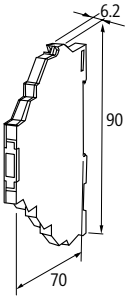
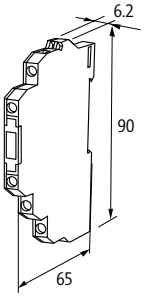
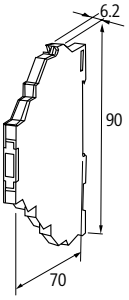
Terminal optocoupler

– with bridge system

Approvals:

	MIRO 6.2	MIRO 6.2	MIRO 6.2	MIRO 6.2
	Transistor 2 A Inrush current limiting Screw terminals	Transistor 2 A Inrush current limiting Spring clamp terminals	Transistor 0.5 A electr. NO/NC contact Screw terminals	Transistor 0.5 A electr. NO/NC contact Spring clamp terminals
				
Circuit diagram				
	 common return for NC			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
24 V DC/6 mA	**52512**	**6652512**	**52510**	**6652510**
Input				
Voltage range ON	10...53 V DC			
Voltage range OFF	0...5 V DC			
Control current	6 mA			
LED display	LED (yellow)			
Output				
Switching voltage	5...48 V DC			
Switching current per output	1 mA...2 A overload protection		0.1 mA...0.5 A	
Saturation voltage (across output)	max. 0.35 V DC		max. 1.2 V DC	
Leakage current (when output is open)	max. 0.1 mA			
Switching time ON/OFF	5/10 ms		40/150 µs	
Switching frequency	max. 10 Hz			
General data				
Test isolation voltage	2.5 kV		3.75 kV	
Temperature range	-20...+60 °C			
Mounting method	DIN-rail mountable (EN 60715)			
Housing	Black plastic, flame retardant			
Dimension drawing				
				

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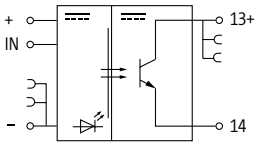
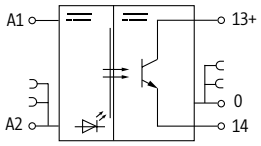
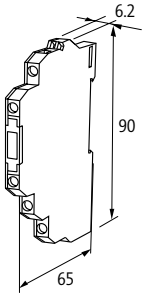
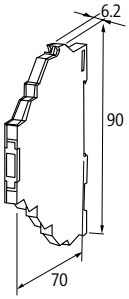
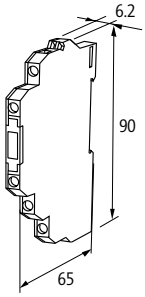
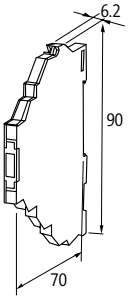
Terminal optocoupler

– with bridge system

Approvals: cULus

	MIRO 6.2 Transistor 0.5 A Control current 0.1 mA (5 V DC) Screw terminals	**MIRO 6.2** Transistor 0.5 A Control current 0.1 mA (5 V DC) Spring clamp terminals	**MIRO 6.2** Transistor 2 A short-circuit protected Screw terminals	**MIRO 6.2** Transistor 2 A short-circuit protected Spring clamp terminals
				
Circuit diagram				
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
24 V DC/0.1 mA (5 V DC)	cCSAus **52511**	cCSAus **6652511**		
24 V DC/6 mA			**52503**	**6652503**
Input				
Voltage range ON	4.2...30 V DC		10...48 V DC	
Voltage range OFF	0...2 V DC		0...5 V DC	
Control current	0.1 mA (5 V)		6 mA	
LED display	LED (yellow)			
Output				
Switching voltage	5...48 V DC		10...35 V DC	
Switching current per output	0.1 mA...0.5 A		1 mA...2 A (short-circuit protected)	
Saturation voltage (across output)	max. 1.2 V DC			
Leakage current (when output is open)	max. 0.1 mA			
Switching time ON/OFF	12/12 µs		90/120 µs	
Switching frequency	max. 20 kHz		max. 1 kHz	
General data				
Test isolation voltage	3.75 kV			
Temperature range	-20...+60 °C			
Mounting method	DIN-rail mountable (EN 60715)			
Housing	Black plastic, flame retardant			
Dimension drawing				
				
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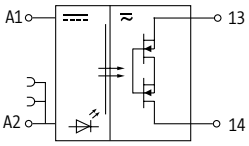
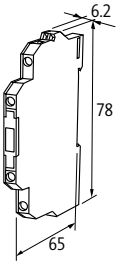
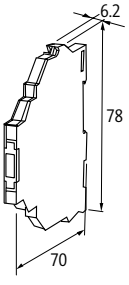
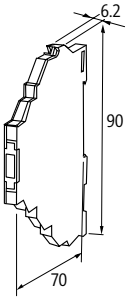
Terminal optocoupler

– with bridge system

	MIRO 6.2	MIRO 6.2	MIRO 6.2	MIRO 6.2
	Transistor 1 A Multi voltage output Screw terminals	Transistor 1 A Multi voltage output Spring clamp terminals	Transistor 2 A Spring clamp terminals	Transistor 0.1 A Spring clamp terminals
				
Circuit diagram				
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
24 V DC/10 mA	**52572**	**6652572**	**526071**	**526100**
Input				
Voltage range ON	10...53 V DC		10...35 V DC	10...30 V DC
Voltage range OFF	0...5 V DC			0...7 V DC
Control current	10 mA		6 mA	5.5 mA
LED display	LED (yellow)		LED (green)	LED (yellow)
Output				
Switching time ON/OFF	3/6 ms		7/6 µs	0.4/0.1 µs
Switching voltage	5...250 V AC/5...350 V DC		10...30 V DC	5...48 V DC
Switching current per output	1 mA...1 A		1 mA...2 A	0...0.1 A
Saturation voltage (across output)	max. 0.7 V AC/DC		max. 0.3 V AC/DC	max. 1.2 V AC/DC
Leakage current (when output is open)	max. 25 µA			max. 250 µA
Switching frequency	max. 10 Hz		max. 30 kHz/400 Hz (resist./ind.)	500 kHz (ohmic)
General data				
Test isolation voltage	2.75 kV		2.5 kV	2.75 kV
Temperature range	-20...+60 °C			
Mounting method	DIN-rail mountable (EN 60715)			
Housing	Black plastic, flame retardant			
Dimension drawing				
				

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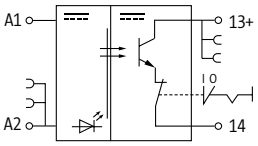
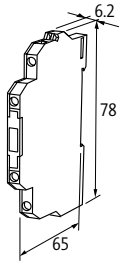
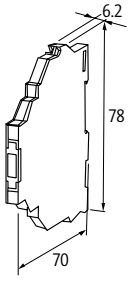
Notes

Terminal optocoupler

– Isolation function in output circuit

Approvals:

	MIRO 6.2 Transistor 2 A Screw terminals	**MIRO 6.2** Transistor 2 A Spring clamp terminals
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
24 V DC/7 mA	**52513**	**6652513**
Input		
Voltage range ON	10...48 V DC	
Voltage range OFF	0...5 V DC	
Control current	7 mA	
LED display	LED (yellow)	
Output		
Switching time ON/OFF	1/5 ms	
Switching current per output	1 mA...2 A	
Switching voltage	5...48 V DC	
Saturation voltage (across output)	max. 0.3 V DC	
Leakage current (when output is open)	max. 0.3 mA	
Switching frequency	max. 10/1 Hz (resist./ind.)	
General data		
Temperature range	-20...+60 °C	
Housing	Black plastic, flame retardant	
Test isolation voltage	2.5 kV	
Mounting method	DIN-rail mountable (EN 60715)	
Dimension drawing		
		
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Notes		

MURR ELEKTRONIK
stay connected

Optocouplers

– Inrush current limiting

– Screw terminals

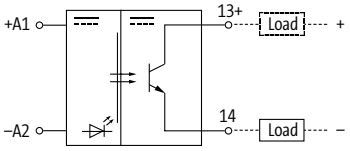
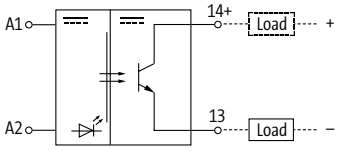
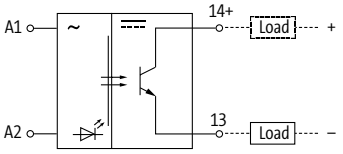
AMMS

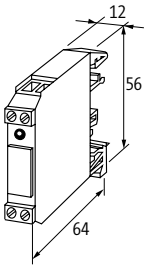
Transistor 1.2 A



EMMS

Transistor 1.2 A

Circuit diagram			
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
3.5...5.5 V DC/6 mA	**50041**		
24 V DC/6 mA		**50040**	
110/230 V AC/2.7 mA			**50105**
Input			
Voltage range ON	3.5...5.5 V DC	10...53 V DC	100...253 V AC
Voltage range OFF	0...0.8 V DC	0...3 V DC	0...40 V AC
Input current	6 mA		2.7 mA
LED display	LED (red)		
Output			
Leakage current (when output is open)	max. 0.3 mA		
Switching current per output	1 mA...1.2 A		
Switching voltage	4.5...53 V DC		
Saturation voltage (across output)	max. 1.2 V DC		
Switching time ON/OFF	100/700 µs		20/50 ms
Switching frequency	max. 500 Hz (resist.) at max. 0.2 A/max. 30 Hz (ind.)		max. 5 Hz
General data			
Test isolation voltage	3.75 kV		
Temperature range	-20...+60 °C		
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)		
Housing	Black plastic, flame retardant		
Dimension drawing			



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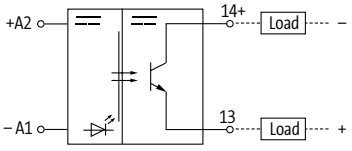
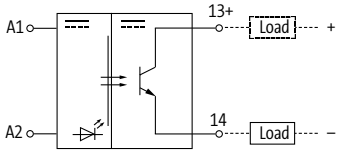
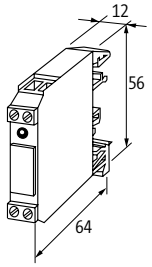
Notes

Optocouplers

– Inrush current limiting

– Screw terminals

	AMMS Transistor 1.2 A	**AMMS** Transistor 2 A
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
4...30 V DC/10 mA	**50010**	
24 V DC/6 mA		**50070**
Input		
Voltage range ON	4...30 V DC	10...53 V DC
Voltage range OFF	0...2 V DC	0...3 V DC
Input current	max. 10 mA	6 mA
LED display	LED (red)	
Output		
Switching voltage	4.5...44 V DC	4.5...40 V DC
Switching current per output	1 mA...1.2 A	10 mA...2 A
Saturation voltage (across output)	max. 1.2 V DC	max. 0.1 V DC
Leakage current (when output is open)	max. 0.3 mA	max. 0.1 mA
Switching time ON/OFF	65/65 µs	2/8 ms
Switching frequency	max. 7 kHz (resist.) at max. 0.3 A/max. 10 Hz (ind.)	max. 2.5 Hz
General data		
Test isolation voltage	3.75 kV	2.5 kV
Temperature range	-20...+60 °C	
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)	
Housing	Black plastic, flame retardant	
Dimension drawing		
		

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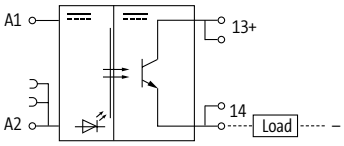
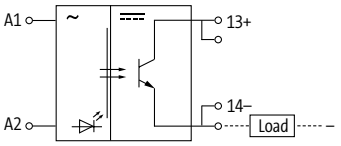
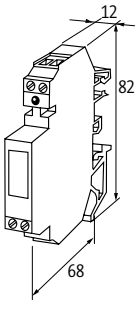
Notes		

MURR ELEKTRONIK
stay connected

Optocouplers

– Double terminals on the output side

– Screw terminals

	AMMDS	**AMMDS**	**AMMDS**
	Transistor 0.1 A with minus plug link	Transistor 2 A with minus plug link	Transistor 0.1 A
			
Circuit diagram			
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
24 V DC/6 mA	**50081**	**50080**	
230 V AC/10 mA			**50110**
Input			
LED display	LED (red)		
Input current	6 mA		7.5 mA
Plug link (supplied)	Art.-Nr. 90960		–
Voltage range ON	10...53 V DC		195...253 V AC
Voltage range OFF	0...3 V DC		0...110 V AC
Output			
Switching voltage	4...40 V DC	4...35 V DC	4...40 V DC
Switching current per output	1 mA...0.1 A	10 mA...2 A (short-circuit protected)	1 mA...0.1 A
Saturation voltage (across output)	max. 1.2 V DC	max. 0.5 V DC	max. 1.2 V DC
Leakage current (when output is open)	max. 0.3 mA		
Switching time ON/OFF	1.5/2 ms	5/15 ms	50/120 ms
Switching frequency	max. 300/40 Hz (resist./ind.)	max. 10/1 Hz (resist./ind.)	
General data			
Temperature range	-20...+60 °C		
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)		
Housing	Black plastic, flame retardant		
Test isolation voltage	3.75 kV	2.5 kV	3.75 kV
Dimension drawing			
			

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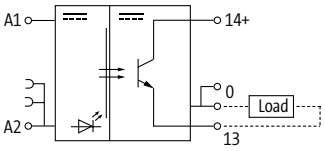
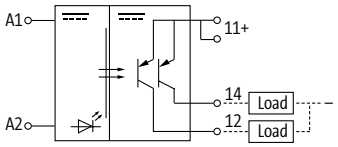
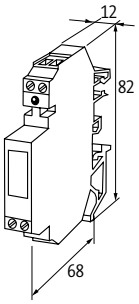
Notes

Optocouplers

– with minus plug link

– Screw terminals

	AMMDS Transistor 2 A Double terminals on the output side for rapid switching	**AMMDS** Transistor 1 A
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
24 V DC/15 mA	**50082**	
24 V AC/DC/10 mA		**50085**
Input		
Voltage range ON	10...35 V DC	10...53 V DC
Voltage range OFF	0...5 V DC	0...6 V DC
Input current	10 mA	
LED display	LED (red)	
Plug link (supplied)	Art.-Nr. 90960	–
Output		
Switching voltage	5...35 V DC	4.5...53 V DC
Switching current per output	1 mA...2 A	1 mA...1 A
Saturation voltage (across output)	max. 0.5 V DC	
Leakage current (when output is open)	max. 0.3 mA	
Switching time ON/OFF	7/6 µs	25/75 µs
Switching frequency	max. 30 kHz/200 Hz (resist./ind.)	max. 1 kHz/10 Hz (resist./ind.)
General data		
Test isolation voltage	2.5 kV	
Temperature range	-20...+60 °C	
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)	
Housing	Black plastic, flame retardant	
Dimension drawing		
		

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Notes		

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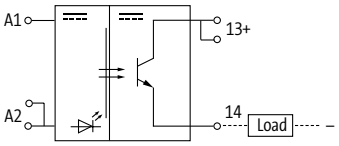
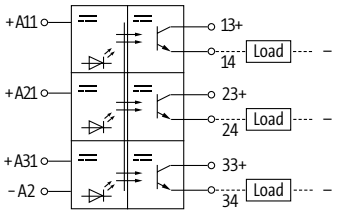
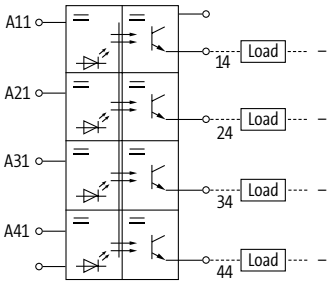
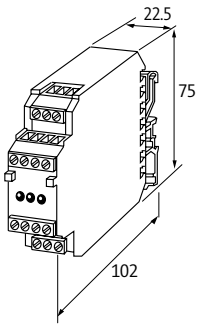
Power opto-coupler modules

– Screw terminals

	AMS Transistor 4 A	**AMS** Transistor 2 A (3-way) 3 NO contacts	**AMS** Transistor 2 A (4-way) 4 NO
			
Circuit diagram			
		 common negative for all 3 inputs = – A2	

Order Data	**Art-No.**	**Art-No.**	**Art-No.**
24 V DC/10 mA	**50044**	**50043**	
24 V DC/3 mA			cCSAus **50015**
Input			
Voltage range ON	10...53 V DC		20...30 V DC
Voltage range OFF	0...3 V DC		0...6 V DC
Input current	14.5 mA	10 mA	27 mA
LED display	LED (red)		LED (yellow)
Output			
Switching voltage	4.5...53 V DC	4.5...35 V DC	5...30 V DC
Switching current per output	100 mA...4 A	10 mA...2 A (short-circuit protected)	1 mA...2 A
Saturation voltage (across output)	max. 1.5 V AC	max. 0.5 V DC	max. 0.05 V DC
Leakage current (when output is open)	max. 10 mA	max. 0.3 mA	max. 0.01 mA
Switching time ON/OFF	4/7 µs	2/15 ms	1/5 ms
Switching frequency	max. 2 kHz/4 Hz (resist./ind.)	max. 10/1 Hz (resist./ind.)	
General data			
Test isolation voltage	3.75 kV	2.5 kV	
Temperature range	-20...+60 °C		-25...+50 °C
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)		
Housing	Black plastic, flame retardant		
Dimension drawing			



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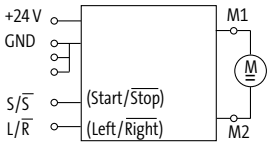
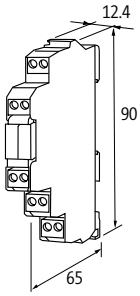
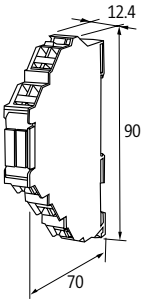
Notes

Optocouplers

– DC Motor control

– Over current / temperature monitoring

	MIRO 12.4 Transistor 3 A Screw terminals	**MIRO 12.4** Transistor 3 A Spring clamp terminals
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
24 V DC/10 mA	**50140**	**6650140**
Input		
Voltage range ON	15...30 V DC	
Voltage range OFF	0...5 V DC	
Input current	10 mA	
LED display	LED (yellow): right running; LED (green): left running	
Output		
Switching voltage	19.2...30 V DC	
Switching current per output	max. 3 A	
Highest current	approx. 6 A for 100 ms	
Saturation voltage (across output)	max. 1.4 V DC	
Leakage current (when output is open)	max. 10 mA	
Switching time ON/OFF	1.2/10 ms	
Switching frequency	max. 1 Hz (motor dependant)	
Changing time	max. 50 ms	
LED display	LED (red): error (over current/over heated)	
General data		
Test isolation voltage	no galvanic separation	
Temperature range	0...+50 °C	
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)	
Housing	Black plastic, flame retardant	
Dimension drawing		
		

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Notes

MURR ELEKTRONIK
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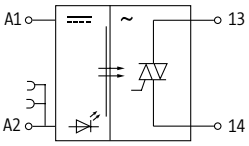
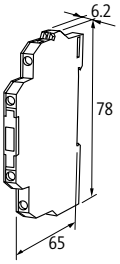
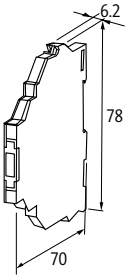
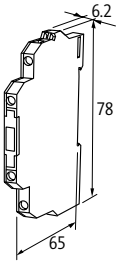
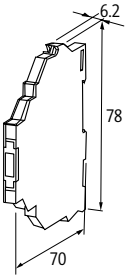
Terminal triac

– Zero potential switch

Approvals: cULus

	MIRO 6.2	**MIRO 6.2**	**MIRO 6.2**	**MIRO 6.2**
	Triac 0.5 A	Triac 0.5 A	Triac 0.5 A	Triac 0.5 A
	Screw terminals	Spring clamp terminals	Screw terminals	Spring clamp terminals
				
Circuit diagram				
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
5 V DC/6 mA	**52551**	**6652551**		
24 V DC/6 mA			**52550**	**6652550**
Input				
Voltage range ON	4...5.5 V DC		10...53 V DC	
Voltage range OFF	0...2 V DC		0...5 V DC	
Control current	6 mA			
LED display	LED (yellow)			
Output				
Switching voltage	24...250 V AC			
Switching current per output	2 mA...0.5 A		1.5 mA...0.5 A	
Saturation voltage (across output)	max. 1.5 V AC			
Leakage current (when output is open)	max. 0.3 mA			
Switching time ON/OFF	10/10 ms			
Switching frequency	max. 20 Hz, depending on suppression			
General data				
Test isolation voltage	2.5 kV			
Temperature range	-20...+60 °C			
Mounting method	DIN-rail mountable (EN 60715)			
Housing	Black plastic, flame retardant			
Dimension drawing				
				
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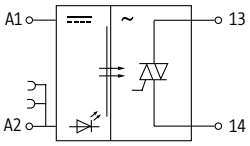
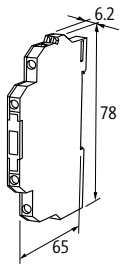
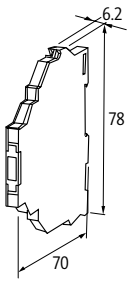
Notes				

Terminal triac

– Zero potential switch

	MIRO 6.2 Triac 1 A Screw terminals	**MIRO 6.2** Triac 1 A Spring clamp terminals
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
24 V DC/9 mA	**52571**	**6652571**
Input		
Voltage range ON	12...53 V DC	
Voltage range OFF	0...3 V DC	
Control current	12 mA (24 V DC)	
LED display	LED (yellow)	
Output		
Switching voltage	12...250 V AC	
Switching current per output	10 mA...1 A	
Saturation voltage (across output)	max. 1.5 V AC	
Leakage current (when output is open)	max. 1 mA	
Switching time ON/OFF	10/10 ms	
Switching frequency	max. 2 Hz, depending on suppression	
General data		
Test isolation voltage	2.5 kV	
Temperature range	0...+60 °C	
Mounting method	DIN-rail mountable (EN 60715)	
Housing	Black plastic, flame retardant	
Dimension drawing		
		
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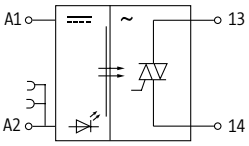
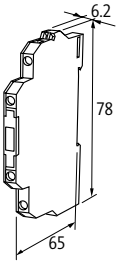
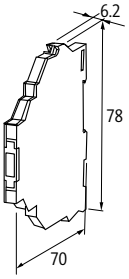
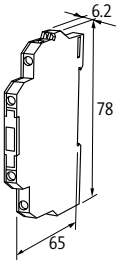
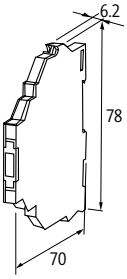
Notes		

MURR ELEKTRONIK
stay connected

Terminal triac

– Zero potential switch

Approvals: cULus

	MIRO 6.2	**MIRO 6.2**	**MIRO 6.2**	**MIRO 6.2**
	Triac 0.5 A Screw terminals	Triac 0.5 A Spring clamp terminals	Triac 0.5 A Screw terminals	Triac 0.5 A Spring clamp terminals
				
Circuit diagram				
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
110 V AC/DC (95...121VAC/DC - 4 mA)	**52556**	**6652556**		
230 V AC/7 mA			**52557**	**6652557**
Input				
Voltage range ON	70...130 V AC/DC		140...250 V AC	
Voltage range OFF	0...35 V AC/DC		0...80 V AC	
Control current	4 mA		7 mA	
LED display	LED (yellow)			
Output				
Switching voltage	12...250 V AC			
Switching current per output	2 mA...0.5 A			
Saturation voltage (across output)	max. 1.5 V AC			
Leakage current (when output is open)	max. 0.3 A	max. 0.3 mA		
Switching time ON/OFF	10/10 ms			
Switching frequency	max. 20 Hz, depending on suppression			
General data				
Test isolation voltage	2.5 kV			
Temperature range	-20...+60 °C			
Mounting method	DIN-rail mountable (EN 60715)			
Housing	Black plastic, flame retardant			
Dimension drawing				
				
Notes				

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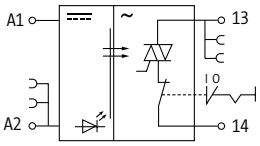
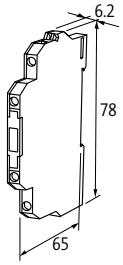
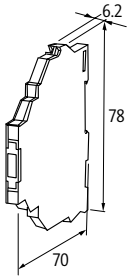
Terminal triac

– Zero potential switch

	MIRO 6.2 Triac 0.5 A Screw terminals	**MIRO 6.2** Triac 0.5 A Spring clamp terminals
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
24 V DC/7 mA	**52561**	**6652561**
Input		
Voltage range ON	10...53 V DC	
Voltage range OFF	0...5 V DC	
Control current	7 mA	
LED display	LED (yellow)	
Output		
Switching voltage	24...250 V AC	
Switching current per output	2 mA...0.5 A	
Saturation voltage (across output)	max. 1.5 V AC	
Leakage current (when output is open)	max. 0.3 mA	
Switching time ON/OFF	10/10 ms	
Switching frequency	max. 20/1 Hz (resist./ind.)	
General data		
Test isolation voltage	2.5 kV	
Temperature range	-20...+60 °C	
Mounting method	DIN-rail mountable (EN 60715)	
Housing	Black plastic, flame retardant	
Dimension drawing		
		
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Notes		

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stay connected

Triac modules MIRO

– Zero potential switch

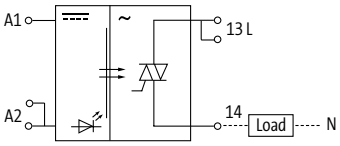
– Screw plug-in terminals

MIRO Triac

Triac 5 A

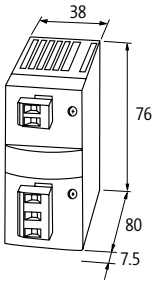


Circuit diagram



Order Data	**Art-No.**	**Art-No.**	**Art-No.**
24 V DC/7.8 mA	**3000-36001-2000020**		
115 V AC/9 mA		**3000-36001-2000022**	
230 V AC/DC - 10 mA			**3000-36001-3000023**
Input			
Voltage range ON	10...53 V DC	70...150 V AC	140...253 V AC
Voltage range OFF	0...3 V DC	0...25 V AC	0...50 V AC
Control current	approx. 7.8 mA	approx. 9 mA	approx. 10 mA
Control voltage	24 V DC	115 V AC	230 V AC
LED display	LED (green)		
Output			
Switching voltage	12...400 V AC		
Switching current per output	10 mA...5 A (no derating)		
Saturation voltage (across output)	max. 0.15 V AC		
Leakage current (when output is open)	max. 1 mA		
Switching time ON/OFF	10/10 ms		
Switching frequency	max. 20/1 Hz (resist./ind.)		
Surge current	70 A		
General data			
Temperature range	-20...+60 °C		
Housing	Black plastic, flame retardant		
Mounting method	DIN-rail mountable (EN 60715)		

Dimension drawing



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Notes

Triac modules MIRO

– Zero potential switch

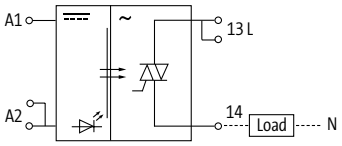
– Screw plug-in terminals

MIRO Triac

Triac 10 A

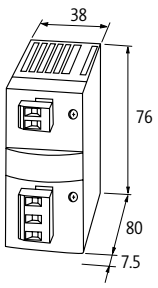


Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.
24 V DC/7.8 mA	**3000-36001-2000025**		
115 V AC/9 mA		**3000-36001-2000027**	
230 V AC/DC - 10 mA			**3000-36001-3000028**
Input			
Voltage range ON	10...53 V DC	70...150 V AC	140...253 V AC
Voltage range OFF	0...3 V DC	0...25 V AC	0...50 V AC
Control current	approx. 7.8 mA	approx. 9 mA	approx. 10 mA
Control voltage	24 V DC	115 V AC	230 V AC
LED display	LED (green)		
Output			
Switching voltage	12...400 V AC		
Switching current per output	100 mA/10 A (no derating)		
Saturation voltage (across output)	max. 0.15 V AC		
Leakage current (when output is open)	max. 1 mA		
Switching time ON/OFF	10/10 ms		
Switching frequency	max. 20/1 Hz (resist./ind.)		
Surge current	70 A		
General data			
Temperature range	-20...+60 °C		
Housing	Black plastic, flame retardant		
Mounting method	DIN-rail mountable (EN 60715)		

Dimension drawing



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Notes

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Triac modules

– Zero potential switch

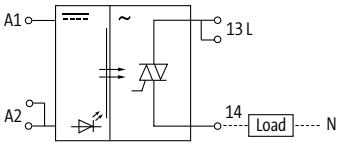
– Screw terminals

AMS

Triac 4 A

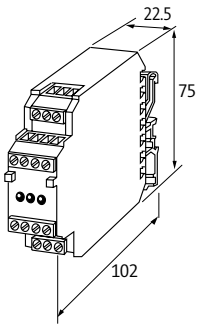


Circuit diagram



Order Data		**Art-No.**
24 V DC/10 mA		**50034**
Input		
Voltage range ON	10...53 V DC	
Voltage range OFF	0...3 V DC	
Input current	10 mA	
LED display	LED (red)	
Output		
Switching voltage	24...250 V AC	
Switching current per output	10 mA...4 A	
Saturation voltage (across output)	max. 1.4 V AC	
Leakage current (when output is open)	max. 10 mA	
Switching time ON/OFF	10/10 ms	
Switching frequency	max. 30/5 Hz (resist./ind.)	
General data		
Test isolation voltage	6 kV	
Temperature range	-20...+60 °C	
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)	
Housing	Black plastic, flame retardant	

Dimension drawing



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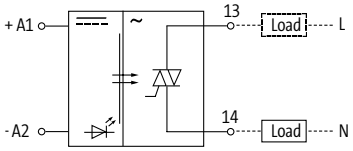
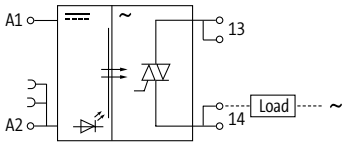
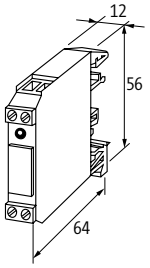
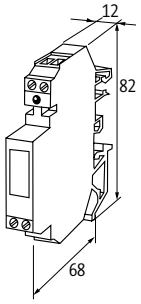
Notes

Triac modules

– Zero potential switch

– Screw terminals

	AMMS Triac 1 A	**AMMDS** Triac 2 A with minus plug link
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
	50030	
24 V DC/6 mA		**50092**
Input		
Voltage range ON	10...53 V DC	10...35 V DC
Voltage range OFF	0...3 V DC	
Input current	6.6 mA	6 mA
LED display	LED (red)	
Plug link (supplied)	–	Art.-Nr. 90960
Output		
Switching voltage	24...253 V AC	24...280 V AC
Switching current per output	50 mA...1 A	50 mA...2 A
Saturation voltage (across output)	max. 1.3 V AC	max. 1 V AC
Leakage current (when output is open)	max. 5 mA	max. 2 mA
Switching time ON/OFF	10/10 ms	
Switching frequency	max. 20 Hz	max. 20/5 Hz (resist./ind.)
General data		
Test isolation voltage	2.5 kV	
Temperature range	-20...+60 °C	
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)	
Housing	Black plastic, flame retardant	
Dimension drawing		
		
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Notes		

Labeling accessories			Art-No.
	**ACS label plate KM 5**		
	for self marking (9 × 20 mm)		**7000-99001-0000000**
	**Label plate KM 4**		
	5 × 10 mm		**90931**
	**ACS label plate KM 6/18**		
	for self marking with ADEMARK markers		**7000-99003-0000000**
	**Label plate KWI 5/15**		
	(88 pieces per plate)		**90901**

Wiring accessories			Art-No.
	**Potential plug link**		
	max. 50 V/2 A	MIRO	**90961**
	**Potential plug link**		
	max. 48 V/2 A	RMM..., RMMD...	**90960**
	**Potential rail blue**		
	40-pole, spacing 12 mm	RMM..., RMMD...	**90970**
	10-pole, spacing 6.2 mm	MIRO 6.2 (screw terminals)	**90975**
	**Potential rail red**		
	40-pole, spacing 12 mm	RMM..., RMMD...	**90971**
	10-pole, spacing 6.2 mm	MIRO 6.2 (screw terminals)	**90976**
	End caps for potential rail		
	blue	MIRO 6.2	**90980**
	red	RMM..., RMMD...	**90982**

Wiring accessories			Art-No.
	**Wire chain 16-pole**		
	Connection cable left and right approx. 50 cm; bk; 1 mm²	MIRO (spring clamp terminals)	**90977**



ACTIVE INTERFACE TECHNOLOGY
ANALOG AND DIGITAL

- **Solid state or relay outputs are short circuit protected**
- **LED display**
- **DIN rail mounting**

CONVERT MEASURED VALUES INTO SIGNALS

While measuring, positioning or checking systems, the status of the machine or installation should be monitored. The measured values have to be converted into digital or standard signals (0...20 mA, 4...20 mA or 0...10 V) so that PLCs and computers can process them.

Murrelektronik offers a wide range of intelligent interface modules that enable signal conversion or signal acquisition with galvanic separation.

Active Interface Technology



Converters
AD/DA converters, Analog converters, Frequency converters, U/I converters

Page 1.12.1



Timer
MIRO 6.2 Timer

Page 1.12.9



Comparator modules
MAK

Page 1.12.14



Temperature converter
MTW

Page 1.12.15



Switches
Tree

Page 1.12.16



Further
Brake rectifiers, Demagnetizer, MIRO GSM

Page 1.12.18

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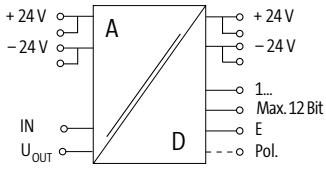
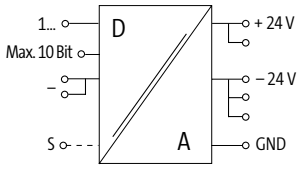
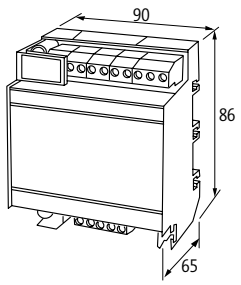
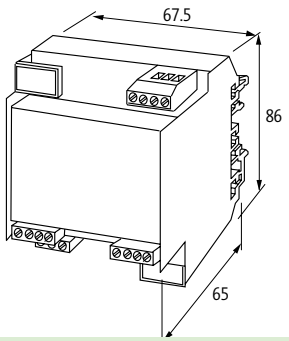
AD/DA converters

– Input and output galvanically separated

– Screw terminals

	MAW	**MDW**
	A/D converter	D/A converter
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
4...20 mA/8 Bit	**44091**	**44073**
0...10 V DC/8 Bit	**44062**	**44067**
0...10 V DC/10 Bit	**44063**	**44068**
Technical Data		
Operating voltage	2 × 21...30 V DC, smoothed (with LED)	21...30 V DC, smoothed (with LED)
Operating current	60 mA (idle load) plus max. 100 mA per digital output	100 mA (idle load), max. 150 mA (full load)
Tolerance	±1 LSB	±1 %
Conversion time	80 ms, (6 Bit adjustable 2.5...150 ms)	–
Release input E	log 1 ≥ 16 V, log 0 ≤ 6 V	
Input		
Input current	type dependent	max. 10 mA/Bit
Input signal	type dependent	0...30 V DC (with LED display)
Output		
Output current	100 mA/Bit, with LED	max. 40 mA (0...10 V DC); max. 20 mA (0...20 mA), 4...20 mA
General data		
Test isolation voltage	2.5 kV	
Temperature range	0...+85 °C	0...+50 °C
Mounting method	DIN-rail mountable (EN 60715)	
Description		
Functional description	On modules with voltage inputs, it is possible to set the maximum input signal using a trimmer. The output "POL" indicates the polarity. A voltage output Uout 15 V/20 mA (minimal ripple) can be used as a power supply for the analog output device. The hold input E will sample and hold the analog value. When E is set to HIGH the outputs will show the last measured value. When E is set to LOW the converter will run again.	The maximum output signal of converters with voltage output can be adjusted to the operating voltage minus 2 V. The outputs are short-circuit protected and overload protected due to internal current limiting.
Dimension drawing		
		
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Notes		

Voltage converter

– Input and output galvanically separated

MU..W 6.2 Voltage (U)

INPUT: 0...10 V DC
with bridge system
Screw terminals

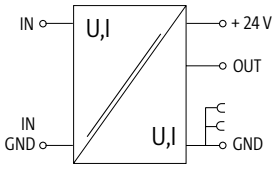


MU..W 6.2 Voltage (U)

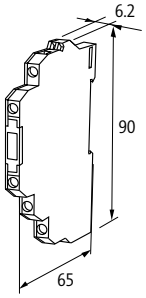
INPUT: 0...10 V DC
with bridge system
Spring clamp terminals

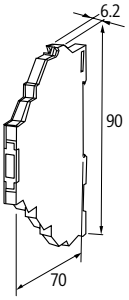


Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.	Art-No.	Art-No.	Art-No.
OUTPUT: 0...10 V DC/20 mA	**44205**			**6644205**		
OUTPUT: 0...20 mA		**44232**			**6644232**	
OUTPUT: 4...20 mA			**44233**			**6644233**
Technical Data						
Operating voltage	24 V DC ±20 %, smoothed					
Operating current	50...70 mA					
Tolerance	max. 0.5 %					
Frequency	max. 500 Hz					
Voltage inputs						
Input resistor	approx. 200 kOhm	approx. 250 kOhm	approx. 200 kOhm		approx. 250 kOhm	approx. 200 kOhm
Voltage output signals						
Load	max. 25 mA					
Current outputs						
Load	max. 500 Ohm					
General data						
Test isolation voltage	1.5 kV			2.5 kV	1.5 kV	
Temperature range	0...+60 °C					
Mounting method	DIN-rail mountable (EN 60715)					
Description						
Functional description	The Murrelektronik analog converters convert standard signal formats (0...10 V, 0...20 mA, 4...20 mA) galvanically separated into one of these signal formats. Due to an integrated current limiter the output is short-circuit and overload protected. Module MIIW – 0/4...20 mA to 0/4...20 mA – without auxiliary supply					
Dimension drawing						





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Notes

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Voltage converter

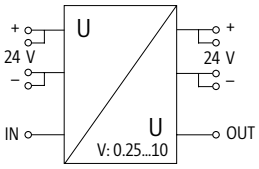
– Input and output galvanically separated

MPUUW

INPUT: 0...10 V DC
Screw terminals



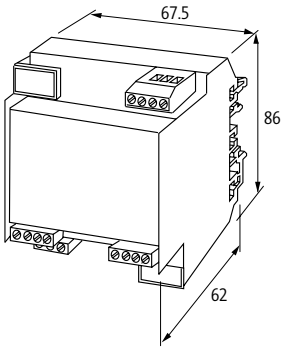
Circuit diagram



Regular voltage amplification

Order Data		**Art-No.**
OUTPUT: 0...10 V DC/300 mA		**44201**
Technical Data		
Operating voltage	24 V DC ±20 %, smoothed	
Operating current	max. 300 mA	
Tolerance	max. 0.5 %	
Frequency	max. 1 kHz	
Voltage inputs		
Input resistor	approx. 10 kOhm	
Voltage output signals		
Load	max. 300 mA	
General data		
Temperature range	0...+50 °C	
Mounting method	DIN-rail mountable (EN 60715)	

Dimension drawing



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Notes

Current converter

– Input and output galvanically separated

MI..W 6.2 current (I)

INPUT: 0...20 mA
Screw terminals

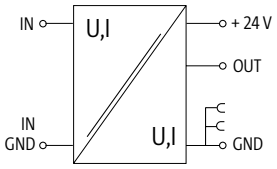


MI..W 6.2 current (I)

INPUT: 0...20 mA
Spring clamp terminals

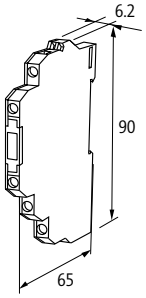


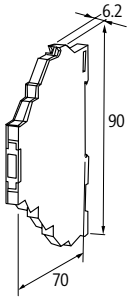
Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.	Art-No.	Art-No.	Art-No.
OUTPUT: 0...10 V DC/20 mA	**44212**			**6644212**		
OUTPUT: 0...20 mA		**44226**			**6644226**	
OUTPUT: 4...20 mA			**44228**			**6644228**
Technical Data						
Operating voltage	24 V DC ±20 %, smoothed					
Operating current	50...70 mA					
Tolerance	max. 0.5 %					
Frequency	max. 500 Hz					
Current input signals						
Load	approx. 250 Ohm					
Voltage output signals						
Load	max. 25 mA					
Current outputs						
Load	max. 500 Ohm					
General data						
Test isolation voltage	1.5 kV					
Temperature range	0...+60 °C					
Mounting method	DIN-rail mountable (EN 60715)					
Description						
Functional description	The Murrelektronik analog converters convert standard signal formats (0...10 V, 0...20 mA, 4...20 mA) galvanically separated into one of these signal formats. Due to an integrated current limiter the output is short-circuit and overload protected. Module MIIW – 0/4...20 mA to 0/4...20 mA – without auxiliary supply					

Dimension drawing





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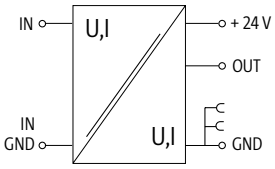
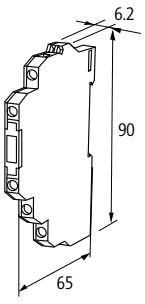
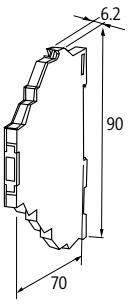
Notes

Current converter

– Input and output galvanically separated

	MI..W 6.2 current (I)	**MI..W 6.2 current (I)**
	INPUT: 4...20 mA Screw terminals	INPUT: 4...20 mA Spring clamp terminals
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
OUTPUT: 0...10 V DC/20 mA	**44213**	**6644213**
Technical Data		
Operating voltage	24 V DC ±20 %, smoothed	
Operating current	50...70 mA	
Tolerance	max. 0.5 %	
Frequency	max. 500 Hz	
Current input signals		
Load	approx. 250 Ohm	
Voltage output signals		
Load	max. 25 mA	
General data		
Test isolation voltage	1.5 kV	
Temperature range	0...+60 °C	
Mounting method	DIN-rail mountable (EN 60715)	
Description		
Functional description	The Murrelektronik analog converters convert standard signal formats (0...10 V, 0...20 mA, 4...20 mA) galvanically separated into one of these signal formats. Due to an integrated current limiter the output is short-circuit and overload protected. Module MIIW – 0/4...20 mA to 0/4...20 mA – without auxiliary supply	
Dimension drawing		
		
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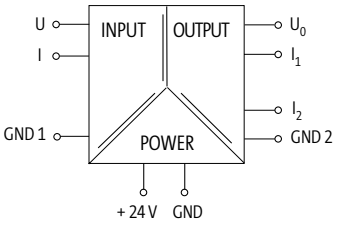
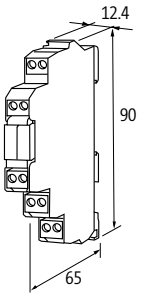
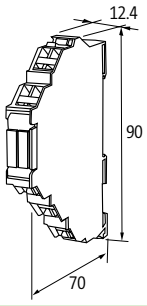
Notes		

Analog converter

– Input, output, and supply voltage galvanically separated

	MULTI Converter 12.4	**MULTI Converter 12.4**
	INPUT: 0...5 V DC, 0...10 V DC, ±10 V DC INPUT: 0...20 mA, 4...20 mA Screw terminals	INPUT: 0...5 V DC, 0...10 V DC, ±10 V DC INPUT: 0...20 mA, 4...20 mA Spring clamp terminals
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
OUTPUT: 0...10 V DC/20 mA	**44207**	**6644207**
OUTPUT: 0...20 mA	**44207**	**6644207**
OUTPUT: 4...20 mA	**44207**	**6644207**
Technical Data		
Operating voltage	24 V DC ±15 %	
Operating current	approx. 50 mA	
Tolerance	max. 0.5 %	
Frequency	max. 25 Hz	
Voltage inputs		
Input voltage	0...5, 0...10, ±10 V DC	
Input resistor	approx. 100 kOhm	
Current input signals		
Input current	0...20 mA, 4...20 mA	
Load	approx. 75 Ohm	
Current outputs		
Load	max. 400 Ohm	
General data		
Test isolation voltage	0.75 kV	
Temperature range	-25...+50 °C	
Mounting method	DIN-rail mountable (EN 60715)	
Description		
Functional description	Due to an integrated current limiter on the output, the output is short circuit and overload protected. A special characteristic of the MULTI Converter Art.-No. 6644207 includes: Analog voltage signals 0...5 V/0...10 V and -10...+10 V and current signals 0...20 mA and 4...20 mA, these compact modules can be galvanically isolated in the three standard signals, which means all combinations are covered with one model. The selection of the input is done by means of a 5-pole rotary switch, accessible under the identification tag. The voltage supply is galvanically isolated from the input and output circuits (3-way isolation).	
Dimension drawing		
		
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Notes		

MURR ELEKTRONIK
stay connected

Analog converter

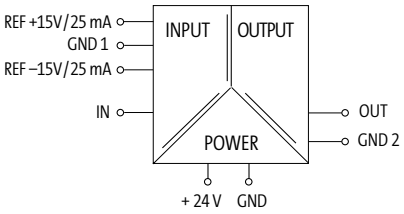
– Input, output, and supply voltage galvanically separated

MUUW

INPUT: ±0...10 V DC
OUTPUT: ±0...10 V
Screw terminals

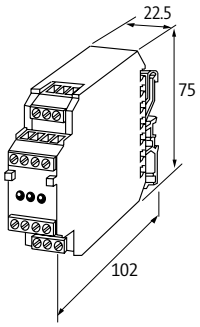


Circuit diagram



Order Data		Art-No.
OUTPUT: ±0...10 V DC		**44203**
Technical Data		
Operating voltage	24 V DC (+15/-10 %)	
Operating current	max. 200 mA	
Tolerance	±1 %	
Frequency	5 kHz, sine wave	
Current outputs		
Load	max. 400 Ohm	
General data		
Test isolation voltage	1.5 kV	
Temperature range	0...+50 °C	
Mounting method	DIN-rail mountable (EN 60715)	

Dimension drawing



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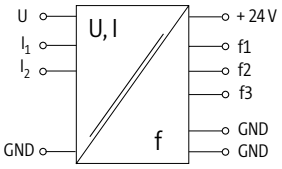
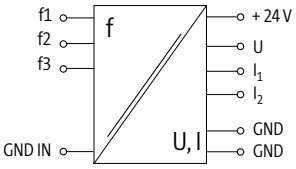
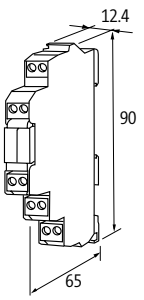
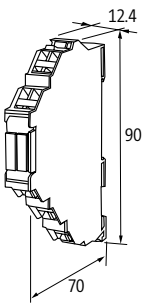
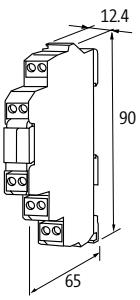
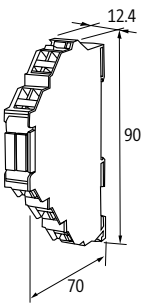
Notes

Frequency converter

– Input and output galvanically separated

	M..FW 12.4	**M..FW 12.4**	**MF...W 12.4**	**MF...W 12.4**
	INPUT: 0...10 V DC, 0...20 mA, 4...20 mA Screw terminals	INPUT: 0...10 V DC, 0...20 mA, 4...20 mA Spring clamp terminals	INPUT: 0...1 kHz, 0...10 kHz, 0...100 kHz Screw terminals	INPUT: 0...1 kHz, 0...10 kHz, 0...100 kHz Spring clamp terminals
				
Circuit diagram				
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
0...1 kHz, 0...10 kHz, 0...100 kHz	**44245**	**6644245**		
0...10 V DC, 0...20 mA, 4...20 mA			**44275**	**6644275**
Technical Data				
Operating voltage	24 V DC ±20 %			
Operating current	max. 60 mA		max. 80 mA	
Tolerance	0.5 % from end value			
Response time	–		max. 350 ms	
Voltage inputs				
Input voltage	0...10 V DC		10...30 V DC	
Input resistor	approx. 100 kOhm		–	
Current input signals				
Input current	0...20 mA, 4...20 mA		6...25 mA	
Input resistor	approx. 75 Ohm		approx. 1.2 kOhm	
Voltage output signals				
Output signal	0...1 kHz, 0...10 kHz, 0...100 kHz		0...10 V DC, 0...20 mA, 4...20 mA	
Output voltage	0.5 V (short-circuit protected)		–	
General data				
Test isolation voltage	1.5 kV		2.5 kV	
Temperature range	-25...+50 °C			
Mounting method	DIN-rail mountable (EN 60715)			
Description				
Functional description	The new frequency converter in the slim MIRO housing can be universally used. An analog voltage or current, on one of the three inputs, is galvanically isolated, transformed and is at the same time available as square wave voltage (frequency) on all three outputs. The output frequencies are through a 4-pole switch separable in relation to 1:2, 1:4 and 1:8.		The new frequency converter in the slim MIRO housing can be universally used. The frequency that is applied on the three inputs, will be galvanically isolated, transformed and is available as analog signal on all three outputs.	
Dimension drawing				
Murrelektronik Online Shop **onlineshop.murrelektronik.com**/en				
Notes				

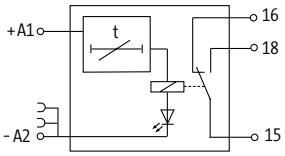
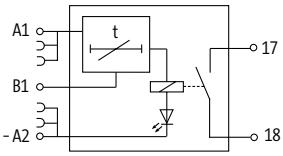
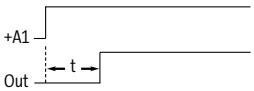
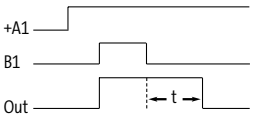
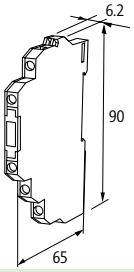
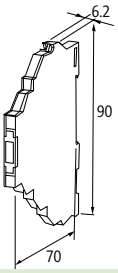
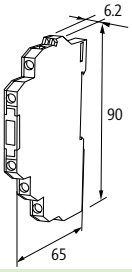
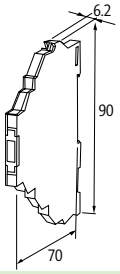
MURR ELEKTRONIK
stay connected

Timer

– Relay output

– with bridge system

Approvals:

	MIRO 6.2 Timer Switch-on delay Screw terminals	MIRO 6.2 Timer Switch-on delay Spring clamp terminals	MIRO 6.2 Timer Switch-off delay Screw terminals	MIRO 6.2 Timer Switch-off delay Spring clamp terminals
				
Circuit diagram				
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
0.1...10 s	**52300**	**6652300**	**52310**	**6652310**
3...300 s	**52301**	**6652301**	**52311**	**6652311**
Switching capacity (EN 60947-5-1)				
AC-12	6 A (24 V AC; 110 V AC; 230 V AC)			
AC-15	3 A (24 V AC; 110 V AC; 230 V AC)			
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)			
Input				
Input voltage	24 V DC (+10 -15 %) input A			
Input current	20 mA (input A)			
Control voltage	24 V DC (+10 -15 %) input B			
Control current	5 mA (input B)			
Output				
Output voltage	max. 250 V AC/DC			
Output current	max. 6 A			
Min. load current	10 mA (12 V DC)			
Output rating	max. 1500 VA/120 W			
Switching frequency	max. 10 Hz			
Contact material	Ag Sn O2			
Energize/release/contact bounce time	10/15/1.5 ms			
General data				
Mech./ elect. life	20.000.000 switching cycles/load dependent			
Test isolation voltage	4 kV; safe separation (EN 60947-1)			
Temperature range	0...+55 °C			
Mounting method	DIN-rail mountable (EN 60715)			
Functional diagram				
				
Dimension drawing				
				
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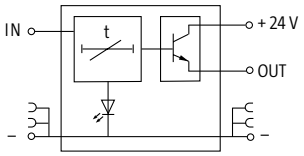
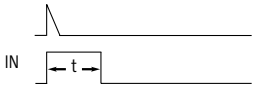
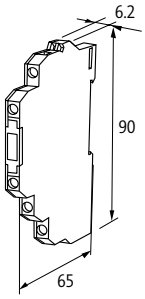
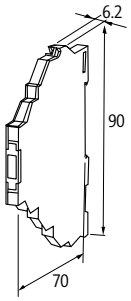
Notes				

Timer

– Transistor output

– with bridge system

Approvals:

	MIRO 6.2 Timer Impulse expansion Screw terminals	**MIRO 6.2 Timer** Impulse expansion Spring clamp terminals
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
0.1...10 s	**52320**	**6652320**
Input		
Input voltage	19...29 V DC	
Control voltage	16...32 V DC	
Time range	0.1...10 s	
Impulse length	min. 0.5 ms	
Output		
Switching voltage	Operating voltage – 1.5 V	
Switching current per output	max. 100 mA	
General data		
Test isolation voltage	no galvanic separation	
Temperature range	0...+60 °C	
Mounting method	DIN-rail mountable (EN 60715)	
Functional diagram		
	 OUT Control impuls ≥ 0.5 ms 0.1...10s front side poti adjustable	
Dimension drawing		
		
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Notes		

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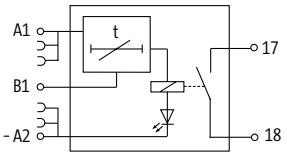
stay connected

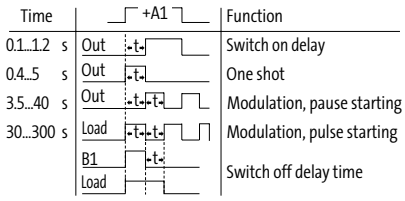
Timer

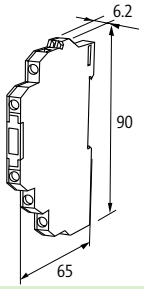
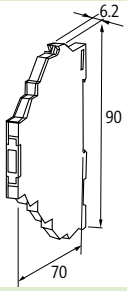
– Switch-on delay

– Switch-off delay

Approvals:

	MIRO 6.2 Timer multifunctional Screw terminals	**MIRO 6.2 Timer** multifunctional Spring clamp terminals
		
Circuit diagram		
Order Data	**Art-No.**	**Art-No.**
0.1...300 s	**52350**	**6652350**
Input		
Input voltage	24 V DC (+10 -15 %) input A	
Input current	20 mA (input A)	
Control voltage	24 V DC (+10 -15 %) input B	
Control current	5 mA (input B)	
Output		
Output voltage	max. 250 V AC/DC	
Output current	max. 6 A	
Min. load current	10 mA (12 V DC)	
Output rating	max. 1500 VA/120 W	
Switching frequency	max. 10 Hz	
Contact material	Ag Sn O2	
Energize/release/contact bounce time	10/15/1.5 ms	
General data		
Mech./ elect. life	20.000.000 switching cycles/load dependent	
Test isolation voltage	4 kV; safe separation (EN 60947-1)	
Temperature range	0...+55 °C	
Mounting method	DIN-rail mountable (EN 60715)	
Functional diagram		



Dimension drawing		
		
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Notes		

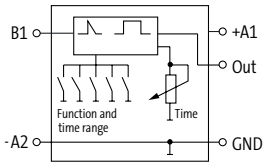
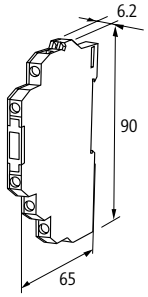
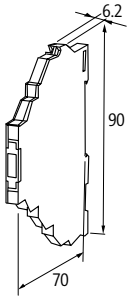
Timer

– Switch-on delay

– Switch-off delay

– Changeover contact

– Memory function

	MIRO 6.2 Timer Transistor output Screw terminals	**MIRO 6.2 Timer** Transistor output Spring clamp terminals
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
10 ms...0.1 s	**3000-18502-0200010**	**3000-18512-0200010**
10 ms...1 s	**3000-18502-0200010**	**3000-18512-0200010**
10 ms...10 s	**3000-18502-0200010**	**3000-18512-0200010**
10 ms...100 s	**3000-18502-0200010**	**3000-18512-0200010**
Input		
Input voltage	18...30 V DC	
Control voltage	18...30 V DC	
Output		
Switching voltage	Operating voltage – 0.2 V	
Switching current per output	max. 100 mA	
Min. load current	1 mA (short-circuit protected)	
Switching frequency	max. 50 Hz	
General data		
Test isolation voltage	no galvanic separation	
Temperature range	-20...+60 °C	
Mounting method	DIN-rail mountable (EN 60715)	
Dimension drawing		
		

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Notes

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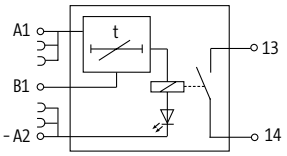
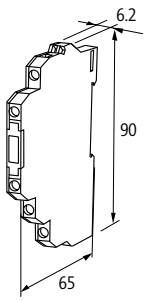
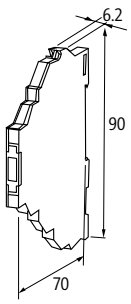
Timer

– Switch-on delay

– Switch-off delay

– Changeover contact

– Memory function

	MIRO 6.2 Timer Relay output Screw terminals	**MIRO 6.2 Timer** Relay output Spring clamp terminals
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
100 ms...1 s	**3000-18503-0200012**	**3000-18513-0200013**
100 ms...10 s	**3000-18503-0200012**	**3000-18513-0200013**
100 ms...100 s	**3000-18503-0200012**	**3000-18513-0200013**
100 ms...1000 s	**3000-18503-0200012**	**3000-18513-0200013**
Switching capacity (EN 60947-5-1)		
AC-12	6 A (24 V AC; 110 V AC; 230 V AC)	
AC-15	3 A (24 V AC; 110 V AC; 230 V AC)	
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)	
Input		
Input voltage	18...30 V DC	
Control voltage	18...30 V DC	
Output		
Switching voltage	max. 250 V AC/DC	
Switching current per output	max. 6 A	
Min. load current	10 mA	
Switching frequency	max. 5 Hz	
Contact material	Ag Sn O2	
Energize/release/contact bounce time	19/15/1.5 ms	
General data		
Mech./ elect. life	20.000.000 switching cycles/load dependent	
Test isolation voltage	4 kV; safe separation (VDE 0106/ VDE 0160)	
Temperature range	-20...+60 °C	
Mounting method	DIN-rail mountable (EN 60715)	
Dimension drawing		
		
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Notes		

Comparator modules

– with bridge system

MAK 12.4

Input signal, voltage DC
selectable via DIP switch
Screw terminals

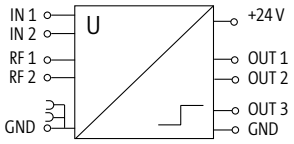


MAK 12.4

Input signal, voltage DC
selectable via DIP switch
Spring clamp terminals

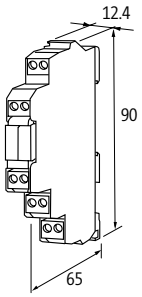


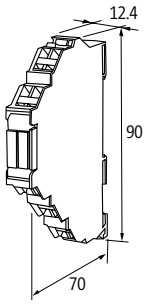
Circuit diagram



Order Data	Art-No.	Art-No.
24 V DC/0.7 A	**44110**	**6644110**
Technical Data		
Operating voltage	20...30 V DC, smoothed	
Operating current	30 mA (idle load), max. 0.8 A (full load)	
Time constant	approx. 10 ms	
Input hysteresis	max. 0.5 % from end value, max. 150 mV	
Input		
Input voltage	2 × 0...30 V DC (IN 1, IN 2)	
Input resistor	100 kOhm	
Output		
Number	3 transistor outputs	
Output current	max. 0.7 A per channel, switched positive, short-circuit protected	
General data		
Temperature range	0...+50 °C	
Mounting method	DIN-rail mountable (EN 60715)	
Description		
Functional description	The DC- or AC-voltage comparator serves for evaluating analog voltages, generated by pressure, temperature or other sensors. The analog input values are compared to internal or external reference voltages to over or underflow. Outputs will be switched, dependent on defined limits. Features: – 2 separate measuring channels (no galvanic separation), (only by comparator service) -2 operating modes (comparator/window discriminator) – adjustable reference voltage (internal/external) per channel – adjustable output (inverted/not inverted) per channel, (only by comparator service) – compact design (12.4 mm) – higher switched current at output – output state display through LED – Easy configuration of the module via DIP switch	

Dimension drawing





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Notes

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Temperature converter

– for PT 100 sensors

MTW 12.4

2-, 3-wire technology
Screw terminals

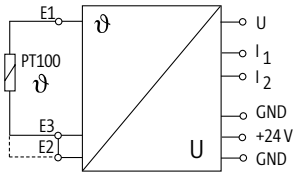


MTW 12.4

2-, 3-wire technology
Spring clamp terminals



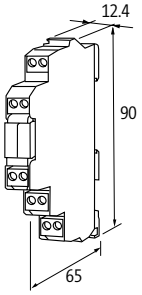
Circuit diagram

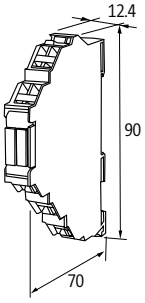


Order Data	**Art-No.**	**Art-No.**
INPUT: -50...+50 °C	**44330**	**6644330**
INPUT: -50...+150 °C	**44331**	**6644331**
INPUT: 0...100 °C	**44332**	**6644332**
INPUT: 0...200 °C	**44334**	**6644334**
INPUT: 0...600 °C	**44336**	**6644336**

Technical Data	
Operating voltage	24 V DC (18...30 V DC), smoothed
Operating current	max. 80 mA
Cable resistance (without PT100)	max. 100 Ohm (3-wire technology)
Output signals at 0...10 V DC	max. 25 mA, overload protected
Output signals at 4...20 V mA	max. 500 Ohm RL
Output signals at 0...20 mA	max. 500 Ohm RL
Tolerance	±1 % from end value
Temperature range	0...+60 °C
General data	
Mounting method	DIN-rail mountable (EN 60715)
Description	
Functional description	The Murrelektronik temperature converter module works in conjunction with a temperature sensor PT100 (IEC 751/EN 60751) and converts the temperature into a standard signal format of (0...10 V, 4...20 mA, 0...20 mA). The MTW modules supply a constant current to the PT100 resistor, which develops a variable voltage. This will be measured, linearized and converted to the output signal at the OUT terminals. All three signals can be used at the same time. The 2-wire technology allows short distances between the PT100 sensor and MTW module (< 5 m) to be covered. For longer distances the 3-wire technology has to be applied for compensating the cable resistance. This requires a 3rd cable (same length and type as the two measuring cables). The bridge between E2 and E3 has to be removed.

Dimension drawing





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Notes

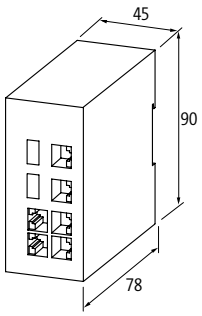
Switches

– unmanaged

– RJ45

Approvals: c UL us Listed

	Tree 6TX Eco	Tree 8TX Metal	Tree 6TX Metal
	6 ports	8 ports	6 ports
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
6 ports	**58170**		**58172**
8 ports		**58171**	
Connections			
Fieldbus	6 × RJ45	8 × RJ45	6 × RJ45
Supply System	Screw plug-in terminal: 0.2...1.5 mm²		
Technical Data			
Operating voltage	2 × 9...30 V DC, redundancy	2 × 9...48 V DC, redundancy	2 × 9...30 V DC, redundancy
Transfer rate	10/100 MBit/s full duplex		
Operating modes	Autocrossing Autonegotiation		
Diagnostic			
Communication status	via LED		
Monitoring - no voltage	yes		
General data			
Protection	IP20	IP50	
Housing	Black plastic	Metal black	
Temperature range	0...+60 °C (storage temperature -10...+70 °C)	-10...+70 °C (storage temperature -40...+85 °C)	
Mounting method	DIN-rail mountable TH35 (EN 60715)		
Dimension drawing			



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Notes

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Brake rectifiers

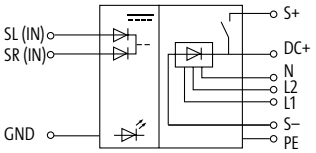
Active controlled rectifier

Spring clamp terminals



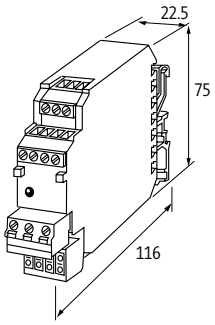
Approvals: cULus

Circuit diagram	



Order Data		**Art-No.**
24 V DC/0.8 A		**50001**
Input		
Input voltage	L1-N (230 V AC); L1-L2 (400 V AC); L1-L2 (480 V AC)	
Input current	max. 0.8 A	
Control voltage	24 V DC	
LED display	LED (green)	
Protection against reverse polarization	yes	
Output		
Output voltage	205 V DC (230 V AC); 180 V DC (400 V AC); 215 V DC (480 V AC)	
Output current	max. 0.75 A	
Switching frequency	max. 2.5 Hz	
General data		
Temperature range	0...+55 °C (storage temperature -20...+60 °C), no condensation	
Protection	IP20	
Mounting method	DIN-rail mountable (EN 60715)	
Connection	Spring clamp terminals	

Dimension drawing



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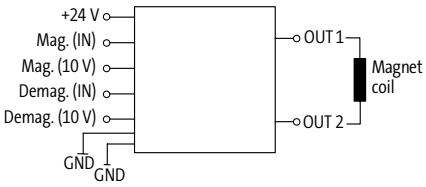
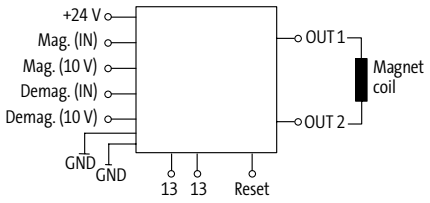
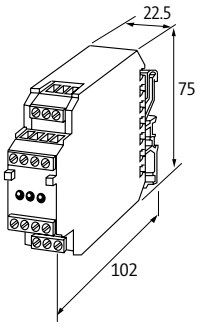
Notes

Demagnetizer – with alarm contact	Demagnetizer Screw terminals	Demagnetizer Screw terminals potential free alarm output 30 V AC/DC, 100 mA
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
24 V DC/40 mA	**446140**	**446142**
Technical Data		
Operating voltage	24 V DC (18...30 V DC)	
Operating current	approx. 40 mA	
LED display	LED (green)	
Protection against reverse polarization	yes	
Group alarm output	–	potential free alarm output 30 V AC/DC, 100 mA
Input		
Input resistor	approx. 10 kOhm	
Magnetization (digital)	safe OFF: max. 1V; safe ON: min. 5 V (LED yellow)	safe OFF: max. 1V; safe ON: min. 5 V (LED green)
Magnetization (analog)	0.8...8.8 V (0...100 %)	
Demagnetization (digital)	safe OFF: max. 1V; safe ON: min. 5 V (LED yellow)	
Demagnetization (analog)	0...10 V (44...55 %)	
Output		
Output voltage	24 V DC	
Output current	max. 1.5 A (short-circuit protected)	
PWM frequency	approx. 800 Hz	
General data		
Temperature range	-25...+50 °C (storage temperature -40...+80 °C)	
Protection	IP20	
Mounting method	DIN-rail mountable (EN 60715)	
Connection	Screw terminals	
Dimension drawing		
		
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Notes		

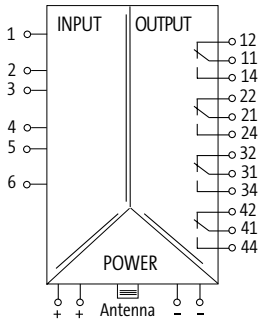
Remote and Signalling Systems

MIRO GSM



Approvals: c UL us Listed

Circuit diagram



Order Data	Art-No.	Art-No.	Art-No.
DI6 DO4R - (Relay) 24 V DC	**52530**		
ADI6 DO4R (Relay) 24 V DC		**52531**	
DI6 DO4R - (Relay) 230 V AC			**52532**

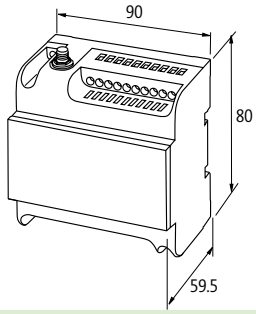
Accessories	Art-No.
Stub antenna	**52533**
MIRO GSM Service Kit	**52535**

Input			
Connection voltage - current	12...48 V DC - 15 mA		110...240 V AC - 10 mA
Resolution (analog)	–	12 Bit	–
Input range (analog)	–	0...10 V DC	–
Input resistor (analog)	–	142 kOhm	–
Conversion time (analog)	–	max. 1 s	–

Output	
Switching voltage	max. 250 V AC/DC
Switching current per output	max. 10 A
Total current	max. 20 A
Contact material	Ag Ni 90/10

General data	
Mech./ elect. life	30.000.000 switching cycles/load dependent
Protection	IP20
Temperature range	-25...+55 °C (storage temperature -40...+85 °C)
Connection	Screw terminals: max. 2.5 mm² (AWG 14)
Mounting method	DIN-rail mountable (EN 60715) or screw fixing

Dimension drawing



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Notes

For inductive loads we recommend EMC suppressors connected parallel to the coil

ACTIVE INTERFACE TECHNOLOGY

Labeling accessories			Art-No.
	**ACS label plate KM 5**		
	for self marking (9 × 20 mm)		**7000-99001-0000000**
	**Label plate KM 4**		
	5 × 10 mm		**90931**
	**ACS label plate KM 6/18**		
	for self marking with ADEMARK markers		**7000-99003-0000000**
	**Label plate KWI 5/15**		
	(88 pieces per plate)		**90901**

Wiring accessories			Art-No.
	**Potential plug link**		
	max. 50 V/2 A	MIRO	**90961**
	**Potential rail blue**		
	10-pole, spacing 6.2 mm	MIRO 6.2 (screw terminals)	**90975**
	**Potential rail red**		
	40-pole, spacing 12 mm	RMM..., RMMD...	**90971**
	10-pole, spacing 6.2 mm	MIRO 6.2 (screw terminals)	**90976**
	End caps for potential rail		
	blue	MIRO 6.2	**90980**
	red	RMM..., RMMD...	**90982**
	**Wire chain 16-pole**		
	Connection cable left and right approx. 50 cm; bk; 1 mm²	MIRO (spring clamp terminals)	**90977**
	**MIRO GSM**		
	Stub antenna		**52533**

Wiring accessories			Art-No.
	**MIRO GSM**		
	External antenna Connection cable 5m		**52534**
	**MIRO GSM Service Kit**		
	Configuration CD USB/RS-232 converter Connection cable SUB-D9 (female/male)		**52535**



PASSIVE INTERFACE TECHNOLOGY
INTERFACE MODULES

- **Screw or spring clamp terminals**
- **LED displays**
- **DIN rail mounting**

FOR ANY APPLICATION

Murrelektronik's interface modules make the connections between the controls and the field. They take over 3 major functions in the system:

- Signal transfer from the machine to the control
- Signal transfer inside the machine or control system
- Easy wiring in control systems

Murrelektronik has been an innovative partner in coming up with interface solutions for years. Their interface modules are fitted with different kinds of robust plugs like SUB-D connectors or ribbon cable connectors for strong signal or power transfers.

They are extremely compact. Individual terminal labels and status displays are integrated into the standard modules.

Interface Modules



With ribbon cable connection
UFL

Page 1.13.1



With SUB-D connector
UG SUB, SV

Page 1.13.2



With pluggable terminals
LUGS, PKB

Page 1.13.5

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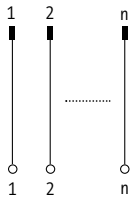
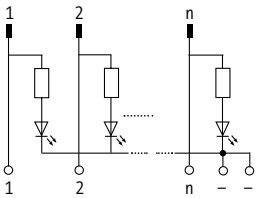
Transfer modules

– Ribbon cable connection

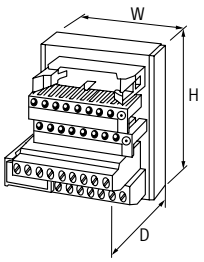
	UFL Ribbon cable connector	UFL Ribbon cable connector + LED
		
Circuit diagram		
		

Order Data	**H×W×D**	**Art-No.**	**H×W×D**	**Art-No.**
10-pole	63×50×48 mm	**54200**	63×50×48 mm	**54011**
16-pole	63×50×48 mm	**54201**		
20-pole	63×50×48 mm	**54202**	63×75×48 mm	**54013**
26-pole	63×75×48 mm	**54203**	63×75×48 mm	**54014**
34-pole	63×95×48 mm	**54204**	63×95×48 mm	**54015**
40-pole	63×120×48 mm	**54205**	63×120×48 mm	**54016**
50-pole	63×140×48 mm	**54206**	63×140×48 mm	**54017**
64-pole	63×185×48 mm	**54208**	63×185×48 mm	**54019**

Technical Data		
Operating voltage	max. 125 V AC/150 V DC	24 V AC
Operating current per bit	max. 1 A	
Air and creepage distances	(EN 60664-1) over voltage, category II	
LED display	–	LED (red) Ø 3 mm per pole, acc. to potential -
Temperature range	-20...+70 °C	
Plug connector	for plugs with or without strain relief (DIN 41651); for plugs with strain relief, it may be necessary to remove the bottom hook	

General data	
Temperature range	-20...+70 °C
Mounting method	DIN-rail mountable (EN 60715)

Dimension drawing



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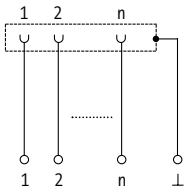
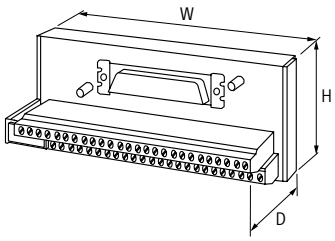
Notes

Transfer modules

– Plug connector SUB-D

	UG-SUB Male connector Screw terminals	UG-SUB Male connector Spring clamp terminals	UG-SUB Female connector Screw terminals	UG-SUB Female connector Spring clamp terminals
				
Circuit diagram				
				
Order Data	**H×W×D** **Art-No.**	**H×W×D** **Art-No.**	**H×W×D** **Art-No.**	**H×W×D** **Art-No.**
9-pole	63×50×48 mm **54030**	63×50×48 mm **6654030**	63×50×48 mm **54040**	63×50×48 mm **6654040**
15-pole	63×75×48 mm **54031**	63×75×48 mm **6654031**	63×75×48 mm **54041**	63×75×48 mm **6654041**
25-pole	63×95×48 mm **54032**	63×95×48 mm **6654032**	63×95×48 mm **54042**	63×95×48 mm **6654042**
37-pole	63×75×58 mm **54033**	63×75×58 mm **6654033**	63×75×58 mm **54043**	63×75×58 mm **6654043**
50-pole	63×95×58 mm **54034**		63×95×58 mm **54044**	
Technical Data				
Operating voltage	max. 125 V AC/150 V DC			
Operating current per bit	max. 2 A			
Air and creepage distances	(EN 60664-1) over voltage, category II			
Plug connector	Standard UNC 4-40 screw thread bolt (EN 60807)			
General data				
Temperature range	-20...+70 °C			
Mounting method	DIN-rail mountable (EN 60715)			
Dimension drawing				
				

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Notes

MURR ELEKTRONIK
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Transfer modules

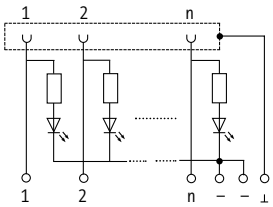
– Plug connector SUB-D

UG-SUB
Male connector + LED
Screw terminals



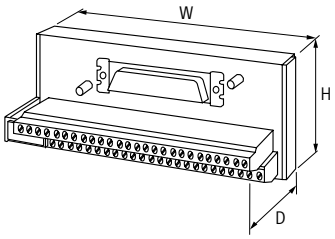
UG-SUB
Female connector + LED
Screw terminals

Circuit diagram



Order Data	H×W×D	Art-No.	H×W×D	Art-No.
9-pole	75×45×66 mm	**54050**	75×45×66 mm	**54060**
15-pole	75×70×66 mm	**54051**	75×70×66 mm	**54061**
25-pole	75×90×66 mm	**54052**	75×90×66 mm	**54062**
37-pole	75×135×66 mm	**54053**	75×135×66 mm	**54063**
50-pole	75×135×66 mm	**54055**	75×135×66 mm	**54065**
Technical Data				
Operating voltage	24 V DC ±15 %			
Operating current per bit	max. 2 A			
LED display	LED (red) Ø 3 mm per pole, acc. to potential -			
Air and creepage distances	(EN 60664-1) over voltage, category II			
Temperature range	-20...+70 °C			
Plug connector	Standard UNC 4-40 screw thread bolt (EN 60807)			
General data				
Mounting method	DIN-rail mountable (EN 60715)			

Dimension drawing



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Notes

Transfer modules

– Signal transfer / 3-wire connection

– Plug connector SUB-D

SV-2 × SUB-D

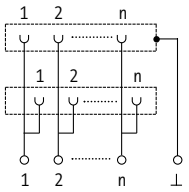
2 ports
Female connector



SV-2 × SUB-D

2 ports
Male connector

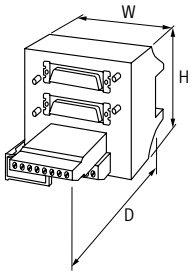
Circuit diagram



Picture: female

Order Data	H×W×D	Art-No.	H×W×D	Art-No.
15-pole	75×70×66 mm	**54165**		
25-pole	75×90×66 mm	**54163**	75×90×66 mm	**54164**
37-pole	86×90×78 mm	**54161**	86×90×78 mm	**54162**
50-pole			86×112.5×78 mm	**54160**
Technical Data				
Operating voltage	max. 125 V AC/150 V DC			
Operating current per bit	max. 2 A			
Air and creepage distances	(EN 60664-1) over voltage, category I			
Temperature range	-20...+70 °C			
Plug connector	Standard UNC 4-40 screw thread bolt (EN 60807)			
General data				
Mounting method	DIN-rail mountable (EN 60715)			

Dimension drawing



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Notes

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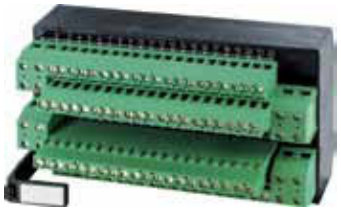
Transfer modules

– Screw plug-in terminals

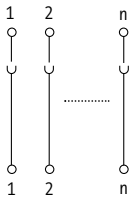
LUGS
Screw plug-in terminals

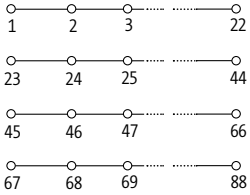


PKB
Potential terminal block



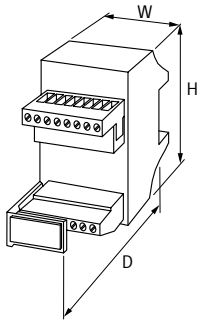
Circuit diagram

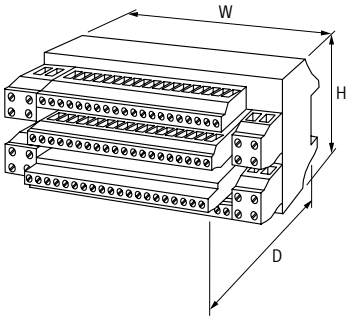




Order Data	H×W×D	Art-No.	H×W×D	Art-No.	H×W×D	Art-No.
2×8-pole	75×45×66 mm	**54100**				
4×8-pole	75×70×66 mm	**54101**				
4×12-pole	75×70×66 mm	**54102**				
4×16-pole	75×90×66 mm	**54103**				
4×22-pole			63×140×48 mm	**54250**	75×135×66 mm	**54251**
Technical Data						
Operating voltage	max. 250 V AC					
Operating current per bit	max. 10 A		15 A per potential rail		25 A per potential rail	
Air and creepage distances	max. 10 A		(EN 60664-1) over voltage, category II			
Total current	–				max. 100 A	
Temperature range	-20...+60 °C					
General data						
Connection	Screw plug-in terminal: max. 4 mm², single wire				Screw plug-in terminal: max. 4 mm², input terminal: max. 4 mm² (single wire)	
Mounting method	DIN-rail mountable (EN 60715)					

Dimension drawing





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Notes

Transfer modules

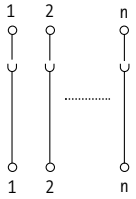
– Spring clamp terminals

LUGS

pluggable Push-In spring clamp terminals



Circuit diagram

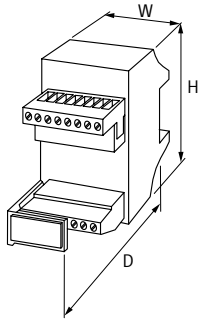


Order Data	H×W×D	Art-No.
4×8-pole	75×45×75 mm	**6654101**
4×12-pole	75×70×75 mm	**6654102**

Technical Data	
Operating voltage	max. 250 V AC
Operating current per bit	max. 8 A
Air and creepage distances	(EN 50178) over voltage, category I
Temperature range	-20...+60 °C

General data	
Connection	Spring clamp plug-in terminals: max. 2.5 mm² (AWG 14)
Mounting method	DIN-rail mountable (EN 60715)

Dimension drawing



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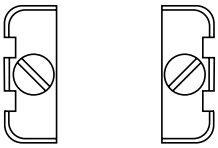
Notes

Accessories			Art-No.
	**ACS label plate KM 5**		
	for self marking (9 × 20 mm)		**7000-99001-0000000**
	**ACS label plate KM 6/18**		
	for self marking with ADEMARK markers		**7000-99003-0000000**
	**Standard UNC 4-40 screw thread bolt (EN 60807)**		
			54079
	**SUB-D snap-in connector**		
	9...37-pole		**54077**



EUROCARD HOLDERS / CONTROL MODULES

- **Flexible applications**
- **Compact modules**
- **Connections with up to 96-poles**

THE IDEAL CONTROL TECHNOLOGY FOR THE CABINET

Various electronic circuits are fitted onto 100 x 160 mm Eurocards and then placed in 19" system housings. Murrelektronik's Eurocard holders are designed to mount Eurocards on DIN rails in the cabinet.

In control systems, units are used which require analog control signals (i.e. 0...10 V DC). With these well designed MPOT potentiometer modules, it is simple, cheap and easy to solve your set-point problems. The diode modules of the MKS series are designed for decoupling and interference applications. The LED indicators are available with diameters of 3, 5, and 10 mm. With their compact design, they are suitable for installation in front panels or process flow diagrams.

Eurocard Holders



SKT

Page 1.14.1



SKP

Page 1.14.3

Control Modules



Potentiometer modules
MPOT

Page 1.14.9



Diode modules
MKS-D, MKS-LDP, MKS-BCD

Page 1.14.10



Assembly modules
MKS-M, ML 14, MP

Page 1.14.12

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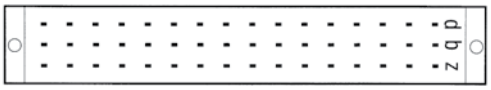
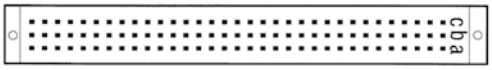
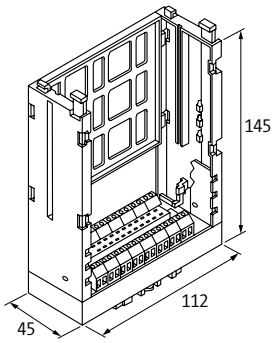
Eurocard holders

– For Eurocards 100 × 160 mm

	SKT	**SKT**
	32-pole F (EN 60603) Screw terminals	32-pole C (EN 60603) Screw terminals
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
Configuration (Row b, z)	**63510**	
Configuration (Row d, z)	**63518**	
Configuration (Row a, c)		**63516**
Technical Data		
Operating voltage	250 V AC	
Operating current	max. 4 A	max. 2 A
Configuration	32-pole F (EN 60603)	32-pole C (EN 60603)
Air and creepage distances	(EN 60664-1) over voltage, category I	
Material	Plastic, flame retardant	
General data		
Connection	4 mm² single core	
Mounting method	DIN-rail mountable (EN 60715) in vertical or horizontal position or screw fixing	
Description		
Functional description	To insert the card first press down the 2 yellow buttons. Then slide the Eurocard into the guide slots pushing until fully engaged. The card is now locked into position. It can be removed by pressing down on the 2 yellow buttons.	
Dimension drawing		
		

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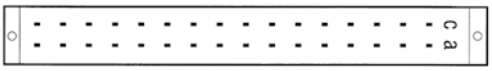
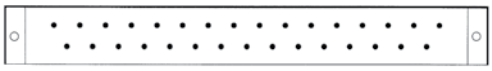
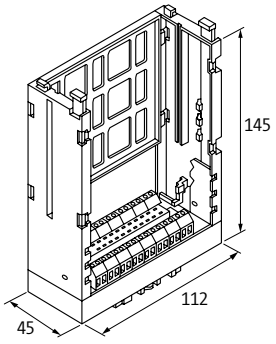
Notes

EUROCARD HOLDERS / CONTROL MODULES

Eurocard holders

– For Eurocards 100 × 160 mm

	SKT 32-pole D (EN 60603) Screw terminals	**SKT** 31-pole (DIN 41617) Screw terminals
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
Configuration (Row a, c)	**63512**	
Configuration (all)		**63501**
Technical Data		
Operating voltage	250 V AC	
Operating current	max. 4 A	max. 5 A
Configuration	32-pole D (EN 60603)	31-pole (DIN 41617)
Air and creepage distances	(EN 60664-1) over voltage, category I	
Material	Plastic, flame retardant	
General data		
Connection	4 mm² single core	
Mounting method	DIN-rail mountable (EN 60715) in vertical or horizontal position or screw fixing	
Description		
Functional description	To insert the card first press down the 2 yellow buttons. Then slide the Eurocard into the guide slots pushing until fully engaged. The card is now locked into position. It can be removed by pressing down on the 2 yellow buttons.	
Dimension drawing		



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Notes

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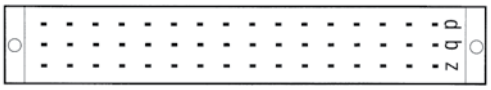
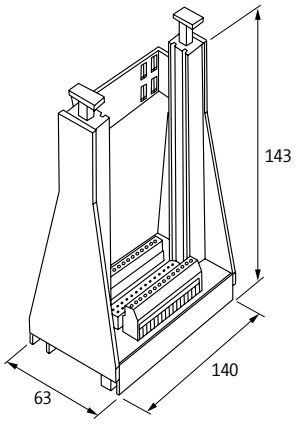
Eurocard holders

– For Eurocards 100 × 160 mm

	SKP 48-pole F (EN 60603) Screw terminals	**SKP** 32-pole F (EN 60603) Spring clamp terminals
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
Configuration (Row z, b, d)	**63020**	**4000-63011-4304800**
Configuration (Row b, z)		**4000-63011-4253200**
Accessories		**Art-No.**
Adapter		**63900**
Technical Data		
Operating voltage	250 V AC	
Operating current	max. 4 A	
Configuration	48-pole F (EN 60603)	32-pole F (EN 60603)
Air and creepage distances	(EN 60664-1) over voltage, category I	
Material	Plastic, flame retardant	
General data		
Connection	4 mm² single core	
Mounting method	DIN-rail mountable (EN 60715) or screw fixing	
Description		
Functional description	To insert the card first press down the 2 yellow buttons. Then slide the Eurocard into the guide slots pushing until fully engaged. The card is now locked into position. It can be removed by pressing down on the 2 yellow buttons.	
Dimension drawing		
		

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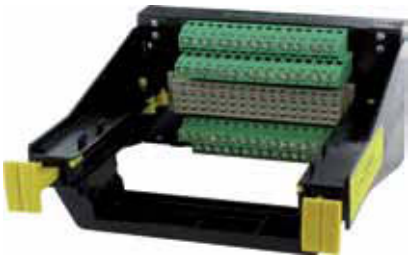
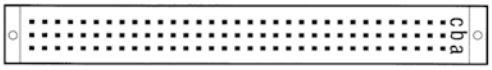
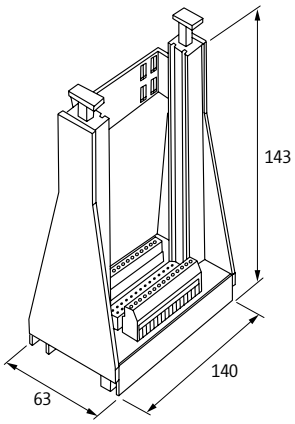
Notes

Eurocard holders

– For Eurocards 100 × 160 mm

	SKP	**SKP**	**SKP**
	32-pole C (EN 60603) Screw terminals	64-pole C (EN 60603) Screw terminals	64-pole C (EN 60603) Spring clamp terminals
			
Circuit diagram			
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
Configuration (Row a, c)	**631776**	**63043**	**4000-63011-1236400**
Accessories			**Art-No.**
Adapter			**63900**
Technical Data			
Operating voltage	250 V AC		
Operating current	max. 2 A		
Configuration	32-pole C (EN 60603)	64-pole C (EN 60603)	
Air and creepage distances	(EN 60664-1) over voltage, category I		
Material	Plastic, flame retardant		
General data			
Mounting method	DIN-rail mountable (EN 60715) or screw fixing		
Connection	4 mm² single core		
Description			
Functional description	To insert the card first press down the 2 yellow buttons. Then slide the Eurocard into the guide slots pushing until fully engaged. The card is now locked into position. It can be removed by pressing down on the 2 yellow buttons.		
Dimension drawing			
			
Notes			

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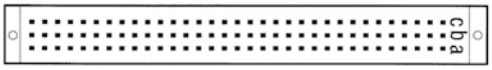
Eurocard holders

– For Eurocards 100 × 160 mm

	SKP	**SKP**
	64-pole C (EN 60603) Screw terminals with LED	96-pole C (EN 60603) Screw terminals

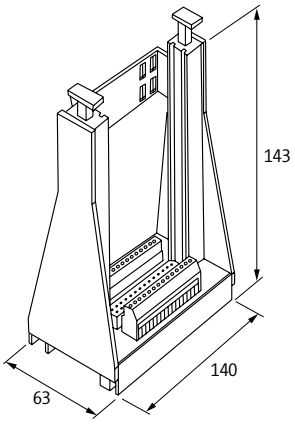


Circuit diagram



Order Data	**Art-No.**	**Art-No.**
Configuration (Row a, c)	**631615**	
Configuration (Row a, b, c)		**636013**
Accessories		**Art-No.**
Adapter		**63900**
Technical Data		
Operating voltage	24 V DC	125 V AC
Operating current	max. 2 A	max. 1 A
Configuration	64-pole C (EN 60603)	96-pole C (EN 60603)
Air and creepage distances	(EN 60664-1) over voltage, category II	(EN 60664-1) over voltage, category I
Material	Plastic, flame retardant	
General data		
Connection	4 mm² single core	
Mounting method	DIN-rail mountable (EN 60715) or screw fixing	
Description		
Functional description	To insert the card first press down the 2 yellow buttons. Then slide the Eurocard into the guide slots pushing until fully engaged. The card is now locked into position. It can be removed by pressing down on the 2 yellow buttons.	

Dimension drawing



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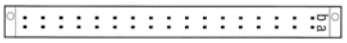
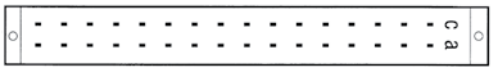
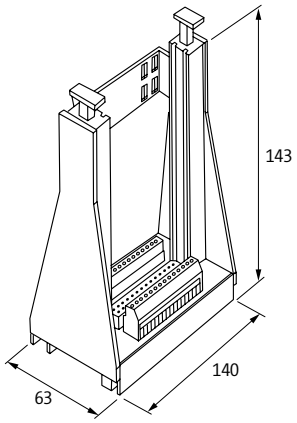
Notes

EUROCARD HOLDERS / CONTROL MODULES

Eurocard holders **– For Eurocards 100 × 160 mm**	**SKP** 64-pole B (EN 60603) Screw terminals	**SKP** 32-pole D (EN 60603) Screw terminals	**SKP** 32-pole D (EN 60603) Spring clamp terminals
			
Circuit diagram			
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
Configuration (Row a, b)	**63042**		
Configuration (Row a, c)		**630732**	**4000-63011-2203200**
Accessories			**Art-No.**
Adapter			**63900**
Technical Data			
Operating voltage	250 V AC		
Operating current	max. 2 A	max. 4 A	
Configuration	64-pole B (EN 60603)	32-pole D (EN 60603)	
Air and creepage distances	(EN 60664-1) over voltage, category I		(EN 60664-1) over voltage, category II
Material	Plastic, flame retardant		
General data			
Connection	4 mm² single core		
Mounting method	DIN-rail mountable (EN 60715) or screw fixing		
Description			
Functional description	To insert the card first press down the 2 yellow buttons. Then slide the Eurocard into the guide slots pushing until fully engaged. The card is now locked into position. It can be removed by pressing down on the 2 yellow buttons.		
Dimension drawing			



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Notes

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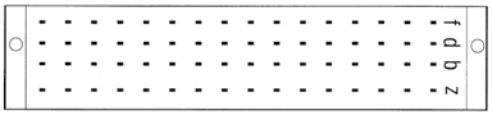
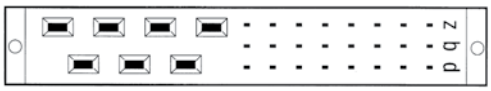
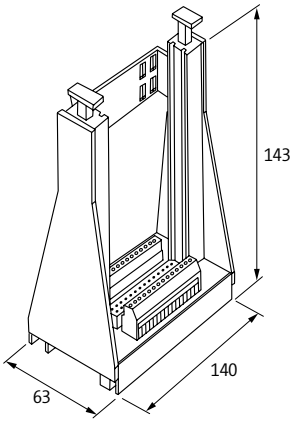
Eurocard holders

– For Eurocards 100 × 160 mm

	SKP 64-pole G (EN 60603) Screw terminals	**SKP** 64-pole G (EN 60603) Spring clamp terminals	**SKP** 24-, 7-pole M (EN 60603) Screw terminals	**SKP** 24-, 7-pole M (EN 60603) Spring clamp terminals
				
Circuit diagram				
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
Configuration (Row z, b, d, f)	**63040**	**4000-63011-5406400**		
Configuration (Row z, b, d)			**63048**	**4000-63011-6302470**
Accessories				**Art-No.**
Adapter				**63900**
Technical Data				
Operating voltage	250 V AC		250 V AC (24-pole)/ 500 V AC (7-pole)	
Operating current	max. 3 A		max. 4 A (24-pole)/15 A (7-pole)	
Configuration	64-pole G (EN 60603)		24-, 7-pole M (EN 60603)	
Air and creepage distances	(EN 60664-1) over voltage, category I			
Material	Plastic, flame retardant			
General data				
Connection	4 mm² single core			
Mounting method	DIN-rail mountable (EN 60715) or screw fixing			
Description				
Functional description	To insert the card first press down the 2 yellow buttons. Then slide the Eurocard into the guide slots pushing until fully engaged. The card is now locked into position. It can be removed by pressing down on the 2 yellow buttons.			

Dimension drawing



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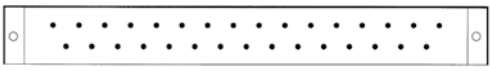
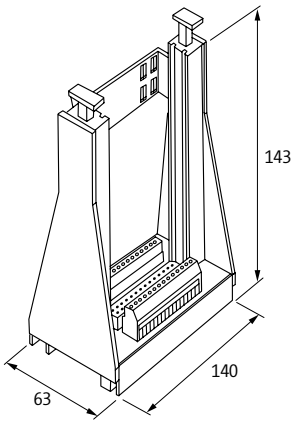
Notes

EUROCARD HOLDERS / CONTROL MODULES

Eurocard holders

– For Eurocards 100 × 160 mm

	SKP 31 / I	**SKP 31 / II**	**SKP 31 / II**
	31-pole (DIN 41617) Screw terminals	31-pole (DIN 41617) Screw terminals	31-pole (DIN 41617) Spring clamp terminals
			
Circuit diagram			
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
Configuration (all)	**63001**	**63007**	**4000-63011-9203100**
Accessories			**Art-No.**
Adapter			**63900**
Technical Data			
Operating voltage	250 V AC		
Operating current	max. 5 A		
Configuration	31-pole (DIN 41617)		
Air and creepage distances	(EN 60664-1) over voltage, category I		
Material	Plastic, flame retardant		
General data			
Connection	4 mm² single core		
Mounting method	DIN-rail mountable (EN 60715) or screw fixing		
Description			
Functional description	To insert the card first press down the 2 yellow buttons. Then slide the Eurocard into the guide slots pushing until fully engaged. The card is now locked into position. It can be removed by pressing down on the 2 yellow buttons.		
Dimension drawing			
			
Notes			

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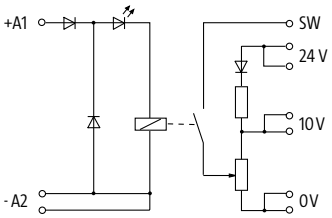
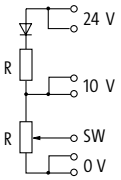
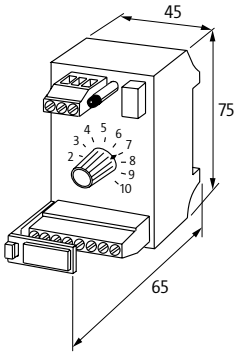
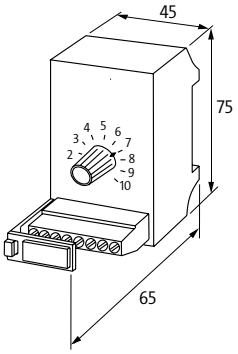
Potentiometer modules

	MPOT 270° potentiometer with relay contact	MPOT 10-turn potentiometer with relay contact	MPOT 270° potentiometer	MPOT 10-turn potentiometer
				
Circuit diagram				
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
1 kOhm	**67551**	**67561**	**67501**	**67511**
5 kOhm	**67555**	**67565**	**67505**	**67515**
10 kOhm	**67552**	**67562**	**67502**	**67512**
100 kOhm	**67553**		**67503**	**67513**
Technical Data				
Resistance tolerance	±20 %	±5 %	±20 %	±5 %
Linearity	±3 %	±0.25 %	±3 %	±0.25 %
Power: potentiometer	1 W	1.4 W (2 W at 40 °C)	1 W	1.4 W (2 W at 40 °C)
Power: resistor	0.25 W			
Input				
Input voltage	24 V DC		–	
Input current	20 mA		–	
LED display	LED (green)		–	
Output				
Switching voltage	10 V DC or 24 V DC		–	
Switching current per output	1 mA/1 A		–	
Contact material	PdNi-Au Rh		–	
General data				
Temperature range	0...+60 °C			
Mounting method	DIN-rail mountable (EN 60715)			
Dimension drawing				
				

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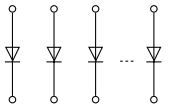
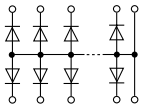
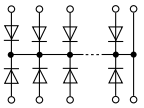
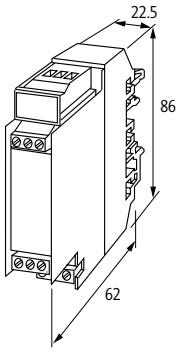
Notes

Diode modules

	MKS-D separation contact via pluggable jumpers	MKS-D Diodes with common potential	
			
Circuit diagram			
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
Single potential (6 diodes)	**67063**		
Com. potential anode (10 diodes)		**67040**	
Com. potential cathode (10 diodes)			**67045**
Technical Data			
Operating voltage	max. 48 V AC/DC		
General data			
Temperature range	-20...+60 °C		
Connection	Screw terminals: max. 4 mm²		
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)		
Description			
Functional description	Diode modules are suitable for the suppression of inductive loads (valve, contactor, etc.)		
Dimension drawing			



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Notes

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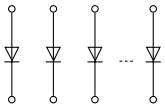
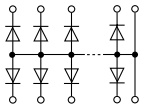
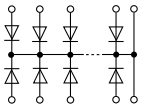
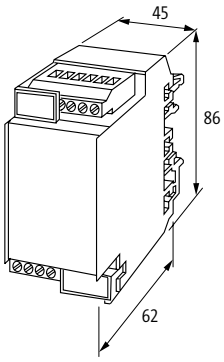
Diode modules

	MKS-D separation contact via pluggable jumpers	MKS-D Diodes with common potential	
			
Circuit diagram			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
Single potential (10 diodes)	**67066**		
Com. potential anode (20 diodes)		**67052**	
Com. potential cathode (20 diodes)			**67057**
Technical Data			
Operating voltage	max. 48 V AC/DC		
General data			
Temperature range	-20...+60 °C		
Connection	Screw terminals: max. 4 mm²		
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)		
Description			
Functional description	Diode modules are suitable for the suppression of inductive loads (valve, contactor, etc.)		
Dimension drawing			



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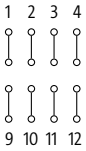
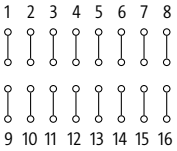
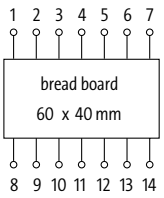
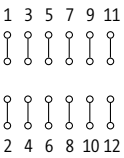
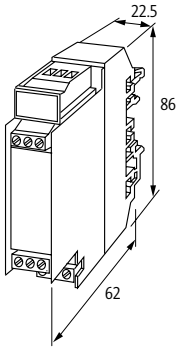
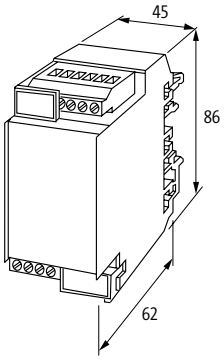
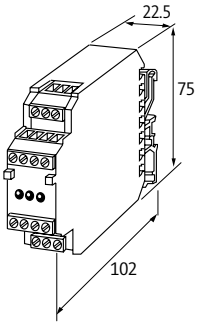
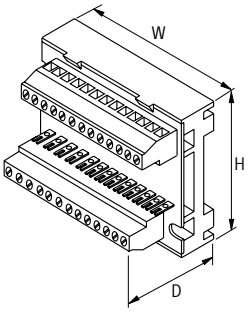
Notes

Assembly modules	**MKS-M** screw terminals connected to solder pin pairs	**MKS-M** screw terminals connected to solder pin pairs	**ML 14** with breadboard	**MP** screw terminals connected to solder pin pairs
				
Circuit diagram				
				

Order Data	**H×W×D**	**Art-No.**	**H×W×D**	**Art-No.**	**H×W×D**	**Art-No.**	**H×W×D**	**Art-No.**
Pairs of solder pins 4/30 mm		**67081**						
Pairs of solder pins 8/40 mm				**67083**				
Pairs of solder pins 14						**92200**		
Pairs of solder pins 6/24 mm							63×45×36 mm	**62001**
Pairs of solder pins 6/50 mm							90×63×36 mm	**62030**
Pairs of solder pins 12/24 mm							63×70×36 mm	**62010**
Pairs of solder pins 16/24 mm							63×90×36 mm	**62020**
Technical Data								
Operating voltage	max. 250 V AC/DC							
Operating current	max. 2.5 A		max. 5 A					
General data								
Temperature range	-20...+60 °C							
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)						DIN-rail mountableTH35 or G32 (EN 60715) or screwable	
Connection	Screw terminals: max. 4 mm², pairs of solder pins (spacing 5 mm)							
Housing	Plastic, flame retardant. Cover removable				Plastic, flame retardant. Housing closed, side part removable.		Plastic, flame retardant. Open design.	
Dimension drawing								
				
Notes								

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Accessories			Art-No.
	**ACS label plate KM 5**		
	for self marking (9 × 20 mm)		**7000-99001-0000000**
	for self marking with ADEMARK markers		**7000-99003-0000000**

INTERFACES

2



1 ELECTRONICS IN THE CONTROL CABINET

2 INTERFACES

3 CONNECTION TECHNOLOGY

4 I/O SYSTEMS

Front Panel Interfaces	2.1
Control Cabinet Interfaces / Cable Entry Systems	2.2
Hybrid Fieldbus Coupling	2.3
Lighting Elements	2.4



MODLINK MSDD
FRONT PANEL INTERFACES

- **PLC Service Port**
- **IP65 Protection**
- **Modular Inserts**

DESIGN YOUR OWN PART – WITH OUR ARTICLE NUMBERS

The article numbers help you figure out whether you are ordering outlets, data connector inserts, individual frames or sets. The article numbers of the individual components can be found on the following pages. Both modules and sets can be ordered in quantities of 1 or more.

THE SET

The set article number is made up of **A, B, C** and **D**.

	A		B	C	D
4000 – 68	☐☐☐	–	☐☐☐	☐☐☐	☐
	Frame		**Insert 1**	**Insert 2** For single frames 000	**Locking mechanism**

First select your components:

Block A:	Frame	(for example 4000-68**522**-000 0001 for transparent double frame)
Block B:	Insert 1	(for example 4000-68000-**001** 0000 for Germany (VDE) gray)
Block C:	Insert 2	(for example 4000-68000-**091** 0000 for 2x RJ45 + 2x USB)
Block D:	Locking mechan.	(for example 4000-68522-000 000**1** for 3 mm double-bit key)

The article number for this example set will be:

4000 – 68 **5 2 2** – **0 0 1** **0 9 1** **1**

Modlink MSDD Front Panel Interfaces



Frames
- Single and double frames

Page 2.1.1



Inserts
- Power outlets
- Data connection inserts

Page 2.1.2



Built-in Sockets
- USB
- RJ45

Page 2.1.19



Accessories

Page 2.1.20

Frames (plastic)			Art-No.
	**1-way transparent**		
	Mounting frame plastic PBT black Lid plastic PC transparent	cURus Closure: 3 mm double bit with pluggable rotation knob	**4000-68512-0000001**
	Mounting frame plastic PBT black Lid plastic PC transparent	Closure: Daimler	**4000-68512-0000003**
	**1-way metallic**		
	Mounting frame plastic PBT black Lid plastic PBT gray	cURus Closure: 3 mm double bit with pluggable rotation knob	**4000-68513-0000001**
	Mounting frame plastic PBT black Lid plastic PBT gray	Closure: Daimler	**4000-68513-0000003**
	**1-way gray**		
	Mounting frame plastic PBT black Lid plastic PBT gray	cURus Closure: 3 mm double bit with pluggable rotation knob	**4000-68514-0000001**
	Mounting frame plastic PBT black Lid plastic PBT gray	Closure: Daimler	**4000-68514-0000003**
	**2-way transparent**		
	Mounting frame plastic PBT black Lid plastic PC transparent	cURus Closure: 3 mm double bit with pluggable rotation knob	**4000-68522-0000001**
	Mounting frame plastic PBT black Lid plastic PC transparent	Closure: Daimler	**4000-68522-0000003**
	**2-way metallic**		
	Mounting frame plastic PBT black Lid plastic PBT gray	cURus Closure: 3 mm double bit with pluggable rotation knob	**4000-68523-0000001**
	Mounting frame plastic PBT black Lid plastic PBT gray	Closure: Daimler	**4000-68523-0000003**
	**2-way gray**		
	Mounting frame plastic PBT black Lid plastic PBT gray	cURus Closure: 3 mm double bit with pluggable rotation knob	**4000-68524-0000001**
	Mounting frame plastic PBT black Lid plastic PBT gray	Closure: Daimler	**4000-68524-0000003**

FRONT PANEL INTERFACES

Power outlets			Art-No.
	**Germany (VDE) white**		
	Screw terminals: max. 6 mm² Operating voltage: max. 250 V AC Operating current: max. 16 A	LED (yellow)	**4000-68000-0010000**
	**Germany (VDE) white**		
	Spring clamp terminals: max. 2.5 mm² (AWG 14) Operating voltage: max. 250 V AC Operating current: max. 16 A		**4000-68000-0160000**
	**Germany (VDE) yellow**		
	Screw terminals: max. 6 mm² Operating voltage: max. 250 V AC Operating current: max. 16 A		**4000-68000-0020000**
	**Germany (VDE) orange**		
	Spring clamp terminals: max. 2.5 mm² (AWG 14) Operating voltage: max. 250 V AC Operating current: max. 16 A		**4000-68000-0140000**
	**France (UTE-NF) gray**		
	Screw terminals: max. 6 mm² Operating voltage: max. 250 V AC Operating current: max. 16 A	LED (yellow)	**4000-68000-0050000**
	**France (UTE-NF) gray**		
	Screw terminals: max. 4 mm² Operating voltage: max. 250 V AC Operating current: max. 16 A		**4000-68000-3010000**
	**France (UTE-NF) red**		
	Spring clamp terminals: max. 2.5 mm² (AWG 14) Operating voltage: max. 250 V AC Operating current: max. 16 A	with touch protection	**4000-68000-0130000**

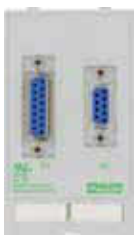
Power outlets			Art-No.
	**France (UTE-NF) orange** Spring clamp terminals: max. 2.5 mm² (AWG 14) Operating voltage: max. 250 V AC Operating current: max. 16 A		**4000-68000-0150000**
	**USA (NEMA 5-15)** Plug-solder connection: 4.8 × 0.8 mm Operating voltage: max. 125 V AC Operating current: max. 15 A	cURus	**4000-68000-0030000**
	**USA (NEMA 5-15)** Plug-solder connection: L 6.3 × 0.8 mm/N (PE) 4.8 × 0.8 mm Operating voltage: max. 125 V AC Operating current: max. 3 A	cURus Fuse 3 A	**4000-68000-0110000**
	**USA (NEMA 5-15)** Screw terminals: max. 2.5 mm² (AWG 14) Operating voltage: max. 125 V AC Operating current: max. 15 A	cURus without touch protection	**4000-68000-3240000**
	**USA (NEMA 5-15)** Screw terminals: max. 2.5 mm² (AWG 14) Operating voltage: max. 125 V AC Operating current: max. 15 A		**4000-68000-0040000**
	**USA (2 × NEMA-GFCI 5-15)** Screw terminals: max. 2.5 mm² (AWG 14) Operating voltage: max. 125 V AC Operating current: max. 15 A	cURus without touch protection	**4000-68000-3220000**
	**USA (2 × NEMA-GFCI 5-20)** Screw terminals: max. 6 mm² Operating voltage: max. 125 V AC Operating current: max. 20 A per socket	cURus without touch protection	**4000-68000-3280000**

FRONT PANEL INTERFACES

Power outlets			Art-No.
	**England (BS)**		
	Screw terminals: max. 4 mm² Operating voltage: max. 250 V AC Operating current: max. 13 A		**4000-68000-0060000**
	**England (BS) orange**		
	Screw terminals: max. 4 mm² Operating voltage: max. 250 V AC Operating current: max. 13 A		**4000-68000-0190000**
	**Italy (CEI 23-16)**		
	Screw terminals: max. 2.5 mm² (AWG 14) Operating voltage: max. 250 V AC Operating current: max. 16 A	Double	**4000-68000-0070000**
	**Italy (CEI 23-16)**		
	Screw terminals: max. 2.5 mm² (AWG 14) Operating voltage: max. 250 V AC Operating current: max. 16 A		**4000-68000-0180000**
	**EURO/USA**		
	Screw terminals: max. 2.5 mm² (AWG 14) Operating voltage: max. 250 V AC (EU); max. 125 V AC (USA) Operating current: max. 16 A (EU); max. 15 A (USA)		**4000-68000-0100000**
	**Denmark**		
	Spring clamp terminals: max. 2.5 mm² (AWG 14) Operating voltage: max. 250 V AC Operating current: max. 10 A		**4000-68000-0170000**
	**Swiss**		
	Spring clamp terminals: max. 1.5 mm² (AWG 16) Operating voltage: max. 250 V AC Operating current: max. 10 A		**4000-68000-0120000**

Power outlets			Art-No.
	**Australia** Screw terminals: max. 2.5 mm² (AWG 14) Operating voltage: max. 250 V AC Operating current: max. 10 A		**4000-68000-0090000**
	**India (IS 1293)** Screw terminals: max. 4 mm² Operating voltage: max. 240 V AC Operating current: max. 6 A		**4000-68000-3210000**
	**China (CCC)** Screw terminals: max. 4 mm² Operating voltage: max. 250 V AC Operating current: max. 10 A		**4000-68000-3250000**
	**Brazil** Screw terminals: max. 2.5 mm² (AWG 14) Operating voltage: max. 250 V AC Operating current: max. 10 A	Double	**4000-68000-3290000**
	**Brazil** Screw terminals: max. 2.5 mm² (AWG 14) Operating voltage: max. 250 V AC Operating current: max. 10 A	Single	**4000-68000-3310000**

FRONT PANEL INTERFACES

Communication inserts			Art-No.
	**SUB-D9; SUB-D9** 2 × SUB-D9 (female/male)	cURus	**4000-68000-0200000**
	**SUB-D9; SUB-D9** 2 × SUB-D9 (solder connection/female)	cURus	**4000-68000-0210000**
	**SUB-D9; SUB-D9** 1 × SUB-D9 (solder connection/male) 1 × SUB-D9 (solder connection/female)	cURus	**4000-68000-0220000**
	**SUB-D9** 1 × SUB-D9 (solder connection/male) 1 × SUB-D9 (blind plug)	cURus	**4000-68000-0230000**
	**SUB-D9; SUB-D15** 1 × SUB-D9 (male/female) 1 × SUB-D15 (male/female)	cURus	**4000-68000-0300000**
	**SUB-D9; SUB-D15** 1 × SUB-D9 (solder connection/male) 1 × SUB-D15 (solder connection/male)	cURus	**4000-68000-0310000**
	**SUB-D9; SUB-D15** 1 × SUB-D9 (female/female) 1 × SUB-D15 (male/male)	cURus	**4000-68000-0320000**

Communication inserts			Art-No.
	**SUB-D9; SUB-D25** 1 × SUB-D9 (male/female) 1 × SUB-D25 (male/female)	cURus	**4000-68000-0400000**
	**SUB-D9; SUB-D25** 1 × SUB-D9 (solder connection/male) 1 × SUB-D25 (solder connection/male)	cURus	**4000-68000-0410000**
	**SUB-D9; SUB-D25** 1 × SUB-D9 (solder connection/female) 1 × SUB-D25 (solder connection/male)	cURus	**4000-68000-0420000**
	**SUB-D9; SUB-D25** 1 × SUB-D9 (female/female) 1 × SUB-D25 (male/female)		**4000-68000-0430000**
	**SUB-D15; SUB-D15** 2 × SUB-D15 (female/male)	cURus	**4000-68000-0500000**
	**SUB-D15; SUB-D15** 2 × SUB-D15 (solder connection/female)	cURus	**4000-68000-0510000**
	**SUB-D15** 1 × SUB-D15 (solder connection/male) 1 × SUB-D9 (blind plug)	cURus	**4000-68000-0530000**

FRONT PANEL INTERFACES

Communication inserts			Art-No.
	**SUB-D15; SUB-D25** 1 × SUB-D15 (male/female) 1 × SUB-D25 (male/female)	cURus	**4000-68000-0600000**
	**SUB-D15; SUB-D25** 1 × SUB-D15 (solder connection/male) 1 × SUB-D25 (solder connection/male)	cURus	**4000-68000-0610000**
	**SUB-D25; SUB-D25** 2 × SUB-D25 (female/male)	cURus	**4000-68000-0700000**
	**SUB-D25; SUB-D25** 2 × SUB-D25 (solder connection/female)	cURus	**4000-68000-0710000**
	**SUB-D25** 1 × SUB-D25 (solder connection/male) 1 × SUB-D9 (blind plug)	cURus	**4000-68000-0730000**
	**SUB-D25** 1 × SUB-D25 (male/female) 1 × SUB-D9 (blind plug)	cURus	**4000-68000-0740000**
	**PS2; PS2; SUB-D15 HD** 2 × PS2 (6-pole solder connection) 1 × SUB-D15 HD (male/female) VGA		**4000-68000-0800000**

Communication inserts			Art-No.
	**PS2; SUB-D15 HD**		
	1 × PS2 (6-pole solder connection) 1 × SUB-D15 HD (solder connection/male) VGA		**4000-68000-0810000**
	**SUB-D15 HD; RJ45; USB; USB (formA)**		
	1 × SUB-D15 HD (male/female) VGA 1 × RJ45, 8-pole metal, CAT5e (female/female) 2 × USB (female/female) form A	cURus shielded	**4000-68000-1040000**
	**RJ45; RJ45; USB (formA)**		
	2 × RJ45, 8-pole metal, CAT5e (female/female) 1 × USB (female/female) form A	cURus shielded	**4000-68000-0940000**
	**RJ45; USB (form A); DVI**		
	1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × USB (female/female) form A 1 × DVI (male/male)		**4000-68000-0820000**
	**RJ45; RJ45; USB; USB (form A)**		
	2 × RJ45, 8-pole metal, CAT5e (female/female) 2 × USB (female/female/0.7 m cable) form A	shielded	**4000-68000-0990000**
	**RJ45; RJ12; USB; USB (form A)**		
	1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × RJ12, 6-pole plastic 2 × USB (female/female) form A	cURus shielded	**4000-68000-0910000**
	**RJ45; USB; USB (form A)**		
	1 × RJ45, 8-pole metal, CAT5e (female/female) 2 × USB (female/female) form A	shielded	**4000-68000-0960000**

FRONT PANEL INTERFACES

Communication inserts			Art-No.
	**RJ45; RJ45; USB; USB (form A)** 2 × RJ45, 8-pole metal, CAT5e (female/female) 2 × USB (female/female) form A	shielded	**4000-68000-0970000**
	**RJ45; RJ12; SUB-D25** 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × RJ12, 6-pole plastic 1 × SUB-D25 (male/female)	cURus	**4000-68000-1100000**
	**RJ45; SUB-D9; SUB-D9** 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × SUB-D9 (female/female) 1 × SUB-D9 (female/female)	cURus	**4000-68000-1110000**
	**RJ45; RJ12; SUB-D9** 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × RJ12, 6-pole plastic 1 × SUB-D9 (female/female)	cURus shielded	**4000-68000-1120000**
	**RJ45; USB; GC/GC** 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × USB (female/female) form A 1 × GC (female/female) 1 × GC (male/male)	shielded	**4000-68000-1140000**
	**RJ12; RJ12; SUB-D9** 2 × RJ12, 6-pole plastic 1 × SUB-D9 (female/female)	shielded	**4000-68000-1090000**
	**RJ45; SUB-D9; SUB-D9** 1 × RJ45, 8-pole metal, CAT5e (female/female) 2 × SUB-D9 (female/female)	shielded	**4000-68000-1160000**

Communication inserts			Art-No.
	**RJ45; USB (form A); SUB-D9; SUB-D9**		
	1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × USB (female/female) form A 2 × SUB-D9 (female/female)	shielded	**4000-68000-1180000**
	**RJ45; USB (form A); SUB-D9; SUB-D9**		
	1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × USB (female/female) form A 1 × SUB-D9 (female/female) 1 × SUB-D9 (female/female)	shielded	**4000-68000-1190000**
	**RJ45; RJ45**		
	2 × RJ45, 8-pole metal, CAT5e (female/female)	cURus shielded	**4000-68000-1200000**
	**RJ45**		
	1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × SUB-D9 (blind plug)	cURus	**4000-68000-1210000**
	**RJ45; RJ45; RJ45; RJ45**		
	4 × RJ45, 8-pole metal, CAT5e (female/female)	shielded	**4000-68000-1220000**
	**USB (form A); RJ45**		
	1 × USB (female/female) form A 1 × RJ45, 8-pole metal, CAT5e (female/female)	cURus shielded	**4000-68000-1310000**
	**RJ45; SUB-D9**		
	1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × SUB-D9 (female/female)	cURus shielded	**4000-68000-1410000**

FRONT PANEL INTERFACES

Communication inserts			Art-No.
	**SUB-D9; RJ45; USB (form A)** 1 × SUB-D9 (female/female) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × USB (male/male/0.7 m cable) form A	shielded	**4000-68000-1420000**
	**RJ45; USB (form A); SUB-D9** 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × USB (female/female) form A 1 × SUB-D9 (male/female)	cURus shielded	**4000-68000-1430000**
	**RJ45; USB (form A); SUB-D9** 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × USB (female/female) form A 1 × SUB-D9 (female/female)	cURus shielded	**4000-68000-1440000**
	**RJ45; USB (form A); SUB-D9** 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × USB (female/female) form A 1 × SUB-D9 (solder connection/male)	shielded	**4000-68000-1460000**
	**RJ45; RJ45; SUB-D25** 2 × RJ45, 8-pole metal, CAT5e (female/female) 1 × SUB-D25 (male/female)	cURus shielded	**4000-68000-1600000**
	**SUB-D25; RJ45; USB (pre-cuttet)** 1 × SUB-D25 (male/female) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × USB (pre-cut)	shielded	**4000-68000-1610000**
	**RJ45; RJ45; SUB-D9** 2 × RJ45, 8-pole metal, CAT5e (female/female) 1 × SUB-D9 (male/female)	shielded	**4000-68000-1620000**

Communication inserts			Art-No.
	**RJ45; SUB-D9; SUB-D25**		
	1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × SUB-D9 (male/female) 1 × SUB-D25 (male/female)	cURus	**4000-68000-1700000**
	**BNC; RJ45; SUB-D9**		
	1 × BNC (male/male) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × SUB-D9 (male/female)	shielded	**4000-68000-1800000**
	**BNC; RJ45; SUB-D9**		
	1 × BNC (male/male) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × SUB-D9 (female/female)		**4000-68000-1810000**
	**RJ45; USB; USB (form A)**		
	1 × RJ45, 8-pole metal, CAT5e (female/female) 2 × USB (female/female/0.7 m cable) form A	shielded	**4000-68000-0980000**
	**USB (form A); SUB-D25**		
	1 × USB (male/male/0.7 m cable) form A 1 × SUB-D25 (male/female)	shielded	**4000-68000-1000000**
	**USB (form A); SUB-D25; RJ45**		
	1 × USB (female/female) form A 1 × SUB-D25 (male/female) 1 × RJ45, 8-pole metal, CAT5e (female/female)	cURus shielded	**4000-68000-1450000**
	**USB (form A); RJ45**		
	1 × USB (male/male/0.7 m cable) form A 1 × RJ45, 8-pole metal, CAT5e (female/female)	shielded	**4000-68000-1300000**

FRONT PANEL INTERFACES

Communication inserts			Art-No.
	**USB (form A); SUB-D9; RJ45**		
	1 × USB (male/male/0.7 m cable) form A 1 × SUB-D9 (male/female) 1 × RJ45, 8-pole metal, CAT5e (female/female)	shielded	**4000-68000-1400000**
	**USB; USB (form A)**		
	2 × USB (female/female/0.7 m cable) form A	shielded	**4000-68000-0900000**
	**USB (form A to A)**		
	1 × USB (female/female) form A	cURus shielded	**4000-68000-0920000**
	**USB (form A); USB (form A)**		
	2 × USB (female/female) form A	cURus shielded	**4000-68000-0930000**
	**USB; USB; USB; USB (form A)**		
	4 × USB (female/female) form A		**4000-68000-0950000**
	**USB (form A); SUB-D25**		
	1 × USB (female/female) form A 1 × SUB-D25 (male/female)	cURus shielded	**4000-68000-1010000**
	**USB (form A); SUB-D9**		
	1 × USB (female/female) form A 1 × SUB-D9 (solder connection/male)		**4000-68000-1020000**

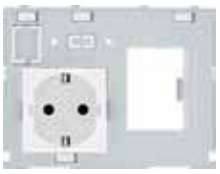
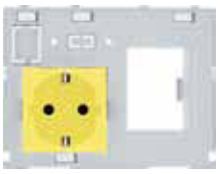
Communication inserts			Art-No.
	**USB (form A); SUB-D25; RJ45**		
	1 × USB (female/female) form A 1 × SUB-D25 (male/solder connection) 1 × RJ45, 8-pole metal, CAT5e (female/female)	shielded	**4000-68000-1470000**
	**USB (form A); SUB-D9; RJ12**		
	1 × USB (female/female) form A 1 × SUB-D9 (female/female) 1 × RJ12, 6-pole plastic	shielded	**4000-68000-1480000**
	**RJ45; USB (form A); SUB-D9; SUB-D9**		
	1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × USB (female/female) form A 1 × SUB-D9 (male/female) 1 × SUB-D9 (male/female)		**4000-68000-1240000**
	**RJ45; USB; USB (form A); SUB-D9 (pre-cut)**		
	1 × RJ45, 8-pole metal, CAT5e (female/female) 2 × USB (female/female) form A 1 × blind plug for SUB-D9		**4000-68000-1250000**
	**RJ45; RJ12; USB; USB (form A); SUB-D9**		
	1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × RJ12, 6-pole plastic 1 × USB (female/female) form A 1 × SUB-D9 (female/female)		**4000-68000-1270000**
	**USB (form A); DVI**		
	2 × USB (female/female) form A 1 × DVI (male/male)		**4000-68000-1280000**
	**SUB-D9 (female)**		
	1 × blind plug for SUB-D9 1 × SUB-D9 (female) PROFIBUS		**4000-68000-2000000**

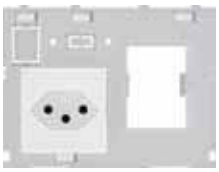
FRONT PANEL INTERFACES

Combinations			Art-No.
	**USA (NEMA 5-15); SUB-D25; RJ45** 1 × NEMA 1-15 (plug-solder connection) 1 × SUB-D25 (male/female) 1 × RJ45, 8-pole metal, CAT5e (female/female)	cURus	**4000-68000-4000000**
	**USA (NEMA 5-15); RJ45; SUB-D9** 1 × NEMA 1-15 (plug-solder connection) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × SUB-D9 (female/female)	cURus	**4000-68000-4010000**
	**USA (NEMA 5-15); RJ45; SUB-D9** 1 × NEMA 5-15 (plug-solder connection) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × SUB-D9 (male/female)	cURus	**4000-68000-4020000**
	**USA (NEMA 5-15); RJ45; USB (form A)** 1 × NEMA 5-15 (plug-solder connection) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × USB (female/female) form A	cURus	**4000-68000-4030000**
	**USA (NEMA 5-15); RJ45** 1 × NEMA 5-15 (plug-solder connection) 1 × RJ45, 8-pole metal, CAT5e (female/female)	cURus	**4000-68000-4040000**
	**USA (NEMA 5-15); RJ45; RJ12** 1 × NEMA 5-15 (plug-solder connection) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × RJ12, 6-pole plastic		**4000-68000-4050000**
	**USA (NEMA 5-15); RJ45; RJ45** 1 × NEMA 5-15 (plug-solder connection) 2 × RJ45, 8-pole metal, CAT5e (female/female)		**4000-68000-4060000**

Combinations			Art-No.
	**USA (NEMA 5-15); RJ45; USB (form A); Fuse** 1 × NEMA 5-15 (screw terminals) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × USB (female/female) form A 1 × fuse (3 A)	cURus with touch protection	**4000-68000-4200000**
	**USA (NEMA 5-15); RJ45; USB (form A); Fuse** 1 × NEMA 5-15 (screw terminals) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × fuse (3 A)	cURus with touch protection	**4000-68000-4210000**
	**USA (NEMA 5-15); RJ45; RJ45; Fuse** 1 × NEMA 5-15 (screw terminals) 2 × RJ45, 8-pole metal, CAT5e (female/female) 1 × fuse (3 A)	cURus with touch protection	**4000-68000-4220000**
	**USA (NEMA 5-15); RJ45; SUB-D9 HD; fuse** 1 × NEMA 5-15 (screw terminals) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × SUB-D9 (male/female) 1 × fuse (3 A)	cURus with touch protection	**4000-68000-4230000**
	**USA (NEMA 5-15); Fuse** 1 × NEMA 5-15 (screw terminals) 1 × fuse (3 A)	cURus with touch protection	**4000-68000-4240000**
	**USA (2 × NEMA-GFCI 5-15); RJ45; USB (form A); fuse** 2 × NEMA-GFCI 5-15 (screw terminals) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × USB (female/female) form A 1 × fuse (3 A)	cURus with touch protection	**4000-68000-4100000**
	**USA (2 × NEMA-GFCI 5-15); RJ45; fuse** 2 × NEMA-GFCI 5-15 (screw terminals) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × fuse (3 A)	cURus with touch protection	**4000-68000-4110000**
	**USA (2 × NEMA-GFCI 5-15); RJ45; RJ45; fuse** 2 × NEMA-GFCI 5-15 (screw terminals) 2 × RJ45, 8-pole metal, CAT5e (female/female) 1 × fuse (3 A)	cURus with touch protection	**4000-68000-4120000**

FRONT PANEL INTERFACES

Combinations			Art-No.
	**USA (2 × NEMA-GFCI 5-15); RJ45; SUB-D9; fuse**		
	2 × NEMA-GFCI 5-15 (screw terminals) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × SUB-D9 (male/female) 1 × fuse (3 A)	cURus with touch protection	**4000-68000-4130000**
	**USA (2 × NEMA-GFCI 5-15); fuse**		
	2 × NEMA-GFCI 5-15 (screw terminals) 1 × fuse (3 A)	cURus with touch protection	**4000-68000-4140000**
	**Germany (VDE); FI cut-out**		
	1 × VDE 1 × FI-cut-out		**4000-68000-4300000**
	**Germany (VDE); RJ45; FI-cut-out**		
	1 × VDE 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × FI-cut-out		**4000-68000-4300001**
	**Germany (VDE) yellow; FI cut-out**		
	1 × VDE yellow 1 × FI-cut-out		**4000-68000-4390000**
	**Germany (VDE) yellow; RJ45; FI-cut-out**		
	1 × VDE yellow 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × FI-cut-out		**4000-68000-4390001**
	**Australia; FI cut-out**		
	1 × Australia 1 × FI-cut-out		**4000-68000-4360000**
	**Australia; RJ45; FI-cut-out)**		
	1 × Australia 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × FI-cut-out		**4000-68000-4360001**

Combinations			Art-No.
	**Swiss; FI cut-out** 1 × Swiss 1 × FI-cut-out		**4000-68000-4340000**
	**Swiss; RJ45; FI cut-out** 1 × Swiss 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × FI-cut-out		**4000-68000-4340001**
	**Italy (CEI 23-16); FI cut-out** 1 × Italy (CEI 23-16) 1 × FI-cut-out		**4000-68000-4330000**
	**Italy (CEI 23-16); RJ45; FI-cut-out** 1 × Italy (CEI 23-16) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × FI-cut-out		**4000-68000-4330001**
	**Great Britain (BS); FI cut-out** 1 × Great Britain (BS) 1 × FI-cut-out		**4000-68000-4320000**
	**Great Britain (BS); RJ45; FI-cut-out** 1 × Great Britain (BS) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × FI-cut-out		**4000-68000-4320001**
	**France (UTE-NF); FI cut-out** France (UTE-NF) 1 × FI-cut-out		**4000-68000-4310000**
	**France (UTE-NF); RJ45; FI-cut-out** 1 × France (UTE-NF) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × FI-cut-out		**4000-68000-4310001**

FRONT PANEL INTERFACES

Pass-through			Art-No.
	**Pass-through**		
	1 × RJ45, 8-pole metal, CAT5e (female/female)	cULus	**4000-73000-0010000**
	**Pass-through**		
	1 × USB 3.0 (female/male) form A, 0.6 m cable	cULus	**4000-73000-0150000**
	1 × USB 3.0 (female/male) form A, 1.0 m cable	cULus	**4000-73000-0160000**
	1 × USB 3.0 (female/male) form A, 1.5 m cable	cULus	**4000-73000-0170000**
	1 × USB 3.0 (female/male) form A, 2.0 m cable	cULus	**4000-73000-0180000**

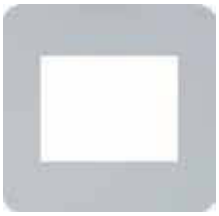
Connection accessories			Art-No.
	**Gender Changer**		
	RJ45 (female /female)	cURus	**4000-68000-9040010**
	**Gender Changer**		
	RJ12; (female/female)		**4000-68000-9040011**
	**Gender Changer**		
	USB (form A to A)		**4000-68000-9040020**
	USB (form A to B)		**4000-68000-9040025**
	**Gender Changer**		
	SUB-D9 (female/female)	cURus	**4000-68000-9040030**
	SUB-D9 (female/male)	cURus	**4000-68000-9040031**
	**Gender Changer**		
	SUB-D9 (male/male)	cURus	**4000-68000-9040032**
	**Gender Changer**		
	SUB-D15 (female/male)	cURus	**4000-68000-9040040**
	SUB-D15 (female/female)	cURus	**4000-68000-9040041**
	**Gender Changer**		
	SUB-D15 (male/male)	cURus	**4000-68000-9040042**
	**Gender Changer**		
	SUB-D15 HD (female/male) VGA	cURus	**4000-68000-9040045**
	**Gender Changer**		
	SUB-D25 (female/female)	cURus	**4000-68000-9040050**
	SUB-D25 (female/male)	cURus	**4000-68000-9040051**

FRONT PANEL INTERFACES

Connection accessories			Art-No.
	**Gender Changer**		
	PS2 (female/female) 6-pole		**4000-68000-9040060**
	Mini DIN; (female/female) 8-pole		**4000-68000-9040065**
	**Gender Changer**		
	BNC		**4000-68000-9040070**
	**Gender Changer**		
	DVI; (female/female)		**4000-68000-9040080**
	**Cable**		
	SUB-D9 (male/male); 2 m	shielded	**4000-68000-9030010**
	SUB-D9 (male/male); 5 m	shielded	**4000-68000-9030011**
	SUB-D9 (female/male); 2 m	shielded	**4000-68000-9030020**
	SUB-D9 (female/male); 5 m	shielded	**4000-68000-9030021**
	**Cable**		
	SUB-D25 (female/male); 1.8 m	shielded	**4000-68000-9030040**
	SUB-D25 (female/male); 5 m	shielded	**4000-68000-9030041**
	**Cable**		
	USB (form A to A); 2 m (male/male)	shielded	**4000-68000-9030050**
	USB (form A to A); 5 m (male/male)	shielded	**4000-68000-9030051**
	USB (form A to A); 2 m (male/male) PUR	shielded	**4000-68000-9030052**
	USB (form A to A); 5 m (male/male) PUR	shielded	**4000-68000-9030053**
	USB (form A to B); 2 m	shielded	**4000-68000-9030054**
	USB (form A to B); 5 m	shielded	**4000-68000-9030055**
	**Cable**		
	RJ45 (8/8-pole) metal, CAT6; 2 m	shielded	**4000-68000-9030060**
	RJ45 (8/8-polie) metal, CAT6; 5 m	shielded	**4000-68000-9030061**
	RJ45 (8/8-pole) metal, CAT6; 10 m	shielded	**4000-68000-9030062**

Mounting accessories			Art-No.
	**Ground strap 6 mm²**		
	100 mm for screw (M4)		**4000-71001-0610004**
	200 mm for screw (M4)		**4000-71001-0620004**
	300 mm for screw (M4)		**4000-71001-0630004**
	**Blind plate (flat)**		
	Self-installation available space: 45 × 75 mm	cURus	**4000-68000-8900000**
	**Blind plate (depth)**		
	Self-installation available space: 34 × 58 mm Cavity: 13 mm deep	cURus	**4000-68000-8910000**
	**Blind plates (pre-cut)**		
	1 × USB, 1 × RJ45, 1 × SUB-D9	cURus shielded	**4000-68000-8500000**
	**Blind plates (pre-cut)**		
	1 × USB, 1 × RJ45, 1 × SUB-D25	cURus shielded	**4000-68000-8510000**
	**Housing (1-way)**		
	with 4 blind plugs (M16 × 1.5) H × W × D: 180×94×81 mm		**4000-68000-9060010**
	**Housing (2-way)**		
	with 6 blind plugs (M16 × 1.5) H × W × D: 182×180×90 mm		**4000-68000-9060020**

FRONT PANEL INTERFACES

Mounting accessories			Art-No.
	**Touch protection box**		
	for double frame 124×124×67 mm	cURus	**4000-68000-9140000**
	**Metal Flange Plate**		
	for single frame 178×182×22 mm	cURus	**4000-68000-9150000**
	**Metal Flange Plate**		
	for double frame 178×182×22 mm	cURus	**4000-68000-9160000**
	**Cable compression gland M16**		
		Cable diameter (4...8 mm)	**4000-68000-9060030**
	**Protection cap**		
	SUB-D9 (female)	cURus	**4000-68000-9100000**
	SUB-D9 (male)	cURus	**4000-68000-9130000**
	SUB-D15 (female)	cURus	**4000-68000-9110000**
	SUB-D25 (female)	cURus	**4000-68000-9120000**
	**Label plate**		
	Frame: 20 pcs.	cURus	**4000-68000-9000000**



CONTROL CABINET INTERFACES / CABLE ENTRY SYSTEMS

- **Durable connections**
- **Modular system**
- **High protection degree**

MODLINK MPV CABLE ENTRY SYSTEM

The article numbers help you figure out whether you are ordering inserts, individual frames or sets.
A set has one part number for up to three components.

THE MODLINK MPV SET

The set article number is made up of **A, B** and **C**.

		A		B		C	
4000 – 69	☐☐☐	–	☐☐☐		☐☐☐		0
	Frame		**Insert 1**		**Insert 2** For single frames 000		

First select your components:

Block A: Frame (z. B. 4000-69**122**-000 0000 for double frame)
Block B: Insert 1 (z. B. 4000-69000-**100** 0000 for M12/Sub-D)
Block C: Insert 2 (z. B. 4000-69000-**200** 0000 for 7/8"/spring clamp terminal)

The article number for this example set will be:

4000 – 69 **1 2 2** – **1 0 0** **2 0 0** 0

Control Cabinet Interfaces



Modlink MPV – *modular*
- Frames
- Inserts
- Accessories

Page 2.2.1



Control cabinet interface – *predefined*
- Push-Pull

Page 2.2.3

Cable Entry Systems



Cable entry system – *modular*
- Cable entry plate
- Inserts

Page 2.2.4



Cable entry system – *predefined*
- Rectangular
- Round

Page 2.2.5

MPV Frame			Art-No.
	**Single**		
	for standard cut-out Size 6 (35 × 52 mm) IP65	cURus	**4000-69112-0000000**
	**Double**		
	for standard cut-out Size 24 (35 × 112 mm) IP65	cURus	**4000-69122-0000000**
	**Single (30°-angle)**		
	for standard cut-out Size 6 (35 × 52 mm) IP65	cURus	**4000-69212-0000000**
	**Double (30°-angle)**		
	for standard cut-out Size 24 (35 × 112 mm) IP65	cURus	**4000-69222-0000000**

MPV Inserts			Art-No.
	**M12**		
	M12 (female/male) 5-pole IP65	cURus	**4000-69000-1040000**
	M12 (female/male) 5-pole, B-coded IP65	cURus	**4000-69000-1060000**
	M12 (female/male) 6-pole, Cube67 IP65	cURus	**4000-69000-1080000**
	**M12; SUB-D9**		
	M12 (male) B-coded SUB-D9 (female) IP65	cURus	**4000-69000-1000000**
	**M12; terminators**		
	M12 (male) 5-pole, A-coded Spring clamp terminal connection IP65		**4000-69000-1050000**

CONTROL CABINET INTERFACES / CABLE ENTRY SYSTEMS

MPV Inserts			Art-No.
	**M12; terminators**		
	M12 (male) 5-pole, A-coded Screw terminal connection (yellow) Safety IP65		**4000-69000-1090000**
	**M12; RJ45**		
	M12 (male) 4-pole, D-coded RJ45 (8/8-pole) metal, CAT6 IP65		**4000-69000-1100000**
	**M23**		
	M23 outer thread (female) 12-pole 3 m pre-wired PVC-wires, (16 × 0.34/5 × 0.75 mm²) IP65		**4000-69000-1500000**
	M23 outer thread (female) 19-pole 3 m pre-wired PVC-wires, (16 × 0.34/5 × 0.75 mm²) IP65		**4000-69000-1600000**
	**7/8"; Spring clamp terminal**		
	7/8" (male) Spring clamp terminal connection IP65	cURus	**4000-69000-2000000**
	**7/8"; Spring clamp terminal**		
	7/8" (female) Spring clamp terminal connection		**4000-69000-2040000**
	**7/8"; Spring clamp terminal**		
	7/8" (male) Spring clamp terminal connection (yellow) Safety IP65		**4000-69000-2020000**

MPV Inserts			Art-No.
	**RJ45**		
	RJ45 (8/8-pole) metal, CAT6 IP65	cURus	**4000-69000-2500000**
	**LWL**		
	Fiber Optic (male/male) single mode IP65		**4000-69000-5200000**
MPV accessories			**Art-No.**
	**Blind insert**		
	for sealing of unused openings IP65	cURus	**4000-69000-9000000**
	**Blind insert yellow**		
	for sealing of unused openings IP65	cURus	**4000-69000-9100000**
	**RJ45**		
	Male straight, 4-pole IP65		**4000-69000-9500050**
	**RJ45**		
	Male 90°, 4-pole IP65		**4000-69000-9500060**
	**Control cabinet entry system M12**		
	straight, A-coded, 5-pole	DeviceNet, CANopen shielded	**7000-42111-0000000**
	straight, B-coded, 5-pole	PROFIBUS, Interbus shielded	**7000-44111-0000000**
	straight, A-coded, 6-pole, shielded	Cube67	**7000-46111-0000000**

CONTROL CABINET INTERFACES / CABLE ENTRY SYSTEMS

MPV accessories			Art-No.
	**Control cabinet entry system M12**		
	straight, D-coded, 4-pole, shielded (female/female)	Ethernet CAT 5	**7000-44611-0000000**

AIDA Push Pull			Art-No.
	**AIDA Push Pull**		
	1 × RJ45, 8-pole metal, CAT5e (female/female) Combicon Power/spring clamp terminal, push-pull Plastic IP65		**4000-74122-1002001**
	**AIDA Push Pull**		
	Fiber Optic (male/male) single mode Combicon Power/spring clamp terminal, push-pull Plastic IP65		**4000-74122-1003001**

AIDA Push Pull Accessories			Art-No.
	**Protection cap**		
	Push Pull Power		**4000-74000-9000000**
	RJ45 and fiber optic push-pull		**4000-74000-9010000**

Cable entry reliefs			Art-No.
	**Size 16**		
	for 4 cables (0 large, 4 small)		**4000-70103-0004000**
	for 5 cables (1 large, 4 small)		**4000-70103-0104000**
	for 8 cables (0 large, 8 small)		**4000-70103-0008000**
	**Size 24**		
	for 4 cables (2 large, 2 small)		**4000-70103-0202000**
	for 7 cables (1 large, 6 small)		**4000-70103-0106000**
	for 10 cables (0 large, 10 small)		**4000-70103-0010000**

Cable entry glands			Art-No.
	**with cable tie eye**		
	Cable diameter (3...4 mm)		**4000-70403-0001030**
	Cable diameter (4...5 mm)		**4000-70403-0001040**
	Cable diameter (5...6 mm)		**4000-70403-0001050**
	Cable diameter (6...7 mm)		**4000-70403-0001060**
	Cable diameter (7...8 mm)		**4000-70403-0001070**
	Cable diameter (8...9 mm)		**4000-70403-0001080**
	Cable diameter (9...10 mm)		**4000-70403-0001090**
	Cable diameter (10...11 mm)		**4000-70403-0001100**
	Cable diameter (11...12 mm)		**4000-70403-0001110**
	Cable diameter (12...13 mm)		**4000-70403-0001120**
	Cable diameter (13...14 mm)		**4000-70403-0001130**
	Cable diameter (14...15 mm)		**4000-70403-0001140**
	Cable diameter (15...16 mm)		**4000-70403-0001150**
	Cable diameter (16...17 mm)		**4000-70403-0100160**
	Cable diameter (17...18 mm)		**4000-70403-0100170**
	Cable diameter (18...19 mm)		**4000-70403-0100180**
	Cable diameter (19...20 mm)		**4000-70403-0100190**
	Cable diameter (20...21 mm)		**4000-70403-0100200**
	Cable diameter (21...22 mm)		**4000-70403-0100210**
	Cable diameter (22..23 mm)		**4000-70403-0100220**
	Cable diameter (23...24 mm)		**4000-70403-0100230**
	Cable diameter (24...25 mm)		**4000-70403-0100240**
	Cable diameter (24...25 mm)		**4000-70403-0100250**
	Cable diameter (26...27 mm)		**4000-70403-0100260**
	Cable diameter (27...28 mm)		**4000-70403-0100270**
	Cable diameter (28...29 mm)		**4000-70403-0100280**
	Cable diameter (29...30 mm)		**4000-70403-0100290**
	Cable diameter (30...31 mm)		**4000-70403-0100300**
	**Special**		
	Blind plug (plugs) single		**4000-70503-0001010**
	Blind plug (plugs) double		**4000-70503-0100010**
	Adapter		**4000-70503-0100020**
	for 1 AS-Interface cable		**4000-70503-0001020**
	for 2 AS-Interface cables		**4000-70503-0001030**
	for 2 cables (diameter 6 mm)		**4000-70503-0001060**
	for 2 cables (diameter 5 mm)		**4000-70503-0001050**

Cable entry plates			Art-No.
	**Size 24**		
	Cable diameter (12) × 8...12 mm		**4000-70603-0240120**
	Cable diameter (6) × 3...6.5 mm, (4) × 5...9.2 mm, (4) × 9.6...15.9 mm		**4000-70603-0240140**
	Cable diameter (17) × 5...9.2 mm		**4000-70603-0240170**
	Cable diameter (16) × 3...6.5 mm, (4) × 5...9.2 mm, (2) × 8...12.5 mm		**4000-70603-0240220**
	Cable diameter (23) × 4.3...8.1 mm		**4000-70603-0240230**
	Cable diameter (29) × 3...6.5 mm		**4000-70603-0240290**

CONTROL CABINET INTERFACES / CABLE ENTRY SYSTEMS

Cable entry plates			Art-No.
	**M 50**		
	Cable diameter (3) × 6...10 mm, (1) × 9.6...15.9 mm		**4000-70703-0500040**
	Cable diameter (1) × 3...5.5 mm, (5) × 5...9.2 mm		**4000-70703-0500060**
	Cable diameter (7) × 3...6.5 mm, (1) × 6...10 mm		**4000-70703-0500080**
	**M 63**		
	Cable diameter (2) × 3...6.5 mm, (4) × 5...9.2 mm, (2) × 9.6...15.9 mm		**4000-70703-0630080**
	Cable diameter (6) × 3...5.5 mm, (6) × 3...6.5 mm, (1) × 6...10 mm		**4000-70703-0630130**
	Cable diameter (6) × 3...5.5 mm, (6) × 3...6.5 mm, (1) × 6...10 mm		**4000-70703-0630190**

Accessories			Art-No.
	**Blind plate**		
	Size 16		**4000-70202-0001000**
	**Blind plate**		
	Size 24		**4000-70202-0002000**
	**Adapter**		
	from size 24 to 16		**4000-70203-0100000**
	**Cable strain relief**		
	for 1 cable		**4000-70302-0000010**
	for 5 cables		**4000-70302-0000050**
	for 9 cables		**4000-70302-0000090**
	**Label plate**		
	20 × 9 mm		**4000-70920-0000000**
	**Cable tie**		
	for small glands L = 75 mm		**4000-70902-0075220**
	for large glands L = 160 mm		**4000-70902-0160450**
	for large glands L = 180 mm		**4000-70902-0180800**



HYBRID FIELDBUS COUPLING

- **For durable connections**
- **A high degree of protection**
- **Repeater included**

EASILY CONNECTED – QUICKLY AND SAFELY

MSDD hybrid fieldbus couplers transfer data and power from the cabinet into the industrial field. A repeater function amplifies and processes signals.

Active hybrid fieldbus coupling offers many benefits:

- Repeater and control cabinet interface in one module
- Profibus FMS/DP galvanically separated
- Three independent Profibus ports
- All three Profibus segments are galvanically separated
- Baud rate change during operation – automatic and continuous Baud rate detection
- 3 × segment length – 200 m at 1.5 Mbit/s and 100 m at 12 Mbit/s
- Cascading capabilities for 31 modules per Profibus segment
- Integrated terminating resistor

MSDD Hybrid Fieldbus Coupling



Active Hybrid Fieldbus Coupling
Active connection between control cabinet and fieldbus area (incl. repeater)

Page 2.3.1



Passive Hybrid Fieldbus Coupling
Passive connection between control cabinet and fieldbus area

Page 2.3.1

Active - PROFIBUS DP			Art-No.
	**M12, RS 485**		
	Field Bus Coupling IP67: M12 (female) 5-pole, B-coded Control Cabinet: SUB-D female	2 × M12 (female/female) cULus	**67604**
	**CU, RS 485**		
	Field Bus Coupling IP67: Han-Brid® Control Cabinet: SUB-D female	(male/female) cULus	**67605**
	**CU, RS 485**		
	Field Bus Coupling IP67: Han-Brid® Control Cabinet: SUB-D female	(female/female) cULus	**67606**
Passive			**Art-No.**
	**CU, RS 485**		
	Field Bus Coupling IP67: Han-Brid® Control Cabinet: spring clamp terminals	(female/female) cULus	**67598**
	**CU, RS 485**		
	Field Bus Coupling IP67: Han-Brid® Control Cabinet: spring clamp terminals	(male/female) cULus	**67599**
	**M12, 7/8", RS 485**		
	Field Bus Coupling IP67: M12 (female) 5-pole, B-coded, 7/8" (female) Control Cabinet: SUB-D female	(female/female)	**67254**
	**Blind plug**		
	Self-installation		**676364**



LIGHTING ELEMENTS
HIGHLY FLEXIBLE

- **Modular design**
- **Extremely bright**
- **Energy saving LED technology**

MODLIGHT AND COMLIGHT PROVIDE EXCELLENT LIGHTING

Energy saving and durable LED technology are only some of the advantages of Murrelektronik's lighting systems. The Modlight50 and Modlight70 signal towers can be combined in various colors. The components can be conveniently connected via notched contacts. The Modlight XTREME 440 machine lighting with IP69K protection provides excellent light that's equivalent to daylight, even in rugged industrial environments.

Signal Towers



Modlight30/50/70
• 30 mm/50 mm/70 mm

Page 2.4.1



Comlight57
• 57 mm diameter
• Single element

Page 2.4.3

Machine Lighting



Modlight Xtreme 440
• Machine lighting
• IP69K

Page 2.4.4

Connection modules			Art-No.
	**Modlight50**		
	Basic (170 mm)	Spring clamp terminals cULus	**4000-75050-1100002**
	Basic + buzzer (170 mm)	Spring clamp terminals cULus	**4000-75050-1100003**
	**Modlight70**		
	Basic (77.5 mm)	Spring clamp terminals cULus	**4000-75070-1100012**
	**Modlight70**		
	Basic (170 mm)	Spring clamp terminals cULus	**4000-75070-1100002**
	Basic + buzzer + flash (170 mm)	Spring clamp terminals cULus	**4000-75070-1100003**
	**Modlight70**		
	Basic (170 mm)	M12 (8-pole), down	**4000-75070-1300002**
	Basic + buzzer + flash (170 mm)	M12 (8-pole), down	**4000-75070-1300003**
	**Modlight70**		
	Basic (170 mm)	M12 (8-pole), sideways	**4000-75070-1400002**
	Basic + buzzer (170 mm)	M12 (8-pole), sideways	**4000-75070-1400003**
	**Modlight70 with magnet base**		
	Basic (170 mm)	M12 (8-pole), sideways	**4000-75070-1500002**
	Basic + buzzer + flash (170 mm) with magnet base	M12 (4-pole), sideways	**4000-75070-1500003**

LIGHTING ELEMENTS

Connection modules			Art-No.
	**Modlight70 (AS-Interface)**		
	Basic (170 mm) for 4 signals	M12 (4-pole), bottom AS-Interface-supply	**4000-75070-1300004**
	Basic + buzzer (170 mm) for 4 signals	M12 (4-pole), bottom AS-Interface-supply	**4000-75070-1300005**
	Basic (170 mm) for 4 signals	M12 (4-pole), bottom External supply	**4000-75070-1300006**
	Basic + buzzer (170 mm) for 4 signals	M12 (4-pole), bottom External supply	**4000-75070-1300007**
	Basic (170 mm) for 5 signals	M12 (4-pole), bottom External supply 2 × AB-Slave	**4000-75070-1300008**
	Basic + buzzer (170 mm) for 7 signals	M12 (4-pole), bottom External supply 2 × AB-Slave	**4000-75070-1300009**
	**Modlight70 (AS-Interface)**		
	Basic (170 mm) for 4 signals	M12 (4-pole), sideways AS-Interface-supply	**4000-75070-1400004**
	Basic + buzzer (170 mm) for 4 signals	M12 (4-pole), sideways AS-Interface-supply	**4000-75070-1400005**
	Basic (170 mm) for 4 signals	M12 (4-pole), sideways External supply	**4000-75070-1400006**
	Basic + buzzer (170 mm) for 4 signals	M12 (4-pole), sideways External supply	**4000-75070-1400007**
	Basic (170 mm) for 5 signals	M12 (4-pole), sideways External supply 2 × AB-Slave	**4000-75070-1400008**
	Basic + buzzer (170 mm) for 7 signals	M12 (4-pole), sideways External supply 2 × AB-Slave	**4000-75070-1400009**
	**Modlight70 with magnet base (AS-Interface)**		
	Basic (170 mm) for 4 signals	M12 (4-pole), sideways External supply	**4000-75070-1500006**
	Basic + buzzer (170 mm) for 4 signals	M12 (4-pole), sideways External supply	**4000-75070-1500007**

LED modules			Art-No.
	**Modlight**		
	LED module Modlight50	cULus	**4000-75050-1011000**
	LED module Modlight70	cULus	**4000-75070-1011000**
	LED flash module Modlight70	cULus	**4000-75070-1021000**
	**Modlight**		
	LED module Modlight50	cULus	**4000-75050-1012000**
	LED module Modlight70	cULus	**4000-75070-1012000**
	LED flash module Modlight70	cULus	**4000-75070-1022000**

LED modules			Art-No.
	**Modlight**		
	LED module Modlight50	cULus	**4000-75050-1013000**
	LED module Modlight70	cULus	**4000-75070-1013000**
	**Modlight**		
	LED module Modlight50	cULus	**4000-75050-1014000**
	LED module Modlight70	cULus	**4000-75070-1014000**
	**Modlight**		
	LED module Modlight50	cULus	**4000-75050-1015000**
	LED module Modlight70	cULus	**4000-75070-1015000**
	LED flash module Modlight70	cULus	**4000-75070-1025000**

Set			Art-No.
	**Modlight30 (green/yellow/red)**		
	Connection module + LED modules Connection cable L = 3 m		**4000-75324-5310000**
	**Modlight50 (green/yellow/red)**		
	Basic + LED modules + M12 (down)		**4000-75501-5310000**
	Basic, buzzer, flash + LED modules + M12 (down)		**4000-75502-5310000**
	**Modlight70 (green/yellow/red)**		
	Basic + LED modules + M12 (down)		**4000-75704-5310000**
	Basic, buzzer, flash + LED modules + M12 (down)		**4000-75705-5310000**
	Basic + LED modules + M12 (side)		**4000-75712-5310000**
	Basic, buzzer, flash + LED modules + M12 (side)		**4000-75713-5310000**
	**Modlight70 (green/yellow/red/transparent)**		
	Basis, Buzzer, flash + LED modules + M12 (side) + LED flash (transparent)		**4000-75713-1358000**

LIGHTING ELEMENTS

Compact status light			Art-No.
	**Comlight57**		
	red		**4000-75057-1111000**
	**Comlight57**		
	amber		**4000-75057-1112000**
	**Comlight57**		
	green		**4000-75057-1113000**
	**Comlight57**		
	blue		**4000-75057-1114000**
	**Comlight57**		
	clear		**4000-75057-1115000**

Modlight XTREME			Art-No.
	**LED machine lamp**		
	24 V DC/1.2 A Stainless Steel	IP69K	**4000-75827-1315000**
	**Xtreme joint coupling**		
			4000-75800-0000900

Accessories Modlight30			Art-No.
	**Adapter for wall assembly**		
			4000-75030-0000903

Signal tower accessories Modlight70/50			Art-No.
	**Top adapter for tube mounting**		
		for Modlight70	**4000-75070-0000900**
		for Modlight50	**4000-75050-0000900**
	**Bottom adapter for tube mounting**		
		for Modlight70/50	**4000-75070-0000901**
	**Adapter for tube/wall mounting**		
		for Modlight70/50	**4000-75070-0000902**
	**Adapter for wall assembly**		
		for Modlight70	**4000-75070-0000903**
	**Adapter for wall assembly**		
	Cable outlet (on the bottom)	for Modlight70	**4000-75070-0000904**

Signal tower accessories Modlight70/50			Art-No.
	**Aluminum tube (300 mm)**		
		for Modlight70/50	**4000-75070-0000913**
		for Modlight70/50	**4000-75070-0000918**
	**Magnet base**		
	with M16 × 1.5 gland	Sideways cable entry point for Modlight70/50	**4000-75070-0000920**
	**Magnet base**		
	with M12 flange plug connector (8-pole)	Sideways connection for Modlight70/50	**4000-75070-0000921**
	**Mounting adapter**		
	for strain relief	bottom or side exit	**4000-75070-0000922**

3 CONNECTION TECHNOLOGY



MURR ELEKTRONIK
stay connected

M8 Round Plug Connectors	3.1
M12 Round Plug Connectors	3.2
T-couplers M8, M12, 7/8"	3.3
Flange Connectors	3.4
MQ12 Round Plug Connectors	3.5
Fieldbus Connectors	3.6
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Valve Connectors	3.10
Technical Data	3.11



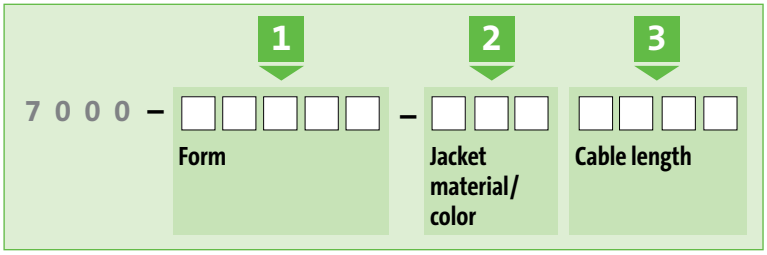
MURRELEKTRONIK'S **CONNECTORS**

ORDERING SYSTEM

Our concept for your individual application solutions.
Our connector range is a modular system that you can customize for your application.

ARTICLE NUMBER SYSTEM

The article number consists of three blocks: form, jacket material/color and cable length.



EXAMPLE

Block 1:	Form	1 2 4 0 1	M12 female 90° with LED, 4-pole
Block 2:	Jacket material/color	0 3 3	PUR (UL/CSA), yellow
Block 3:	Cable length	0 3 0 0	3 m

The resulting part number is how you will order your connector.

7 0 0 0 – 1 2 4 0 1 – 0 3 3 0 3 0 0

MURR ELEKTRONIK
stay connected

INTERNATIONAL APPROVALS FOR FLEXIBLE USE WORLDWIDE

DID YOU KNOW?

Every Murrelektronik connector is 100% tested.

This means:

- Electrically tested
- High voltage tested
- Performance tested
- Pin assignment tested
- Short circuit tested
- Visually controlled

YOUR BENEFITS

- **Modular connector program**
  - Find your connector quickly
- **International approvals**
  - Products approved for your market
- **Guaranteed quality**
  - 100% tested
  - All contacts gold-plated
  - High IP67 protection as standard
  - Shock and vibration resistant
- **Worldwide and industry wide**
  - Benefit from our expertise and our cross-industry expertise

Quality
MADE BY MURRELEKTRONIK

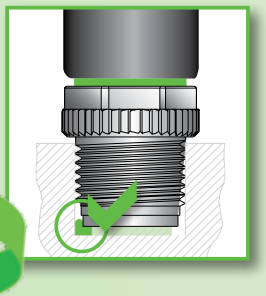




AUDIBLY SEALED – SIMPLE AND SAFE

Our torque wrench connects Murrelektronik M8-, M12-, 7/8" and M23 connectors simply and tightly, leaving no room for error.





M8	0.4 Nm
M12	0.6 Nm
7/8"	1.5 Nm
M23	2.0 Nm

Just turn until you hear the click.

No more sore fingers!

STANDARD CABLE TYPES
FOR YOUR APPLICATION



WIDE RANGE MEETS YOUR REQUIREMENTS

- **4 standard cable types for your application solution**
  - Always the right cable
- **3 cable colors (yellow, gray and black)**
  - The color you need for your industry
- **Meets the highest quality requirements**
  - Certified, application approved and successfully tested with many aggressive media (oil and lubricants)






Cable Types		PVC	PUR/PVC	PUR	PUR Welding Spark Resistant
Cable Standard		★	★★	★★★	★★★★★
Properties*	Flame retardant	■	■	■	■
	Resistant to chemicals	■	■	■	■
	Resistant to cleaning agents (Ecolab)	■			
	Resistant to oil and lubricants		■	■	■
	Suitable for use in C-tracks**		2 million	5 million	10 million
	Suitable for robotic applications			±180°	±360°
	Welding spark resistant				■
	UV resistant			■	■
	Halogen-free			■	■
	Varying temperatures	-5 to +80 °C	-5 to +80 °C	-25 to +80 °C	-25 to +90 °C
	UL/CSA approvals	■		■	■
	Compliant with NFPA 79 Edition 2012	■		■	
Application Examples		Packaging machines Food & Beverage Assembly lines Production lines	Packaging machines Handling machines Assembly lines Production lines	Machine tools Swivel tables Metal cutting	Machine tools Industrial robots Metal cutting High performance C-tracks

* The properties of some cable types may differ from this data.

** Max. 3.3 m/s at 5 m horizontal travel distance and max. acceleration of 5 m/s².



M8 ROUND PLUG CONNECTORS
SMALL, LIGHT, MEETS YOUR NEEDS

- **Extensive selection**
- **Tested technology**
- **Modern design**

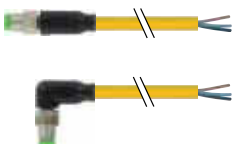
M8 REDESIGN – MORE MODELS, & NEW DESIGN

M8's redesign introduces new innovations. We completely redesigned all Murrelektronik's molded M8 connectors. They now have a new look and have been upgraded. We also significantly expanded our range of shielded M8 connectors.

Features:
- Durable PUR molding
- Gold plated contacts
- Small dimensions and improved feel
- Corrugated tubing connection
- Hex screw with thread (SW9)

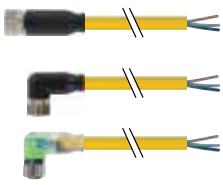
Huge Variety:
- Male/female, straight/90°, 3-pole/4-pole
- Shielded and unshielded connectors
- 3 standard colors, 4 standard cable types
- Cables, open ended wires, T-couplers, adapters, models with LED

With Open Ended Wires



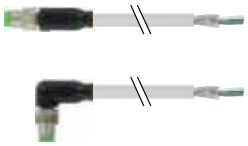
M8 male
• Straight
• 90°

Page 3.1.1



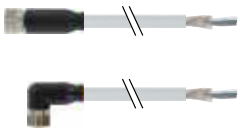
M8 female
• Straight
• 90°
• 90° with LED

Page 3.1.3



M8 male (shielded)
• Straight
• 90°

Page 3.1.6



M8 female (shielded)
• Straight
• 90°

Page 3.1.8

Connection Cables



M8 male
- Straight

M8 female
- Straight
- 90°
- 90° with LED

Page 3.1.10



M8 male
- Straight
- 90°

M12 female
- Straight
- 90°
- 90° with LED

Page 3.1.13

Field-Wireable



Insulation Displacement Technology
0.25...0.5 mm²

M8 male/female
- Straight

Page 3.1.15



Insulation Displacement Technology
0.14...0.34 mm²

M8 male/female
- Straight

Page 3.1.16



Solder pins

M8 male/female
- Straight
- 90°

Page 3.1.17



Screw Terminals

M8 male/female
- Straight

Page 3.1.19



Screw terminals (shielded)

M8 male/female
- Straight

Page 3.1.20

NOTES

M8 ROUND PLUG CONNECTORS

MURR ELEKTRONIK
stay connected

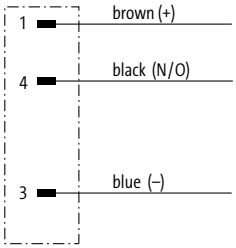
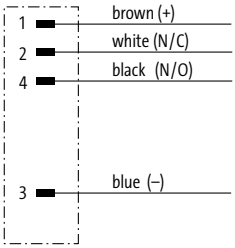
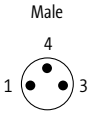
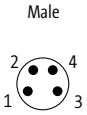
Open ended wires

Male
straight



Approvals: c CSA us, PCT, c UL us Listed *

* only for products with UL/CSA approvaled cable

1 Form	**08001**			**08011**		
Type	**3-pole**			**4-pole**		
Circuit diagram						
Contact layout						
2 Cable Type	**Jacket Color**			**Jacket Color**		
Wire diameter 0.25 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
PVC (UL/CSA)	**010**	**210**	**610**	**011**	**211**	**611**
PUR/PVC	**020**	**220**	**620**	**021**	**221**	**621**
PUR (UL/CSA)	**030**	**230**	**630**	**031**	**231**	**631**
PUR (UL/CSA), welding spark res.	**050**	**250**	**650**	**051**	**251**	**651**
3 Cable Length						
1.5 m	**0150**					
3.0 m	**0300**					
5.0 m	**0500**					
7.5 m	**0750**					
10.0 m	**1000**					
Technical Data						
Operating voltage	max. 60 V AC/DC			max. 30 V AC/DC		
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)					
Temperature range	-25...+85 °C, depending on cable quality					
Article No.						
The composition of your article number is explained on page 3.1.i	7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _					
		1 Form		**2 Cable Type**		**3 Cable Length**

Notes

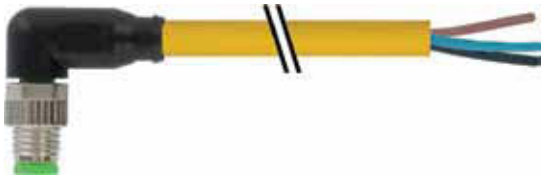
Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M8 ROUND PLUG CONNECTORS

Open ended wires

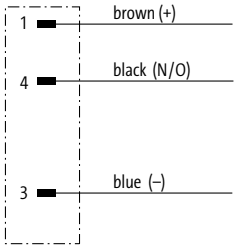
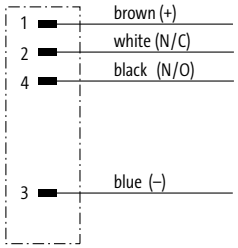
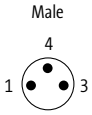
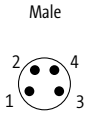
Male

90°



Approvals:

* only for products with UL/CSA approvaled cable

1 Form	08021	08031
Type	3-pole	4-pole
Circuit diagram		
Contact layout		

2 Cable Type	Jacket Color			Jacket Color		
Wire diameter 0.25 mm²	yellow	gray	black	yellow	gray	black
PVC (UL/CSA)	010	210	610	011	211	611
PUR/PVC	020	220	620	021	221	621
PUR (UL/CSA)	030	230	630	031	231	631
PUR (UL/CSA), welding spark res.	050	250	650	051	251	651

3 Cable Length	
1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data		
Operating voltage	max. 60 V AC/DC	max. 30 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i	7000 – _ _ _ _ _	– _ _ _	_ _ _ _
	1 Form	2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M8 ROUND PLUG CONNECTORS

MURR ELEKTRONIK
stay connected

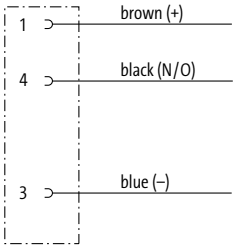
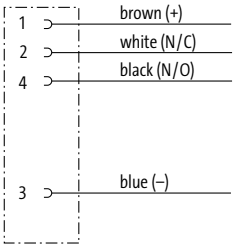
Open ended wires

Female
straight



Approvals: c CSA us, PCT, c UL us Listed *

* only for products with UL/CSA approvaled cable

1 Form	**08041**			**08061**		
Type	**3-pole**			**4-pole**		
Circuit diagram						
Contact layout	Female 			Female 		
2 Cable Type	**Jacket Color**			**Jacket Color**		
Wire diameter 0.25 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
PVC (UL/CSA)	**010**	**210**	**610**		**211**	**611**
PUR/PVC	**020**	**220**	**620**	**021**	**221**	**621**
PUR (UL/CSA)	**030**	**230**	**630**	**031**	**231**	**631**
PUR (UL/CSA), welding spark res.	**050**	**250**	**650**	**051**	**251**	**651**
3 Cable Length						
1.5 m	**0150**					
3.0 m	**0300**					
5.0 m	**0500**					
7.5 m	**0750**					
10.0 m	**1000**					
Technical Data						
Operating voltage	max. 60 V AC/DC			max. 30 V AC/DC		
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)					
Temperature range	-25...+85 °C, depending on cable quality					
Article No.						
The composition of your article number is explained on page 3.1.i	7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _					
		1 Form		**2 Cable Type**		**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M8 ROUND PLUG CONNECTORS

Open ended wires

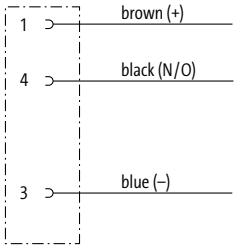
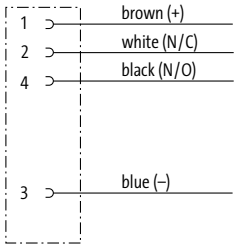
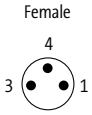
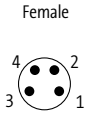
Female

90°



Approvals:

* only for products with UL/CSA approvaled cable

1 Form	08081	08101
Type	3-pole	4-pole
Circuit diagram		
Contact layout		

2 Cable Type	Jacket Color			Jacket Color		
Wire diameter 0.25 mm²	yellow	gray	black	yellow	gray	black
PVC (UL/CSA)	010	210	610	011	211	611
PUR/PVC	020	220	620	021	221	621
PUR (UL/CSA)	030	230	630	031	231	631
PUR (UL/CSA), welding spark res.	050	250	650	051	251	651

3 Cable Length	
1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data		
Operating voltage	max. 60 V AC/DC	max. 30 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7000	– _ _ _ _ _	– _ _ _	_ _ _ _
	1 Form	2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Open ended wires

Female

90°



Approvals:

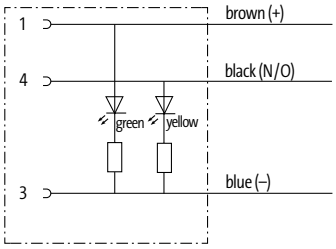
* only for products with UL/CSA approvaled cable

1 Form

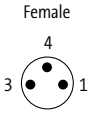
08121 me✖

Type	**3-pole with 2 × LED (PNP)**
	(NPN) on request

Circuit diagram



Contact layout



2 Cable Type

Wire diameter 0.25 mm²	yellow	gray	black
PVC (UL/CSA)	**010**	**210**	**610**
PUR/PVC	**020**	**220**	**620**
PUR (UL/CSA)	**030**	**230**	**630**
PUR (UL/CSA), welding spark res.	**050**	**250**	**650**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	24 V DC ±25 %
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	08121	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M8 ROUND PLUG CONNECTORS

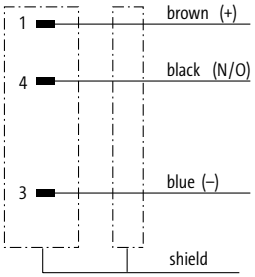
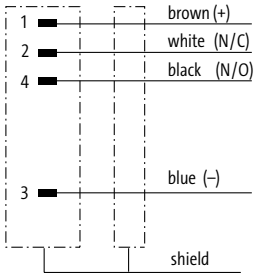
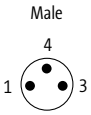
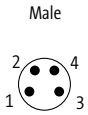
Open ended wires

– shielded

Male
straight



Approvals:

1 Form	08701	08711
Type	3-pole	4-pole
Circuit diagram		
Contact layout		

2 Cable Type	Jacket Color		Jacket Color	
Wire diameter 0.34 mm²	gray	black	gray	black
PVC (UL/CSA)	200	600	201	601
PUR (UL/CSA)	240	640	241	641

3 Cable Length	
1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data		
Operating voltage	max. 60 V AC/DC	max. 30 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Open ended wires

– shielded

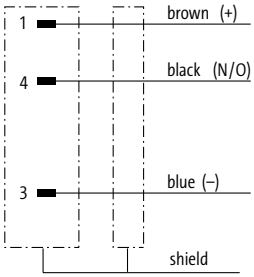
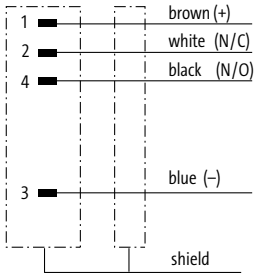
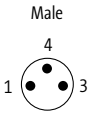
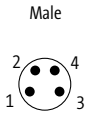
Male

90°



Approvals:

1 Form

	08721	08731
Type	**3-pole**	**4-pole**
Circuit diagram		
Contact layout		

2 Cable Type

	Jacket Color		Jacket Color	
Wire diameter 0.34 mm²	**gray**	**black**	**gray**	**black**
PVC (UL/CSA)	**200**	**600**	**201**	**601**
PUR (UL/CSA)	**240**	**640**	**241**	**641**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 60 V AC/DC	max. 30 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

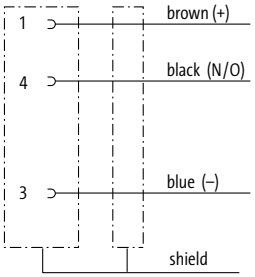
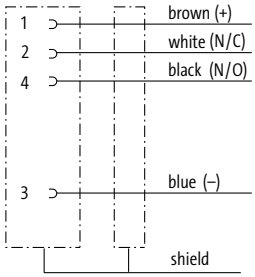
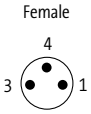
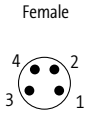
Open ended wires

– shielded

Female
straight



Approvals:

1 Form	08741	08761
Type	3-pole	4-pole
Circuit diagram		
Contact layout		

2 Cable Type	Jacket Color		Jacket Color	
Wire diameter 0.34 mm²	gray	black	gray	black
PVC (UL/CSA)	200	600	201	601
PUR (UL/CSA)	240	640	241	641

3 Cable Length	
1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data		
Operating voltage	max. 60 V AC/DC	max. 30 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7000	– _ _ _ _ _	– _ _ _	_ _ _ _
	1 Form	2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Open ended wires

– shielded

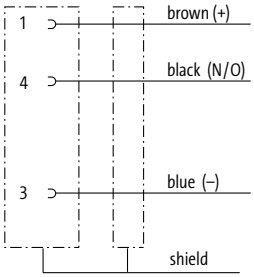
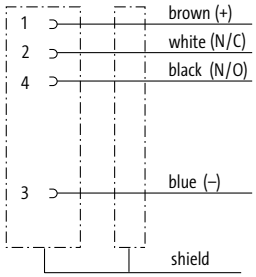
Female

90°



Approvals:

1 Form

	08781	08801
Type	**3-pole**	**4-pole**
Circuit diagram		
Contact layout		

2 Cable Type

	Jacket Color		Jacket Color	
Wire diameter 0.34 mm²	**gray**	**black**	**gray**	**black**
PVC (UL/CSA)	**200**	**600**	**201**	**601**
PUR (UL/CSA)	**240**	**640**	**241**	**641**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 60 V AC/DC	max. 30 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M8 ROUND PLUG CONNECTORS

Connection cables

– M8 - M8

Male
straight

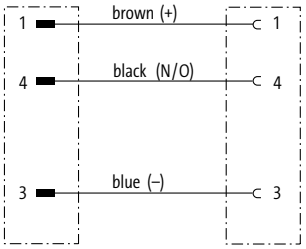
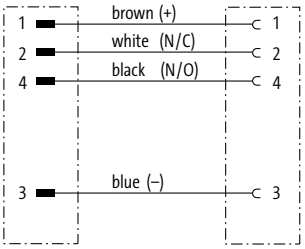
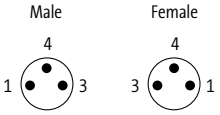
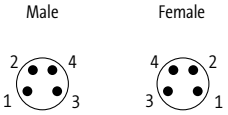
Female
straight



Approvals: c SP us, c UL us Listed *

* only for products with UL/CSA approvaled cable

1 Form

	88001	88011
Type	3-pole	4-pole
Circuit diagram		
Contact layout		

2 Cable Type

	Jacket Color			Jacket Color		
Wire diameter 0.25 mm²	yellow	gray	black	yellow	gray	black
PVC (UL/CSA)	010	210	610	011	211	611
PUR/PVC	020	220	620	021	221	621
PUR (UL/CSA)	030	230	630	031	231	631
PUR (UL/CSA), welding spark res.	050	250	650	051	251	651

3 Cable Length

0.3 m	0030
0.6 m	0060
1.0 m	0100
1.5 m	0150
2.0 m	0200

Technical Data

Operating voltage	max. 60 V AC/DC	max. 30 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _

1 Form | 2 Cable Type | 3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M8 ROUND PLUG CONNECTORS

MURR ELEKTRONIK
stay connected

Connection cables

– M8 - M8

Male
straight

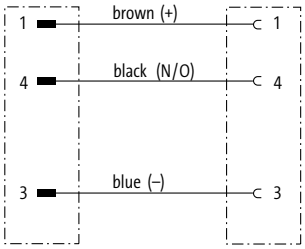
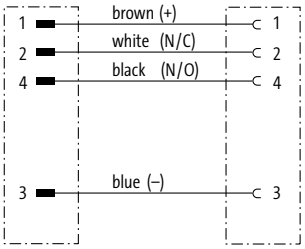
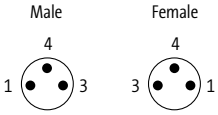
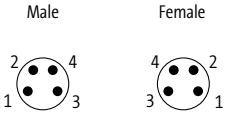
Female
90°



Approvals: c CSA us, PCT, c UL us Listed *

* only for products with UL/CSA approvaled cable

1 Form

	88021	88031
Type	3-pole	4-pole
Circuit diagram		
Contact layout		

2 Cable Type

	Jacket Color			Jacket Color		
Wire diameter 0.25 mm²	yellow	gray	black	yellow	gray	black
PVC (UL/CSA)	010	210	610	011	211	611
PUR/PVC	020	220	620	021	221	621
PUR (UL/CSA)	030	230	630	031	231	631
PUR (UL/CSA), welding spark res.	050	250	650	051	251	651

3 Cable Length

0.3 m	0030
0.6 m	0060
1.0 m	0100
1.5 m	0150
2.0 m	0200

Technical Data

Operating voltage	max. 60 V AC/DC	max. 30 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _

1 Form | 2 Cable Type | 3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M8 ROUND PLUG CONNECTORS

Connection cables

– M8 - M8

Male	**Female**
straight	90°



Approvals: * only for products with UL/CSA approvaled cable

1 Form

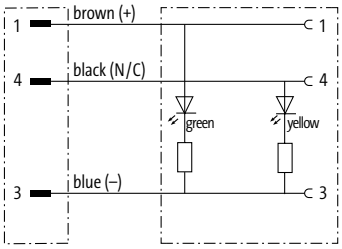
88041 mex

Type

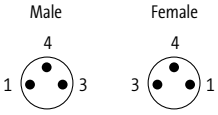
3-pole with 2 × LED (PNP)

(NPN) on request

Circuit diagram



Contact layout



2 Cable Type

Wire diameter 0.25 mm²	**yellow**	**gray**	**black**
PVC (UL/CSA)	**010**	**210**	**610**
PUR/PVC	**020**	**220**	**620**
PUR (UL/CSA)	**030**	**230**	**630**
PUR (UL/CSA), welding spark res.	**050**	**250**	**650**

3 Cable Length

0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data

Operating voltage	24 V DC ±25 %
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	88041	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M8 ROUND PLUG CONNECTORS

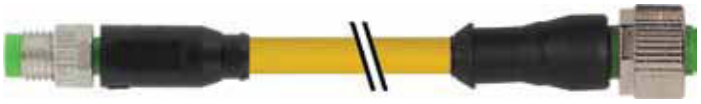
MURR ELEKTRONIK
stay connected

Connection cables

– M8 - M12

Male
straight

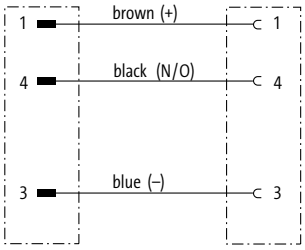
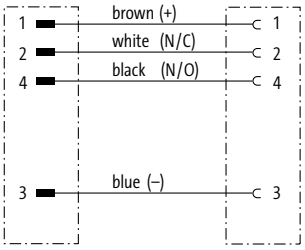
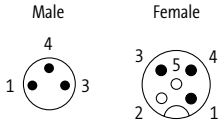
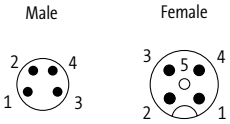
Female
straight



Approvals: c CSA us, PCT, c UL us Listed *

* only for products with UL/CSA approvaled cable

1 Form

	88241	88251
Type	3-pole	4-pole
Circuit diagram		
Contact layout		

2 Cable Type

	Jacket Color			Jacket Color		
Wire diameter 0.25 mm²	yellow	gray	black	yellow	gray	black
PVC (UL/CSA)	010	210	610	011	211	611
PUR/PVC	020	220	620	021	221	621
PUR (UL/CSA)	030	230	630	031	231	631
PUR (UL/CSA), welding spark res.	050	250	650	051	251	651

3 Cable Length

0.3 m	0030
0.6 m	0060
1.0 m	0100
1.5 m	0150
2.0 m	0200

Technical Data

Operating voltage	max. 60 V AC/DC	max. 30 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _

1 Form | 2 Cable Type | 3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M8 ROUND PLUG CONNECTORS

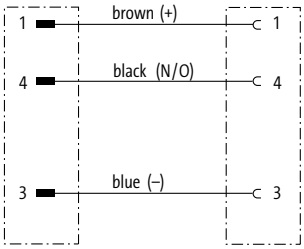
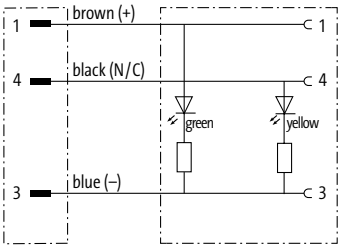
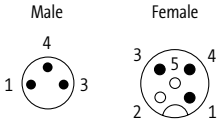
Connection cables

– M8 - M12

	Male straight	**Female** 90°	**Male** straight	**Female** 90° with LED
				

Approvals: cSAus, PCT, cULus Listed *

* only for products with UL/CSA approvaled cable

1 Form	**88261** mex	**88281**
Type	**3-pole**	**3-pole with 2 × LED (PNP)** **(NPN) on request**
Circuit diagram		
Contact layout		

2 Cable Type	**Jacket Color**			**Jacket Color**		
Wire diameter 0.25 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
PVC (UL/CSA)	**010**	**210**	**610**	**010**	**210**	**610**
PUR/PVC	**020**	**220**	**620**	**020**	**220**	**620**
PUR (UL/CSA)	**030**	**230**	**630**	**030**	**230**	**630**
PUR (UL/CSA), welding spark res.	**050**	**250**	**650**	**050**	**250**	**650**

3 Cable Length	
0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data		
Operating voltage	max. 60 V AC/DC	24 V DC ±25 %
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0 –	_ _ _ _ _ –	_ _ _	_ _ _ _
	1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M8 ROUND PLUG CONNECTORS

MURR ELEKTRONIK
stay connected

Field-wireable

– Insulation displacement technology

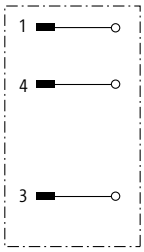
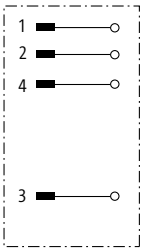
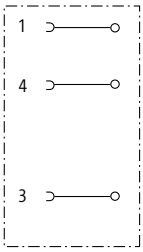
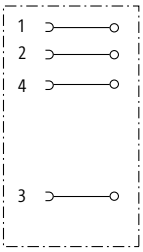
Approvals: cULus

Male
straight



Female
straight



1 Form	**08321 mex**	**08341 mex**	**08361 mex**	**08381 mex**
Type	**3-pole**	**4-pole**	**3-pole**	**4-pole**
Circuit diagram				
Connection cross section	**0.25...0.5 mm²**			
Contact layout	Male 	Male 	Female 	Female 

Technical Data

Operating voltage	max. 32 V AC/DC
Operating current per contact	max. 4 A
Connection cross section	0.25...0.5 mm² (conductor diameter min. 0.1 mm)
Sealing range (cable diameter)	4...5.1 mm
Wire isolation	PVC, PP, TPE
Outer wire diameter	1.2...1.6 mm
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i	7 0 0 0	– _ _ _ _ _	– 0 0 0	0 0 0 0
		1 Form		

Notes

Other versions on request.

M8 ROUND PLUG CONNECTORS

Field-wireable

– Insulation displacement technology

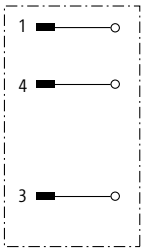
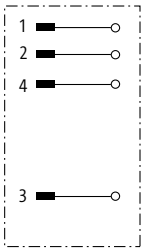
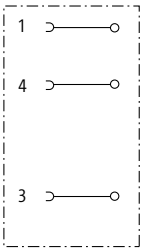
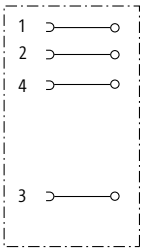
Approvals:

Male
straight



Female
straight



1 Form	08331 mex	08351 mex	08371 mex	08391 mex
Type	3-pole	4-pole	3-pole	4-pole
Circuit diagram				
Connection cross section	0.14...0.34 mm²			
Contact layout	Male 	Male 	Female 	Female 

Technical Data

Operating voltage	max. 32 V AC/DC
Operating current per contact	max. 4 A
Connection cross section	0.14...0.34 mm² (conductor diameter min. 0.1 mm)
Sealing range (cable diameter)	2.5...5.1 mm (gasket included)
Wire isolation	PVC, PP, TPE
Outer wire diameter	1.0...1.6 mm
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7000	– _____	– 000	0000
	1 Form		

Notes

Other versions on request.

Field-wireable

– Solder pins

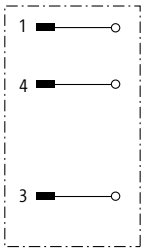
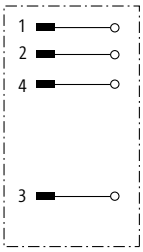
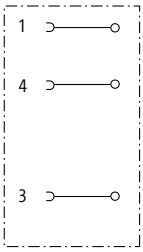
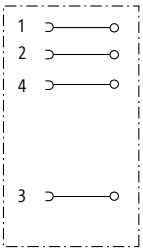
Approvals:

Male
straight



Female
straight



1 Form	08401	08421	08481	08501
Type	3-pole	4-pole	3-pole	4-pole
Circuit diagram				
Connection cross section	max. 0.25 mm²			
Contact layout	Male 	Male 	Female 	Female 

Technical Data

Operating voltage	max. 60 V AC/DC	max. 30 V AC/DC	max. 60 V AC/DC	max. 30 V AC/DC
Operating current per contact	max. 4 A			
Connection cross section	max. 0.25 mm²			
Sealing range (cable diameter)	3.5...5.0 mm			
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)			
Temperature range	-25...+85 °C			

Article No.

The composition of your article number is explained on page 3.1.i

7000	– _____	– 000	0000
	1 Form		

Notes

Other versions on request.

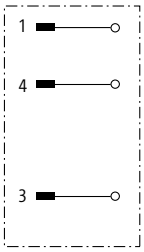
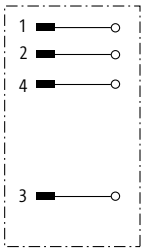
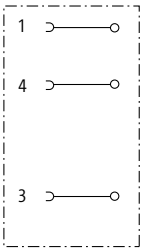
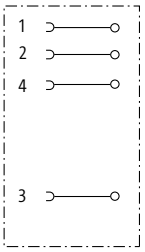
M8 ROUND PLUG CONNECTORS

Field-wireable

– Solder pins

Approvals:

	Male 90°	**Female** 90°
		

1 Form	**08441**	**08461**	**08521**	**08541**
Type	**3-pole**	**4-pole**	**3-pole**	**4-pole**
Circuit diagram				
Connection cross section	**max. 0.25 mm²**			
Contact layout	Male 	Male 	Female 	Female 

Technical Data

Operating voltage	max. 60 V AC/DC	max. 30 V AC/DC	max. 60 V AC/DC	max. 30 V AC/DC
Operating current per contact	max. 4 A			
Connection cross section	max. 0.25 mm²			
Sealing range (cable diameter)	3.5...5.0 mm			
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)			
Temperature range	-25...+85 °C			

Article No.

The composition of your article number is explained on page 3.1.i	**7 0 0 0 – _ _ _ _ _ – 0 0 0**			**0 0 0 0**
		1 Form		

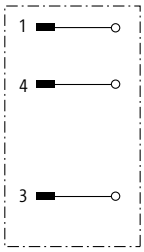
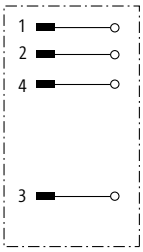
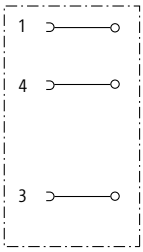
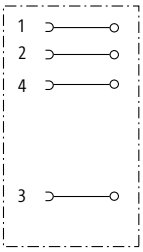
Notes

Other versions on request.

Field-wireable

– Screw terminals

Approvals:

	Male straight		**Female** straight	
				
1 Form	**08601**	**08611**	**08621**	**08631**
Type	**3-pole**	**4-pole**	**3-pole**	**4-pole**
Circuit diagram				
Connection cross section	**0.14... 0.5 mm²**			
Contact layout	Male 	Male 	Female 	Female 

Technical Data

Operating voltage	max. 60 V AC/DC	max. 30 V AC/DC	max. 60 V AC/DC	max. 30 V AC/DC
Operating current per contact	max. 4 A			
Connection cross section	0.14... 0.5 mm²			
Sealing range (cable diameter)	2.5...5.0 mm			
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)			
Temperature range	-25...+85 °C			

Article No.

The composition of your article number is explained on page 3.1.i

7000 – _____ –	000	0000
	1 Form		

Notes

Other versions on request.

M8 ROUND PLUG CONNECTORS

Field-wireable

– Screw terminals

– shielded

Approvals:

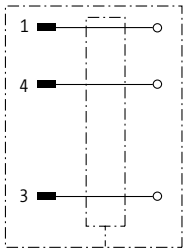
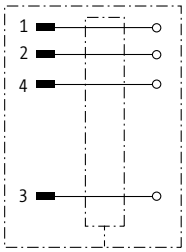
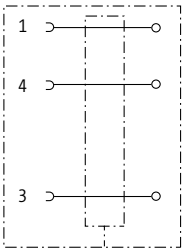
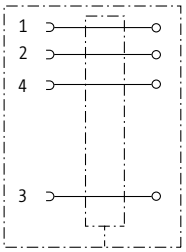
Male
straight



Female
straight



1 Form

	08641	08651	08661	08671
Type	**3-pole**	**4-pole**	**3-pole**	**4-pole**
Circuit diagram				
Connection cross section	**0.14... 0.5 mm²**			
Contact layout	Male 	Male 	Female 	Female 

Technical Data

Operating voltage	max. 60 V AC/DC	max. 30 V AC/DC	max. 60 V AC/DC	max. 30 V AC/DC
Operating current per contact	max. 4 A			
Connection cross section	0.14... 0.5 mm²			
Sealing range (cable diameter)	3.5...5.5 mm			
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)			
Temperature range	-25...+85 °C			

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_____	–	000	0000
		1 Form			

Notes

Other versions on request.

Labeling accessories			Art-No.
	**Slip-on cable sleeve**		
	for ACS label plates (4 × 18 mm)	Cable diameter (4...6.5 mm)	**7000-99004-0000000**
	Snap-on cable sleeve		
	for ACS label plates (4 × 18 mm)	Cable diameter (4.2...5.6 mm)	**7000-99005-0000000**
	for ACS label plates (4 × 18 mm)	Cable diameter (5...7 mm)	**7000-99006-0000000**
	ACS label plate		
	for self marking (4 × 18 mm)	Cable sleeves	**7000-99002-0000000**
Mounting accessories			**Art-No.**
	**Torque wrench set**		
	M8 (0.4 Nm, AF9)		**7000-99101-0000000**
End fitting accessories			**Art-No.**
	**Tube adapter**		
	snap-in for corrugated tube (size 13mm)	Cable diameter (4...7 mm)	**7000-99081-0000000**
Connection accessories			**Art-No.**
	**Flange M8 male, pre-wired 0.2 m**		
	3-pole		**7000-08551-9700020**
	4-pole		**7000-08561-9710020**
	**Flange M8 female, pre-wired 0.2 m**		
	3-pole		**7000-08571-9700020**
	4-pole		**7000-08581-9710020**



M12 ROUND PLUG CONNECTORS
COMPREHENSIVE AND VERSATILE

- **The right model for any application**
- **Shock and vibration resistant with integrated fastening**
- **Reliable – 100 % tested**

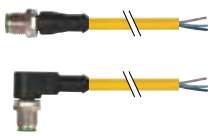
M12 CONNECTORS – DESIGNED FOR MANY DIFFERENT CUSTOMER APPLICATIONS

Murrelektronik offers one of the most comprehensive M12 connector ranges on the market.
Reliable, quick and easy assembly, a clear LED indicator: these are only a few of the features that make this product range one of the best.

Features

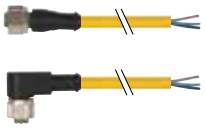
- Combined hex screw with thread for secure connections
- Highly resistant, halogen-free PUR molding guarantees IP67/68 seal
- Wide range of cable material and color – always the right choice for your application

With Open Ended Wires



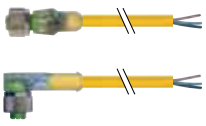
M12 male
• Straight
• 90°

Page 3.2.1



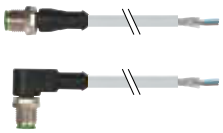
M12 female
• Straight
• 90°

Page 3.2.7



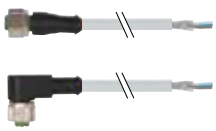
M12 female with LED
• Straight
• 90°

Page 3.2.13



M12 male (shielded)
• Straight
• 90°

Page 3.2.16



M12 female (shielded)
• Straight
• 90°

Page 3.2.22

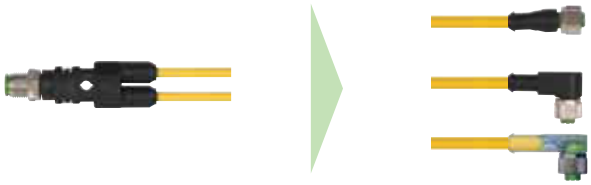
Connection Cables



M12 male
- Straight
- 90°

M12 female
- Straight
- 90°
- 90° with LED

Page 3.2.28



M12 Y connector male
- Straight

M12 female
- Straight
- 90°
- 90° with LED

Page 3.2.34



M12 male (shielded)
- Straight

acc. to DESINA®

M12 female (shielded)
- Straight

acc. to DESINA®

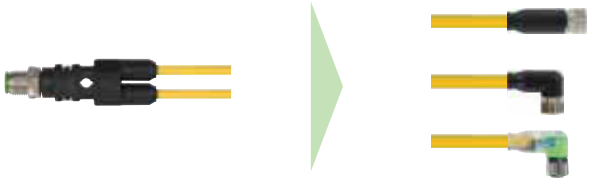
Page 3.2.37



M12 male
- Straight

M8 female
- Straight
- 90°
- 90° with LED

Page 3.2.39



M12 Y connector male
- Straight

M8 female
- Straight
- 90°
- 90° with LED

Page 3.2.41

Field-Wireable



Insulation Displacement Technology

M12 male/female
- Straight
- 90°

M12 female
- 90° with LED

Page 3.2.43



Screw Terminals

M12 male/female
- Straight
- 90°

Screw Terminals

M12 Y connector male
- Straight

Page 3.2.49



Screw Terminals (shielded)

M12 male/female
- Straight
- 90°

Page 3.2.56

NOTES

M12 ROUND PLUG CONNECTORS

MURR ELEKTRONIK
stay connected

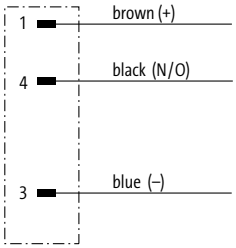
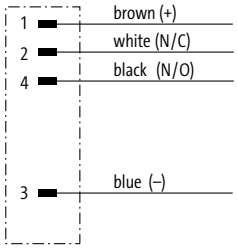
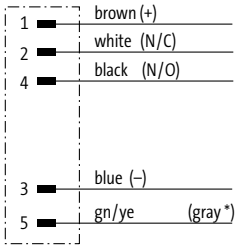
Open ended wires

Male
straight



Approvals: c CSA us, PCT, c UL us Listed *

* only for products with UL/CSA approvaled cable

1 Form	12001 mex	12021 mex	12041 mex
Type	3-pole	4-pole	5-pole
Circuit diagram			 (* for cable type 126 and 732)
Contact layout	Male 	Male 	Male 

2 Cable Type	Jacket Color			Jacket Color			Jacket Color		
Wire diameter 0.34 mm²	yellow	gray	black	yellow	gray	black	yellow	gray	black
PVC (UL/CSA)	013	213	613	014	214	614	015	215	615
PUR/PVC	023	223	623	024	224	624	025	225	625
PUR (UL/CSA)	033	233	633	034	234	634	035 (126)	235	635 (732)
PUR (UL/CSA), welding spark res.	053	253	653	054	254	654	055	255	655

3 Cable Length	
1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data		
Operating voltage	max. 250 V AC/DC	max. 125 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _

7 0 0 5 **M12 Lite** (plastic hexagonal screw) on request

1 Form | 2 Cable Type | 3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

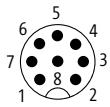
Open ended wires

Male
straight



Approvals: c SP us, c UL us Listed *

* only for products with UL/CSA approvaled cable

1	**Form**	**17001**	**17001**
	Type	**8-pole**	**8-pole**
	Circuit diagram	1 white 2 brown 3 green 4 yellow 5 gray 6 pink 7 blue 8 red	1 brown 2 white 3 blue 4 black 5 gray 6 pink 7 violet 8 orange
	Contact layout	Male 	
2	**Cable Type**	**Jacket Color**	**Jacket Color**
	Wire diameter 0.25 mm²	**gray**	**gray**
	PUR	**292**	
	PUR (UL/CSA)		**295**
3	**Cable Length**		
	1.5 m	**0150**	
	3.0 m	**0300**	
	5.0 m	**0500**	
	7.5 m	**0750**	
	10.0 m	**1000**	
	Technical Data		
	Operating voltage	max. 30 V AC/DC	
	Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
	Temperature range	-25...+85 °C, depending on cable quality	
	Article No.		
	The composition of your article number is explained on page 3.1.i	7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _	
		7 0 0 5 **M12 Lite** (plastic hexagonal screw) on request	
		1 Form	**2 Cable Type** / **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Open ended wires

Male
straight

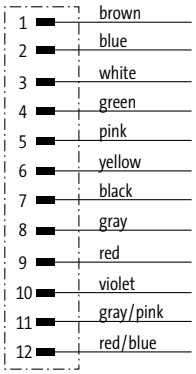


Approvals:

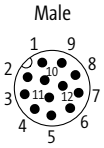
1 Form — 19001

Type — **12-pole**

Circuit diagram



Contact layout



2 Cable Type / Jacket Color

Cable Type	gray	black
Wire diameter 0.25 mm²		
PUR (UL/CSA)	**301**	
Wire diameter 0.14 mm²		
PVC		**702**
PUR (UL/CSA)		**705**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

1 Form	2 Cable Type	3 Cable Length
7000 – 19001 –	___	____
7005	M12 Lite (plastic hexagonal screw) on request	

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

Open ended wires

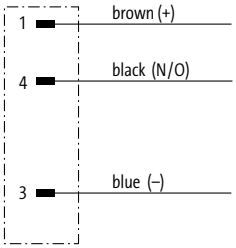
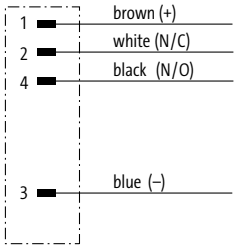
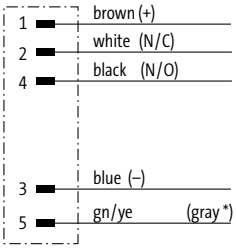
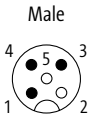
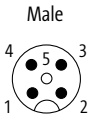
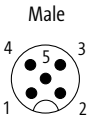
Male

90°



Approvals: cULus Listed *

* only for products with UL/CSA approvaled cable

1 Form	12081	12101	12121
Type	**3-pole**	**4-pole**	**5-pole**
Circuit diagram			 (* for cable type 126 and 732)
Contact layout			

2 Cable Type	Jacket Color			Jacket Color			Jacket Color		
Wire diameter 0.34 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
PVC (UL/CSA)	**013**	**213**	**613**	**014**	**214**	**614**	**015**	**215**	**615**
PUR/PVC	**023**	**223**	**623**	**024**	**224**	**624**	**025**	**225**	**625**
PUR (UL/CSA)	**033**	**233**	**633**	**034**	**234**	**634**	**035 (126)**	**235**	**635 (732)**
PUR (UL/CSA), welding spark res.	**053**	**253**	**653**	**054**	**254**	**654**	**055**	**255**	**655**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data		
Operating voltage	max. 250 V AC/DC	max. 125 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	– _ _ _ _ _	– _ _ _	_ _ _ _
7 0 0 5	M12 Lite (plastic hexagonal screw) on request		

	1 Form	2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Open ended wires

Male

90°



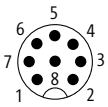
Approvals:

* only for products with UL/CSA approvaled cable

1 Form	17021	17021
Type	8-pole	8-pole
Circuit diagram		

Contact layout

Male



2 Cable Type	Jacket Color	Jacket Color
Wire diameter 0.25 mm²	gray	gray
PUR	292	
PUR (UL/CSA)		295

3 Cable Length	
1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

1 Form	2 Cable Type	3 Cable Length
7000 –	–	
7005 M12 Lite (plastic hexagonal screw) on request		

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

Open ended wires

Male

90°



Approvals:

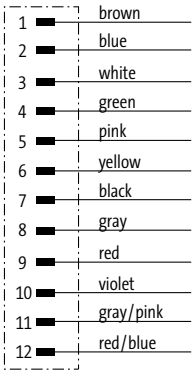
1 Form

19021

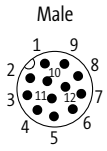
Type

12-pole

Circuit diagram



Contact layout



2 Cable Type

	Jacket Color	
	gray	black
Wire diameter 0.25 mm²		
PUR (UL/CSA)	**301**	
Wire diameter 0.14 mm²		
PVC		**702**
PUR (UL/CSA)		**705**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	**19021**	–	____ ____
7005	**M12 Lite** (plastic hexagonal screw) on request			
		1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Open ended wires

Female

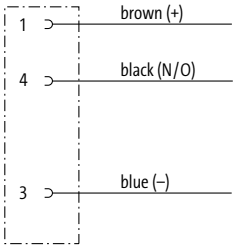
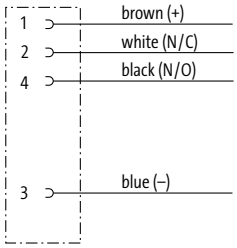
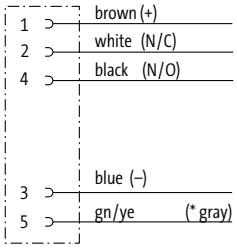
straight



Approvals:

* only for products with UL/CSA approvaled cable

1 Form

	12181 me	12221 me	12241 me
Type	**3-pole**	**4-pole**	**5-pole**
Circuit diagram			 (* for cable type 126 and 732)
Contact layout	Female 	Female 	Female 

2 Cable Type

	Jacket Color			Jacket Color			Jacket Color		
Wire diameter 0.34 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
PVC (UL/CSA)	**013**	**213**	**613**	**014**	**214**	**614**	**015**	**215**	**615**
PUR/PVC	**023**	**223**	**623**	**024**	**224**	**624**	**025**	**225**	**625**
PUR (UL/CSA)	**033**	**233**	**633**	**034**	**234**	**634**	**035 (126)**	**235**	**635 (732)**
PUR (UL/CSA), welding spark res.	**053**	**253**	**653**	**054**	**254**	**654**	**055**	**255**	**655**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 250 V AC/DC	max. 125 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

1 Form	2 Cable Type	3 Cable Length
7000 –	–	
7005 M12 Lite (plastic hexagonal screw) on request		

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

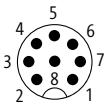
Open ended wires

Female
straight



Approvals: c SP us, c UL us Listed *

* only for products with UL/CSA approvaled cable

1	**Form**	**17041**	**17041**
	Type	**8-pole**	**8-pole**
	Circuit diagram	1 white 2 brown 3 green 4 yellow 5 gray 6 pink 7 blue 8 red	1 brown 2 white 3 blue 4 black 5 gray 6 pink 7 violet 8 orange
	Contact layout	Female 	
2	**Cable Type**	**Jacket Color**	**Jacket Color**
	Wire diameter 0.25 mm²	**gray**	**gray**
	PUR	**292**	
	PUR (UL/CSA)		**295**
3	**Cable Length**		
	1.5 m	**0150**	
	3.0 m	**0300**	
	5.0 m	**0500**	
	7.5 m	**0750**	
	10.0 m	**1000**	
	Technical Data		
	Operating voltage	max. 30 V AC/DC	
	Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
	Temperature range	-25...+85 °C, depending on cable quality	
	Article No.		
	The composition of your article number is explained on page 3.1.i	7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _	
		7 0 0 5 **M12 Lite** (plastic hexagonal screw) on request	
		1 Form	**2 Cable Type** / **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Open ended wires

Female
straight

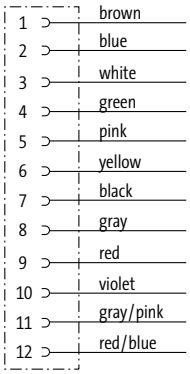


Approvals:

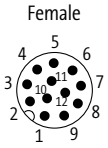
1 Form — 19041

Type — **12-pole**

Circuit diagram



Contact layout



2 Cable Type — Jacket Color

Cable Type	gray	black
Wire diameter 0.25 mm²		
PUR (UL/CSA)	**301**	
Wire diameter 0.14 mm²		
PVC		**702**
PUR (UL/CSA)		**705**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0 – 1 9 0 4 1 – _ _ _ _ _ _ _ _

7 0 0 5 **M12 Lite** (plastic hexagonal screw) on request

1 Form	2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

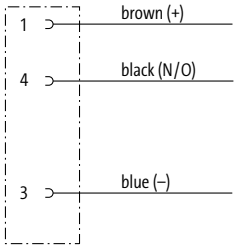
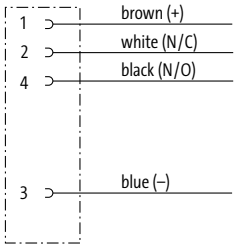
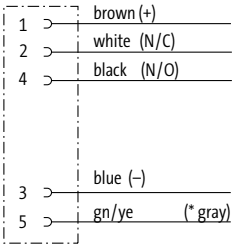
Open ended wires

Female
90°



Approvals: c SP us, c UL us Listed *

* only for products with UL/CSA approvaled cable

1 Form	12321 mex	12341 mex	12361 mex
Type	3-pole	4-pole	5-pole
Circuit diagram			 (* for cable type 126 and 732)
Contact layout	Female 	Female 	Female 

2 Cable Type	Jacket Color			Jacket Color			Jacket Color		
Wire diameter 0.34 mm²	yellow	gray	black	yellow	gray	black	yellow	gray	black
PVC (UL/CSA)	013	213	613	014	214	614	015	215	615
PUR/PVC	023	223	623	024	224	624	025	225	625
PUR (UL/CSA)	033	233	633	034	234	634	035 (126)	235	635 (732)
PUR (UL/CSA), welding spark res.	053	253	653	054	254	654	055	255	655

3 Cable Length	
1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data		
Operating voltage	max. 250 V AC/DC	max. 125 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _

7 0 0 5 **M12 Lite** (plastic hexagonal screw) on request

1 Form 2 Cable Type 3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

MURR ELEKTRONIK
stay connected

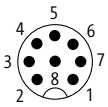
Open ended wires

Female
90°



Approvals: c CSA us, PCT, c UL us Listed *

* only for products with UL/CSA approvaled cable

1	**Form**	**17061**	**17061**
	Type	**8-pole**	**8-pole**
	Circuit diagram	1 white 2 brown 3 green 4 yellow 5 gray 6 pink 7 blue 8 red	1 brown 2 white 3 blue 4 black 5 gray 6 pink 7 violet 8 orange
	Contact layout	Female 	

2	**Cable Type**	**Jacket Color**	**Jacket Color**
	Wire diameter 0.25 mm²	**gray**	**gray**
	PUR	**292**	
	PUR (UL/CSA)		**295**

3	**Cable Length**	
	1.5 m	**0150**
	3.0 m	**0300**
	5.0 m	**0500**
	7.5 m	**0750**
	10.0 m	**1000**

	Technical Data	
	Operating voltage	max. 30 V AC/DC
	Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
	Temperature range	-25...+85 °C, depending on cable quality
	Article No.	
	The composition of your article number is explained on page 3.1.i	7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _
		7 0 0 5 **M12 Lite** (plastic hexagonal screw) on request
		1 Form **2** Cable Type **3** Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

Open ended wires

Female

90°



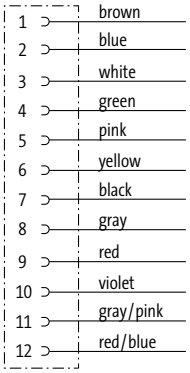
Approvals:

1 Form

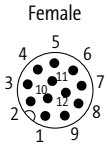
19061

Type: **12-pole**

Circuit diagram



Contact layout



2 Cable Type

	Jacket Color	
	gray	black
Wire diameter 0.25 mm²		
PUR (UL/CSA)	**301**	
Wire diameter 0.14 mm²		
PVC		**702**
PUR (UL/CSA)		**705**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000 – 19061 – ___ ____

7005 M12 Lite (plastic hexagonal screw) on request

1 Form	2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

MURR ELEKTRONIK
stay connected

Open ended wires

– with LED

Female
straight

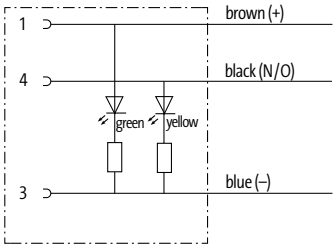


Female
90°



Approvals: c SA us, PCT, c UL us Listed *

* only for products with UL/CSA approvaled cable

1	**Form**	**12261**	**12381** mex
	Type	**3-pole with 2 × LED (PNP)** **(NPN) on request**	**3-pole with 2 × LED (PNP)** **(NPN) on request**
	Circuit diagram		
	Contact layout	Female 	

2	**Cable Type**	**Jacket Color**			**Jacket Color**		
	Wire diameter 0.34 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
	PVC (UL/CSA)	**013**	**213**	**613**	**013**	**213**	**613**
	PUR/PVC	**023**	**223**	**623**	**023**	**223**	**623**
	PUR (UL/CSA)	**033**	**233**	**633**	**033**	**233**	**633**
	PUR (UL/CSA), welding spark res.	**053**	**253**	**653**	**053**	**253**	**653**

3	**Cable Length**	
	1.5 m	**0150**
	3.0 m	**0300**
	5.0 m	**0500**
	7.5 m	**0750**
	10.0 m	**1000**

Technical Data

Operating voltage	24 V DC ±25 %
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	– _ _ _ _ _	– _ _ _	_ _ _ _
7 0 0 5	**M12 Lite** (plastic hexagonal screw) on request		
	1 Form	**2** Cable Type	**3** Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

Open ended wires

– with LED

Female
straight



Female
90°



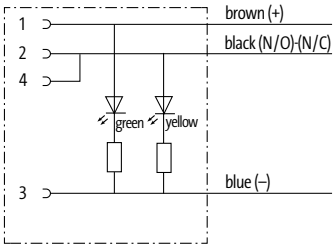
Approvals: c SP us, c UL us Listed *

* only for products with UL/CSA approvaled cable

1 Form

Form	**12281**	**12401**
Type	**4-pole with 2 × LED (PNP)** **(NPN) on request**	**4-pole with 2 × LED (PNP)** **(NPN) on request**

Circuit diagram



Contact layout

Female



2 Cable Type

	Jacket Color			Jacket Color		
Wire diameter 0.34 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
PVC (UL/CSA)	013	213	613	013	213	613
PUR/PVC	023	223	623	023	223	623
PUR (UL/CSA)	033	233	633	033	233	633
PUR (UL/CSA), welding spark res.	053	253	653	053	253	653

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	24 V DC ±25 %
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _

7 0 0 5 **M12 Lite** (plastic hexagonal screw) on request

1 Form **2 Cable Type** **3 Cable Length**

Notes

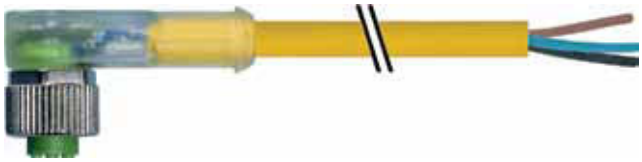
Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Open ended wires

– with LED

Female

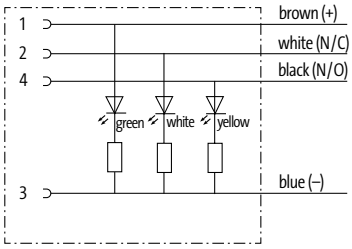
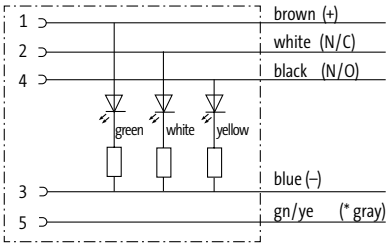
90°



Approvals: cULus Listed *

* only for products with UL/CSA approvaled cable

1 Form

	12421 me	12441 me
Type	**4-pole with 3 × LED (PNP)** **(NPN) on request**	**5-pole with 3 × LED (PNP)** **(NPN) on request**
Circuit diagram		 (* for cable type 126 and 732)
Contact layout	Female 	Female 

2 Cable Type

	Jacket Color			Jacket Color		
Wire diameter 0.34 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
PVC (UL/CSA)	**014**	**214**	**614**	**015**	**215**	**615**
PUR/PVC	**024**	**224**	**624**	**025**	**225**	**625**
PUR (UL/CSA)	**034**	**234**	**634**	**035 (126)**	**235**	**635 (732)**
PUR (UL/CSA), welding spark res.	**054**	**254**	**654**	**055**	**255**	**655**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	24 V DC ±25 %
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

1 Form	2 Cable Type	3 Cable Length
7000 –	_ _ _ _ _ –	_ _ _	_ _ _ _
7005	M12 Lite (plastic hexagonal screw) on request		

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

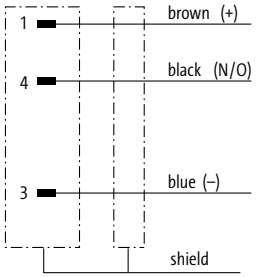
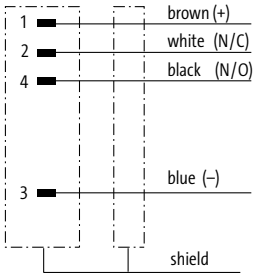
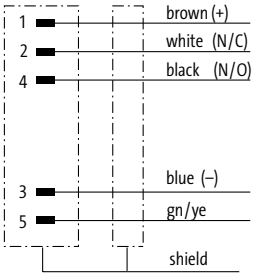
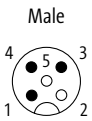
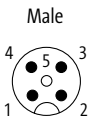
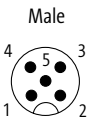
Open ended wires

– shielded

Male
straight



Approvals:

1 Form	13061	13081	13101
Type	3-pole	4-pole	5-pole
Circuit diagram			
Contact layout			

2 Cable Type	Jacket Color	Jacket Color	Jacket Color
Wire diameter 0.34 mm²	gray	gray	gray
PVC	317	330	348
PUR/PVC	318	331	349

3 Cable Length	
1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	max. 60 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _
1 Form · 2 Cable Type · 3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Open ended wires

– shielded

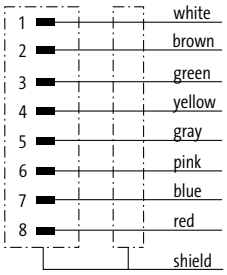
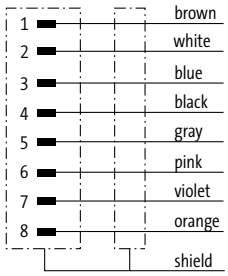
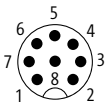
Male

straight



Approvals: cULus, CSA, cULus Listed *

* only for products with UL/CSA approvaled cable

1	**Form**	**17081**	**17081**
	Type	**8-pole**	**8-pole**
	Circuit diagram		
	Contact layout	Male 	
2	**Cable Type**	**Jacket Color**	**Jacket Color**
	Wire diameter 0.25 mm²	**gray**	**gray**
	PUR, suitable for C-tracks	**291**	
	PUR (UL/CSA)		**294**
3	**Cable Length**		
	1.5 m	**0150**	
	3.0 m	**0300**	
	5.0 m	**0500**	
	7.5 m	**0750**	
	10.0 m	**1000**	
	Technical Data		
	Operating voltage	max. 30 V AC/DC	
	Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
	Temperature range	-25...+85 °C, depending on cable quality	
	Article No.		
	The composition of your article number is explained on page 3.1.i	7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _	
		1 Form	**2 Cable Type** / **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

Open ended wires

– shielded

Male
straight



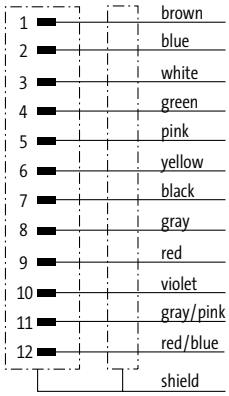
Approvals:

1 Form

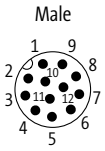
19301

Type: **12-pole**

Circuit diagram



Contact layout



2 Cable Type / Jacket Color

Cable Type	Jacket Color: black
Wire diameter 0.14 mm²	
PVC	**703**
PUR (UL/CSA)	**706**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	19301	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Open ended wires

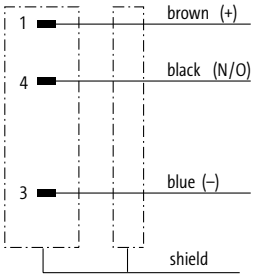
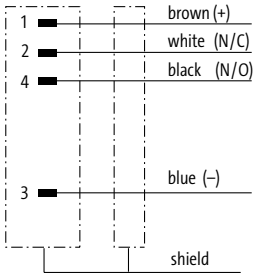
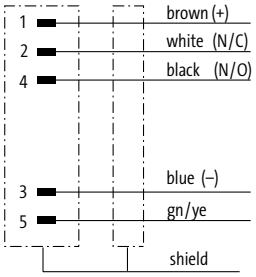
– shielded

Male

90°



Approvals:

1	**Form**	**13121**	**13141**	**13161**
	Type	**3-pole**	**4-pole**	**5-pole**
	Circuit diagram			
	Contact layout	Male 	Male 	Male 
2	**Cable Type**	**Jacket Color**	**Jacket Color**	**Jacket Color**
	Wire diameter 0.34 mm²	**gray**	**gray**	**gray**
	PVC	**317**	**330**	**348**
	PUR/PVC	**318**	**331**	**349**
3	**Cable Length**			
	1.5 m	**0150**		
	3.0 m	**0300**		
	5.0 m	**0500**		
	7.5 m	**0750**		
	10.0 m	**1000**		
	Technical Data			
	Operating voltage	max. 60 V AC/DC		
	Protection	IP65 and IP67 when plugged and screwed down (EN 60529)		
	Temperature range	-25...+85 °C, depending on cable quality		
	Article No.			
	The composition of your article number is explained on page 3.1.i	7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _		
		1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

Open ended wires

– shielded

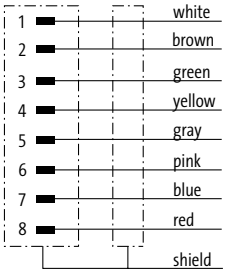
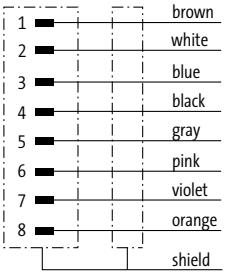
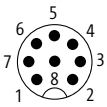
Male

90°



Approvals: cULus Listed *

* only for products with UL/CSA approvaled cable

1 Form	**17101**	**17101**
Type	**8-pole**	**8-pole**
Circuit diagram		
Contact layout	Male 	

2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 0.25 mm²	**gray**	**gray**
PUR, suitable for C-tracks	**291**	
PUR (UL/CSA)		**294**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Open ended wires

– shielded

Male

90°



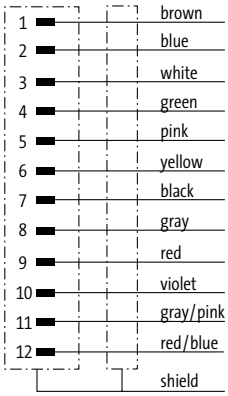
Approvals:

1 Form

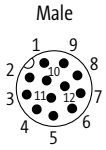
19321

Type: **12-pole**

Circuit diagram



Contact layout



2 Cable Type / Jacket Color

Wire diameter 0.14 mm²	black
PVC	**703**
PUR (UL/CSA)	**706**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	19321	–	___	____
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

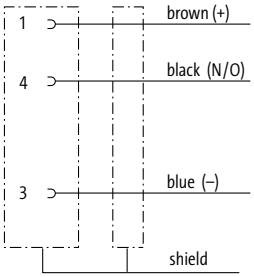
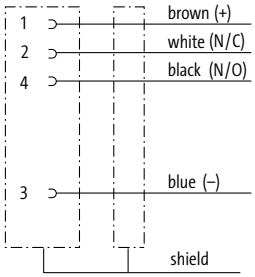
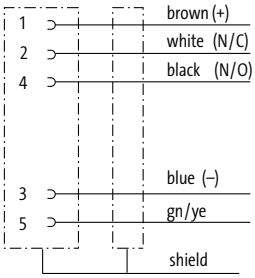
Open ended wires

– shielded

Female
straight



Approvals:

1 Form	13181	13201	13221
Type	3-pole	4-pole	5-pole
Circuit diagram			
Contact layout	Female 	Female 	Female 

2 Cable Type	Jacket Color	Jacket Color	Jacket Color
Wire diameter 0.34 mm²	gray	gray	gray
PVC	317	330	348
PUR/PVC	318	331	349

3 Cable Length	
1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	max. 60 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	– _ _ _ _ _	– _ _ _	_ _ _ _
	1 Form	2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Open ended wires

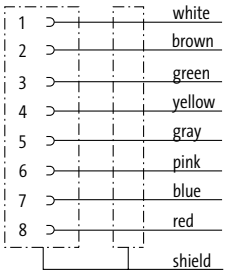
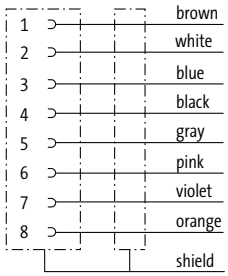
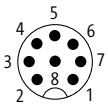
– shielded

Female

straight



Approvals:

1	**Form**	**17121**	**17121**
	Type	**8-pole**	**8-pole**
	Circuit diagram		
	Contact layout	Female 	
2	**Cable Type**	**Jacket Color**	**Jacket Color**
	Wire diameter 0.25 mm²	**gray**	**gray**
	PUR, suitable for C-tracks	**291**	
	PUR (UL/CSA)		**294**
3	**Cable Length**		
	1.5 m	**0150**	
	3.0 m	**0300**	
	5.0 m	**0500**	
	7.5 m	**0750**	
	10.0 m	**1000**	
	Technical Data		
	Operating voltage	max. 30 V AC/DC	
	Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
	Temperature range	-25...+85 °C, depending on cable quality	
	Article No.		
	The composition of your article number is explained on page 3.1.i	7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _	
		1 Form	**2 Cable Type** / **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

Open ended wires

– shielded

Female
straight



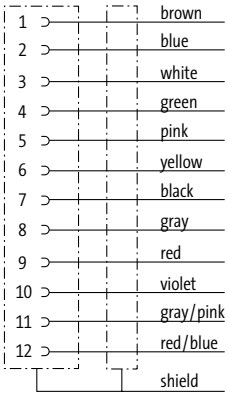
Approvals:

1 Form

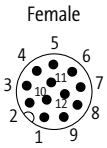
19341

Type: **12-pole**

Circuit diagram



Contact layout



2 Cable Type

Cable Type	Jacket Color
	black
Wire diameter 0.14 mm²	
PVC	**703**
PUR (UL/CSA)	**706**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	19341	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Open ended wires

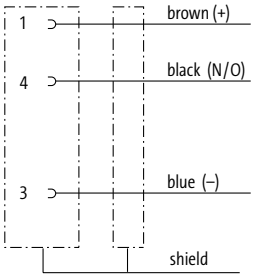
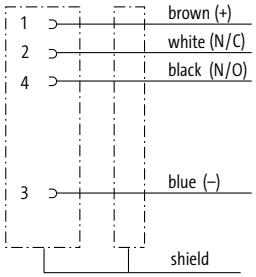
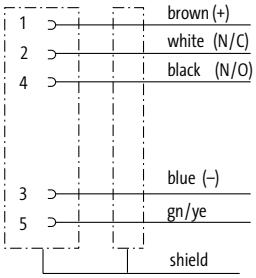
– shielded

Female

90°



Approvals:

1	**Form**	**13241**	**13261**	**13281**
	Type	**3-pole**	**4-pole**	**5-pole**
	Circuit diagram			
	Contact layout	Female 	Female 	Female 
2	**Cable Type**	**Jacket Color**	**Jacket Color**	**Jacket Color**
	Wire diameter 0.34 mm²	**gray**	**gray**	**gray**
	PVC	**317**	**330**	**348**
	PUR/PVC	**318**	**331**	**349**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 60 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

Open ended wires

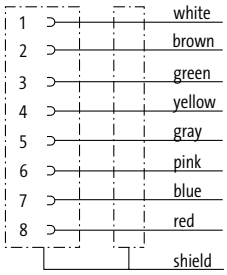
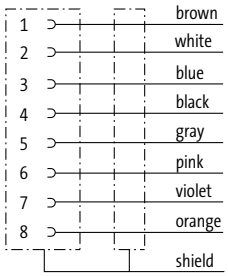
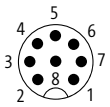
– shielded

Female

90°



Approvals:

1	**Form**	**17141**	**17141**
	Type	**8-pole**	**8-pole**
	Circuit diagram		
	Contact layout	Female 	
2	**Cable Type**	**Jacket Color**	**Jacket Color**
	Wire diameter 0.25 mm²	**gray**	**gray**
	PUR, suitable for C-tracks	**291**	
	PUR (UL/CSA)		**294**
3	**Cable Length**		
	1.5 m	**0150**	
	3.0 m	**0300**	
	5.0 m	**0500**	
	7.5 m	**0750**	
	10.0 m	**1000**	
	Technical Data		
	Operating voltage	max. 30 V AC/DC	
	Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
	Temperature range	-25...+85 °C, depending on cable quality	
	Article No.		
	The composition of your article number is explained on page 3.1.i	7 0 0 0 – _ _ _ _ _ – _ _ _	_ _ _ _
		1 Form	**2 Cable Type** / **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Open ended wires

– shielded

Female

90°



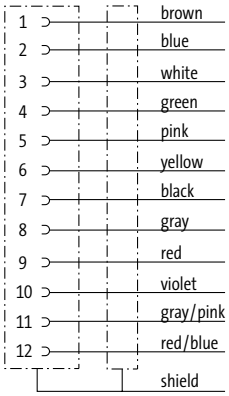
Approvals:

1 Form

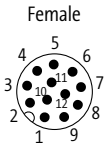
19361

Type: **12-pole**

Circuit diagram



Contact layout



2 Cable Type

	Jacket Color
Wire diameter 0.14 mm²	**black**
PVC	**703**
PUR (UL/CSA)	**706**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	19361	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

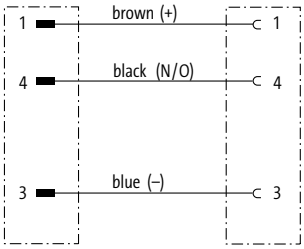
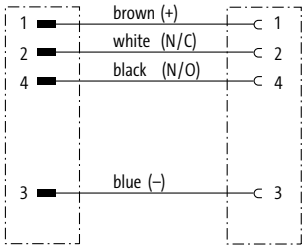
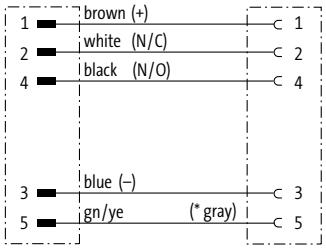
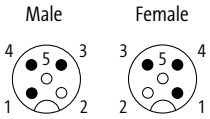
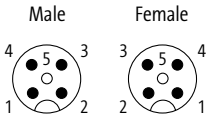
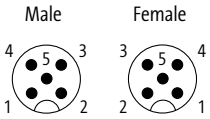
Male
straight

Female
straight



Approvals: cSAus, PG, cULus Listed *

* only for products with UL/CSA approvaled cable

1 Form	**40001** me	**40021** me	**40041** me
Type	**3-pole**	**4-pole**	**5-pole**
Circuit diagram			 (* for cable type 126 and 732)
Contact layout			

2 Cable Type	**Jacket Color**			**Jacket Color**			**Jacket Color**		
Wire diameter 0.34 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
PVC (UL/CSA)	**013**	**213**	**613**	**014**	**214**	**614**	**015**	**215**	**615**
PUR/PVC	**023**	**223**	**623**	**024**	**224**	**624**	**025**	**225**	**625**
PUR (UL/CSA)	**033**	**233**	**633**	**034**	**234**	**634**	**035 (126)**	**235**	**635 (732)**
PUR (UL/CSA), welding spark res.	**053**	**253**	**653**	**054**	**254**	**654**	**055**	**255**	**655**

3 Cable Length	
0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data		
Operating voltage	max. 250 V AC/DC	max. 125 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0 – _ _ _ _ _ – _ _ _	_ _ _ _
7 0 0 5 **M12 Lite** (plastic hexagonal screw) on request	

1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

MURR ELEKTRONIK
stay connected

Connection cables

– M12 - M12

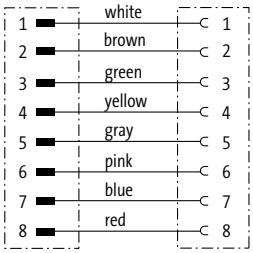
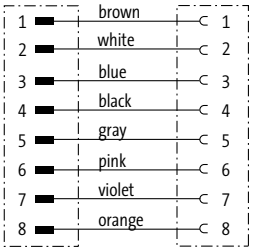
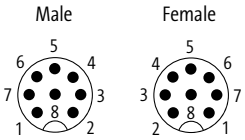
Male
straight

Female
straight



Approvals: c SP us, PCT, c UL us Listed *

* only for products with UL/CSA approvaled cable

1 Form	**48001**	**48001**
Type	**8-pole**	**8-pole**
Circuit diagram		
Contact layout		

2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 0.25 mm²	**gray**	**gray**
PUR	**292**	
PUR (UL/CSA)		**295**

3 Cable Length	
0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**
Technical Data	
Operating voltage	max. 30 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality
Article No.	
The composition of your article number is explained on page 3.1.i	**7 0 0 0** – _ _ _ _ _ – _ _ _ _ _ _ _
	7 0 0 5 **M12 Lite** (plastic hexagonal screw) on request
	1 Form **2 Cable Type** **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

Male
straight

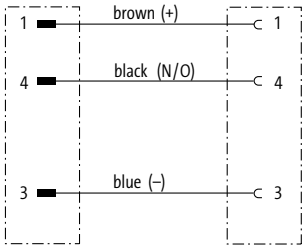
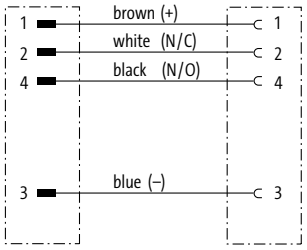
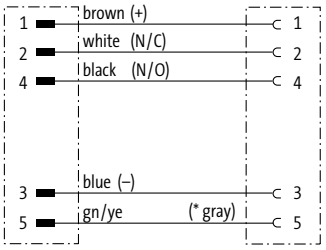
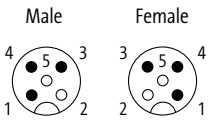
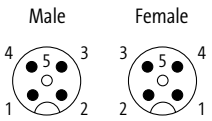
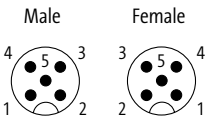
Female
90°



Approvals: cSAus, PG, cULus Listed *

* only for products with UL/CSA approvaled cable

1 Form

	40101 me	40121 me	40141 me
Type	**3-pole**	**4-pole**	**5-pole**
Circuit diagram			
Contact layout			

(* for cable type 126 and 732)

2 Cable Type

Wire diameter 0.34 mm²	Jacket Color yellow	gray	black	Jacket Color yellow	gray	black	Jacket Color yellow	gray	black
PVC (UL/CSA)	013	213	613	014	214	614	015	215	615
PUR/PVC	023	223	623	024	224	624	025	225	625
PUR (UL/CSA)	033	233	633	034	234	634	035 (126)	235	635 (732)
PUR (UL/CSA), welding spark res.	053	253	653	054	254	654	055	255	655

3 Cable Length

0.3 m	0030
0.6 m	0060
1.0 m	0100
1.5 m	0150
2.0 m	0200

Technical Data

Operating voltage	max. 250 V AC/DC	max. 125 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _

7 0 0 5 **M12 Lite** (plastic hexagonal screw) on request

1 Form	2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

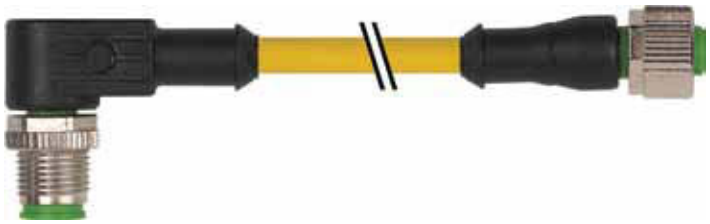
MURR ELEKTRONIK
stay connected

Connection cables

– M12 - M12

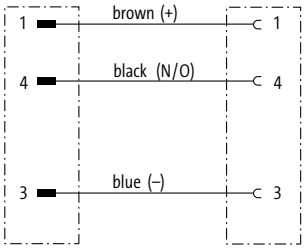
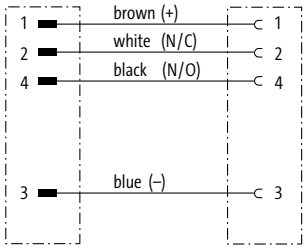
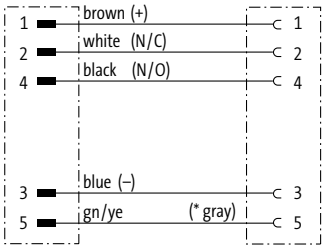
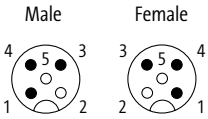
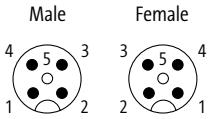
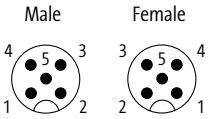
Male
90°

Female
straight



Approvals: c SP us, PCT, c UL us Listed *

* only for products with UL/CSA approvaled cable

1 Form	**40171**	**40201**	**40221**
Type	**3-pole**	**4-pole**	**5-pole**
Circuit diagram			 (* for cable type 126 and 732)
Contact layout			

2 Cable Type	**Jacket Color**			**Jacket Color**			**Jacket Color**		
Wire diameter 0.34 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
PVC (UL/CSA)	013	213	613	014	214	614	015	215	615
PUR/PVC	023	223	623	024	224	624	025	225	625
PUR (UL/CSA)	033	233	633	034	234	634	035 (126)	235	635 (732)
PUR (UL/CSA), welding spark res.	053	253	653	054	254	654	055	255	655

3 Cable Length	
0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data		
Operating voltage	max. 250 V AC/DC	max. 125 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _

7 0 0 5 **M12 Lite** (plastic hexagonal screw) on request

1 Form **2 Cable Type** **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

Male
straight

Female
90° with LED



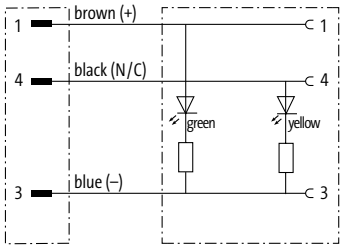
Approvals: c SP us, PCT, c UL us Listed *

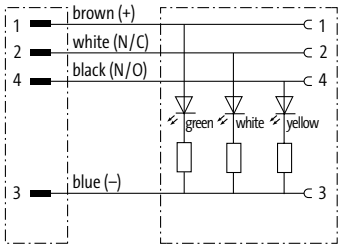
* only for products with UL/CSA approvaled cable

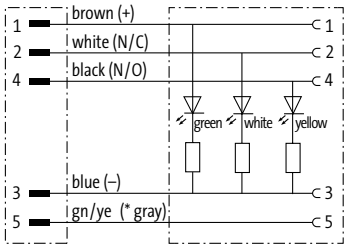
1 Form

	40321	40341	40361
Type	3-pole with 2 × LED (PNP) (NPN) on request	4-pole with 3 × LED (PNP) (NPN) on request	5-pole with 3 × LED (PNP) (NPN) on request

Circuit diagram

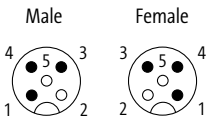


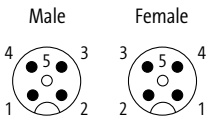


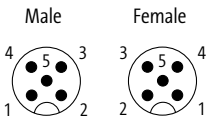


(* for cable type 126 and 732)

Contact layout







2 Cable Type

Wire diameter 0.34 mm²	Jacket Color yellow	gray	black	Jacket Color yellow	gray	black	Jacket Color yellow	gray	black
PVC (UL/CSA)	013	213	613	014	214	614	015	215	615
PUR/PVC	023	223	623	024	224	624	025	225	625
PUR (UL/CSA)	033	233	633	034	234	634	035 (126)	235	635 (732)
PUR (UL/CSA), welding spark res.	053	253	653	054	254	654	055	255	655

3 Cable Length

0.3 m	0030
0.6 m	0060
1.0 m	0100
1.5 m	0150
2.0 m	0200

Technical Data

Operating voltage	24 V DC ±25 %
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _

7 0 0 5 **M12 Lite** (plastic hexagonal screw) on request

1 Form **2** Cable Type **3** Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

MURR ELEKTRONIK
stay connected

Connection cables

– M12 - M12

Male
straight

Female
90° with LED



Approvals: c SP us, PCT, c UL us Listed *

* only for products with UL/CSA approvaled cable

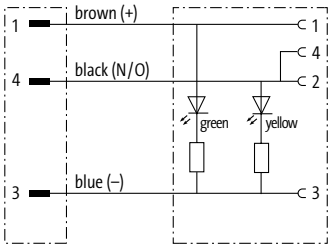
1 Form

40381

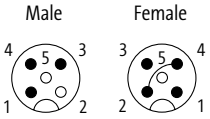
Type

3-pole with 2 × LED (PNP)
(NPN) on request

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Wire diameter 0.34 mm²	yellow	gray	black
PVC (UL/CSA)	013	213	613
PUR/PVC	023	223	623
PUR (UL/CSA)	033	233	633
PUR (UL/CSA), welding spark res.	053	253	653

3 Cable Length

0.3 m	0030
0.6 m	0060
1.0 m	0100
1.5 m	0150
2.0 m	0200

Technical Data

Operating voltage	24 V DC ±25 %
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0 – 4 0 3 8 1 – _ _ _ _ _ _ _ _

7 0 0 5 **M12 Lite** (plastic hexagonal screw) on request

1 Form **2** Cable Type **3** Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

Y connector
Male straight

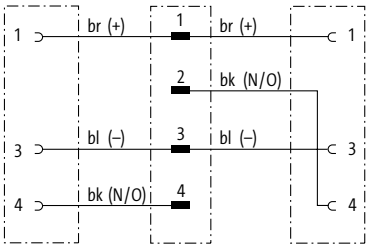
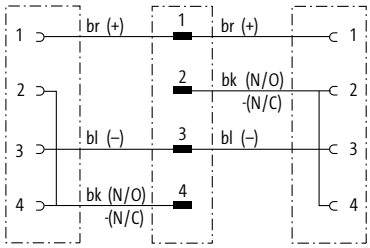
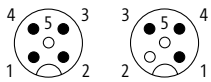
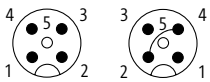
Females
straight



Approvals: c SP us, PCT, c UL us Listed *

* only for products with UL/CSA approvaled cable

1 Form

	40701	40721
Type	4-pole	4-pole
Circuit diagram		
Contact layout	Y-Male / Females 	Y-Male / Females 

2 Cable Type

	Jacket Color			Jacket Color		
Wire diameter 0.34 mm²	yellow	gray	black	yellow	gray	black
PVC (UL/CSA)	013	213	613	013	213	613
PUR/PVC	023	223	623	023	223	623
PUR (UL/CSA)	033	233	633	033	233	633
PUR (UL/CSA), welding spark res.	053	253	653	053	253	653

3 Cable Length

0.3 m	0030
0.6 m	0060
1.0 m	0100
1.5 m	0150
2.0 m	0200

Technical Data

Operating voltage	max. 250 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _

7 0 0 5 **M12 Lite** (plastic hexagonal screw) on request

1 Form **2** Cable Type **3** Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

MURR ELEKTRONIK
stay connected

Connection cables

– M12 - M12

Y connector
Male straight

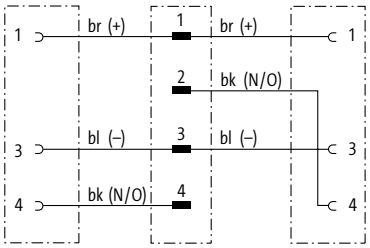
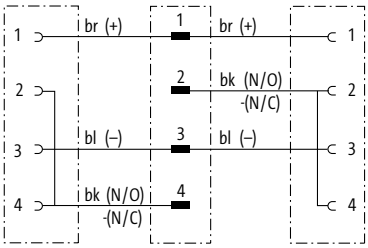
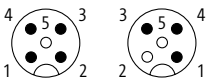
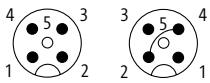
Females
90°



Approvals: c CSA us, PCT, c UL us Listed *

* only for products with UL/CSA approvaled cable

1 Form

	40741	40761
Type	4-pole	4-pole
Circuit diagram		
Contact layout	Y-Male / Females 	Y-Male / Females 

2 Cable Type

	Jacket Color			Jacket Color		
Wire diameter 0.34 mm²	yellow	gray	black	yellow	gray	black
PVC (UL/CSA)	013	213	613	013	213	613
PUR/PVC	023	223	623	023	223	623
PUR (UL/CSA)	033	233	633	033	233	633
PUR (UL/CSA), welding spark res.	053	253	653	053	253	653

3 Cable Length

0.3 m	0030
0.6 m	0060
1.0 m	0100
1.5 m	0150
2.0 m	0200

Technical Data

Operating voltage	max. 250 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _

7 0 0 5 **M12 Lite** (plastic hexagonal screw) on request

1 Form | 2 Cable Type | 3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

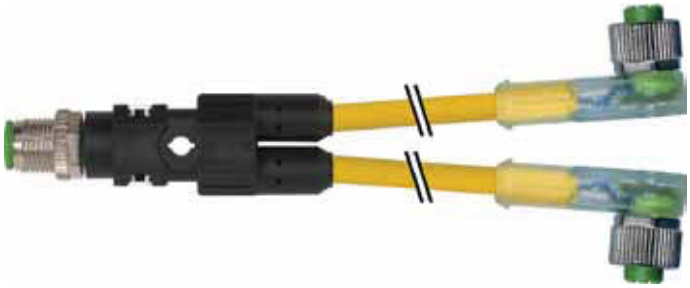
M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

Y connector
Male straight

Females
90° with LED



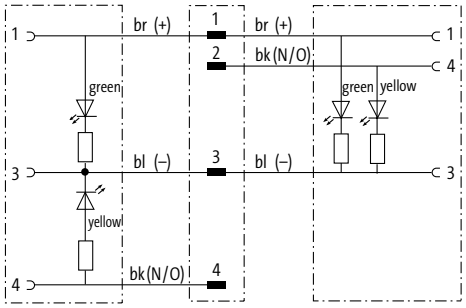
Approvals: c SP us, c UL us Listed *

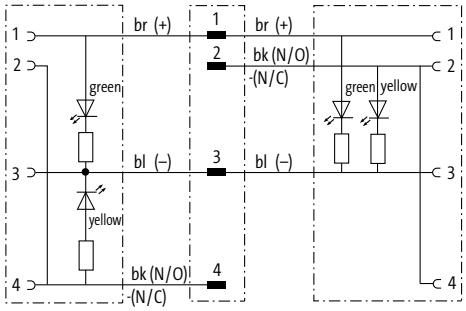
* only for products with UL/CSA approvaled cable

1 Form

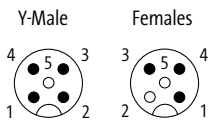
	40781	40801
Type	4-pole with 2 × LED (PNP)	4-pole with 2 × LED (PNP)
	(NPN) on request	(NPN) on request

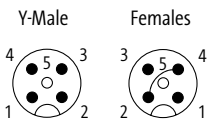
Circuit diagram





Contact layout





2 Cable Type

	Jacket Color			Jacket Color		
Wire diameter 0.34 mm²	yellow	gray	black	yellow	gray	black
PVC (UL/CSA)	013	213	613	013	213	613
PUR/PVC	023	223	623	023	223	623
PUR (UL/CSA)	033	233	633	033	233	633
PUR (UL/CSA), welding spark res.	053	253	653	053	253	653

3 Cable Length

0.3 m	0030
0.6 m	0060
1.0 m	0100
1.5 m	0150
2.0 m	0200

Technical Data

Operating voltage	24 V DC ±25 %
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _

7 0 0 5 **M12 Lite** (plastic hexagonal screw) on request

1 Form **2 Cable Type** **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Connection cables

– M12 - M12

– shielded

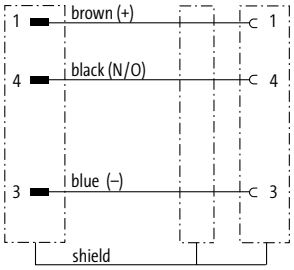
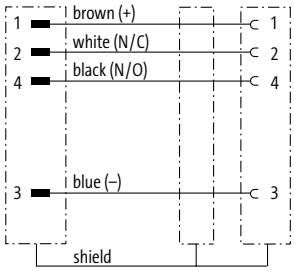
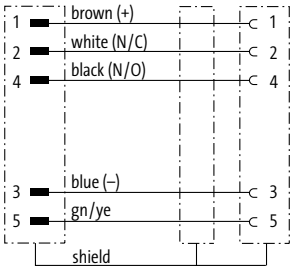
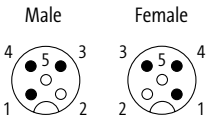
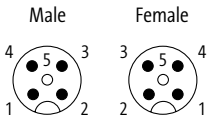
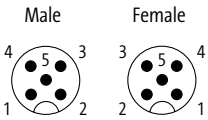
Male
straight

Female
straight



Approvals:

1 Form

	40481	40501	40521
Type	**3-pole**	**4-pole**	**5-pole**
Circuit diagram			
Contact layout			

2 Cable Type

	Jacket Color		Jacket Color		Jacket Color
Wire diameter 0.34 mm²	**gray**		**gray**	**green**	**gray**
PVC	**317**		**330**		**348**
PUR/PVC	**318**		**331**		**349**
PUR				**820 - DESINA®**	

3 Cable Length

0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data

Operating voltage	max. 60 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

– shielded

Male
straight

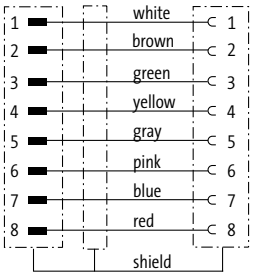
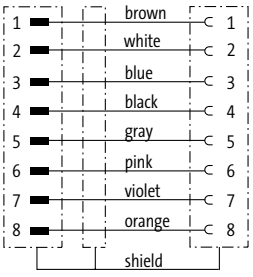
Female
straight



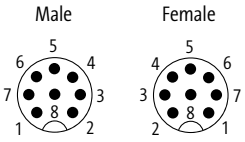
Approvals: cULus Listed *

* only for products with UL/CSA approvaled cable

1 Form

	48041	48041
Type	**8-pole**	**8-pole**
Circuit diagram		

Contact layout



2 Cable Type

	Jacket Color	Jacket Color
Wire diameter 0.25 mm²	**gray**	**gray**
PUR, suitable for C-tracks	**291**	
PUR (UL/CSA)		**294**

3 Cable Length

0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

MURR ELEKTRONIK
stay connected

Connection cables

– M12 - M8

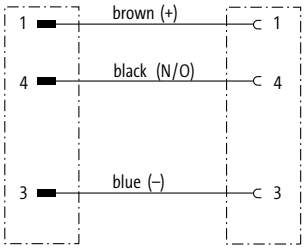
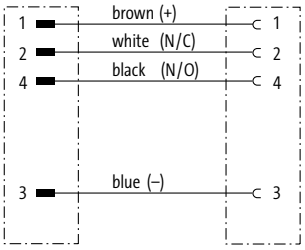
Male
straight

Female
straight



Approvals: c CSA us, PCT, c UL us Listed *

* only for products with UL/CSA approvaled cable

1 Form	**40561** mex		**40581** mex
Type	**3-pole**		**4-pole**
Circuit diagram			
Contact layout	Male  Female 		Male  Female 

2 Cable Type	**Jacket Color**			**Jacket Color**		
Wire diameter 0.25 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
PVC (UL/CSA)	**010**	**210**	**610**	**011**	**211**	**611**
PUR/PVC	**020**	**220**	**620**	**021**	**221**	**621**
PUR (UL/CSA)	**030**	**230**	**630**	**031**	**231**	**631**
PUR (UL/CSA), welding spark res.	**050**	**250**	**650**	**051**	**251**	**651**

3 Cable Length	
0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data		
Operating voltage	max. 60 V AC/DC	max. 30 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M8

Male
straight

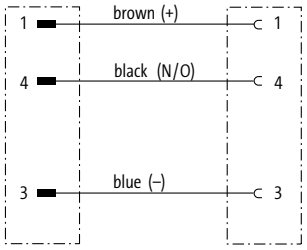
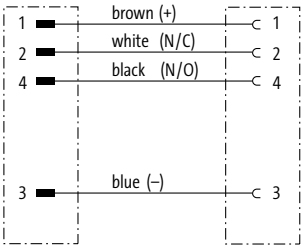
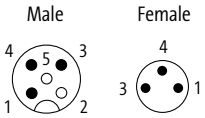
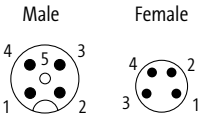
Female
90°



Approvals: cSAus, PG, cULus Listed *

* only for products with UL/CSA approvaled cable

1 Form

	40601	40621
Type	**3-pole**	**4-pole**
Circuit diagram		
Contact layout		

2 Cable Type

Wire diameter 0.25 mm²	Jacket Color yellow	gray	black	Jacket Color yellow	gray	black
PVC (UL/CSA)	010	210	610	011	211	611
PUR/PVC	020	220	620	021	221	621
PUR (UL/CSA)	030	230	630	031	231	631
PUR (UL/CSA), welding spark res.	050	250	650	051	251	651

3 Cable Length

0.3 m	0030
0.6 m	0060
1.0 m	0100
1.5 m	0150
2.0 m	0200

Technical Data

Operating voltage	max. 60 V AC/DC	max. 30 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Connection cables

– M12 - M8

	Male straight	**Female** 90° with LED	**Y connector** Male straight	**Females** straight





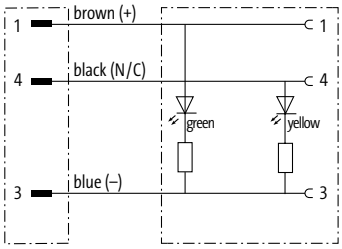
Approvals: cULus, PG, cULus Listed *

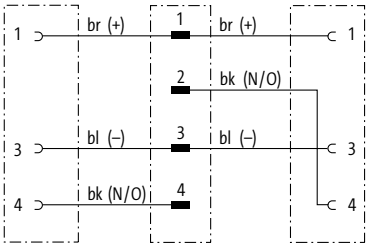
* only for products with UL/CSA approvaled cable

1 Form

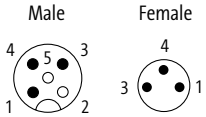
	40641	me✖	40821
Type	**3-pole with 2 × LED (PNP)** **(NPN) on request**		**4-pole**

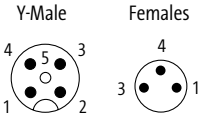
Circuit diagram





Contact layout





2 Cable Type

Wire diameter 0.25 mm²	**Jacket Color** yellow	gray	black	**Jacket Color** yellow	gray	black
PVC (UL/CSA)	**010**	**210**	**610**	**010**	**210**	**610**
PUR/PVC	**020**	**220**	**620**	**020**	**220**	**620**
PUR (UL/CSA)	**030**	**230**	**630**	**030**	**230**	**630**
PUR (UL/CSA), welding spark res.	**050**	**250**	**650**	**050**	**250**	**650**

3 Cable Length

0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data

Operating voltage	24 V DC ±25 %	max. 60 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_____	–	___	____
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M8

Y connector Male straight — **Females** 90°



Y connector Male straight — **Females** 90° with LED



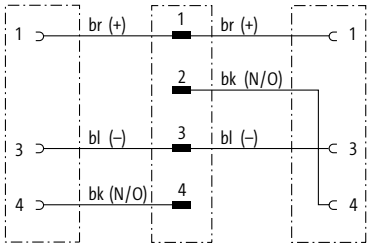
Approvals: cULus Listed *

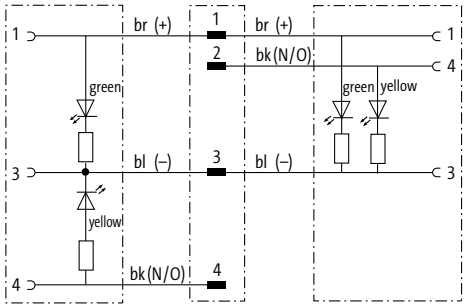
* only for products with UL/CSA approvaled cable

1 Form

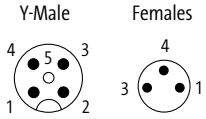
Type	**40841**	**40861**
	4-pole	**4-pole with 2 × LED (PNP)**
		(NPN) on request

Circuit diagram





Contact layout



2 Cable Type

Wire diameter 0.25 mm²	Jacket Color yellow	gray	black	Jacket Color yellow	gray	black
PVC (UL/CSA)	010	210	610	010	210	610
PUR/PVC	020	220	620	020	220	620
PUR (UL/CSA)	030	230	630	030	230	630
PUR (UL/CSA), welding spark res.	050	250	650	050	250	650

3 Cable Length

0.3 m	0030
0.6 m	0060
1.0 m	0100
1.5 m	0150
2.0 m	0200

Technical Data

Operating voltage	max. 60 V AC/DC	24 V DC ±25 %
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0 –	_ _ _ _ _ –	_ _ _	_ _ _ _
	1 Form	2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

MURR ELEKTRONIK
stay connected

Field-wireable

– Insulation displacement technology

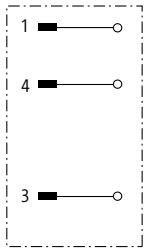
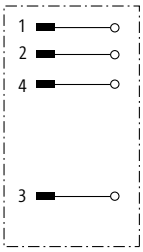
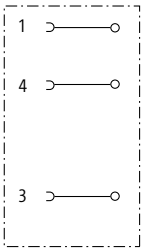
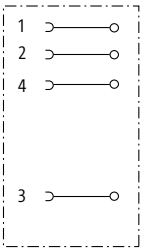
Approvals: cULus

Male
straight



Female
straight



1 Form	12461 mex	12481 mex	12581 mex	12601 mex
Type	3-pole	4-pole	3-pole	4-pole
Circuit diagram				
Connection cross section	0.25...0.5 mm²			
Contact layout	Male 	Male 	Female 	Female 

Technical Data

Operating voltage	max. 32 V AC/DC
Operating current per contact	max. 4 A
Connection cross section	0.25...0.5 mm² (conductor diameter min. 0.1 mm)
Sealing range (cable diameter)	4...5.1 mm
Wire isolation	PVC, PP, TPE
Outer wire diameter	1.2...1.6 mm
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	– _ _ _ _ _	– 0 0 0	0 0 0 0
7 0 0 5	**M12 Lite** (plastic hexagonal screw) on request		
	1 Form		

Notes

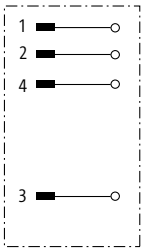
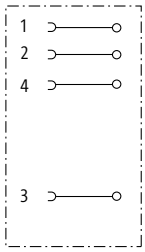
Other versions on request.

M12 ROUND PLUG CONNECTORS

Field-wireable

– Insulation displacement technology

Approvals:

	Male straight, compact	**Female** straight, compact
		
1 Form	**12491** me	**12611** me
Type	**4-pole**	**4-pole**
Circuit diagram		
Connection cross section	**0.14...0.34 mm²**	
Contact layout	Male 	Female 

Technical Data

Operating voltage	max. 32 V AC/DC
Operating current per contact	max. 4 A
Connection cross section	0.14...0.34 mm² (conductor diameter min. 0.1 mm)
Sealing range (cable diameter)	2.9...5.1 mm
Wire isolation	PVC, PP, TPE
Outer wire diameter	1.0...1.6 mm
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_____	–	000	0000
		1 Form			

Notes

Other versions on request.

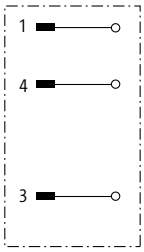
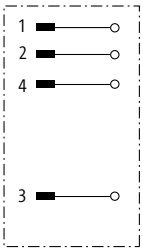
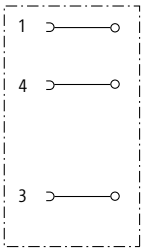
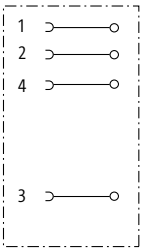
M12 ROUND PLUG CONNECTORS

MURR ELEKTRONIK
stay connected

Field-wireable

– Insulation displacement technology

Approvals: cULus

	Male 90°		**Female** 90°	
				
1 Form	12541 mex	12561 mex	12661 mex	12681 mex
Type	3-pole	4-pole	3-pole	4-pole
Circuit diagram				
Connection cross section	0.25...0.5 mm²			
Contact layout	Male 	Male 	Female 	

Technical Data

Operating voltage	max. 32 V AC/DC
Operating current per contact	max. 4 A
Connection cross section	0.25...0.5 mm² (conductor diameter min. 0.1 mm)
Sealing range (cable diameter)	4...5.1 mm
Wire isolation	PVC, PP, TPE
Outer wire diameter	1.2...1.6 mm
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	– _ _ _ _ _	– 0 0 0	0 0 0 0
7 0 0 5	**M12 Lite** (plastic hexagonal screw) on request		
	1 Form		

Notes

Other versions on request.

M12 ROUND PLUG CONNECTORS

Field-wireable

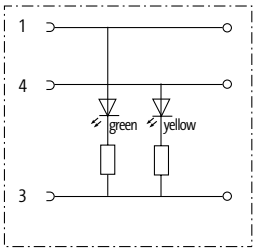
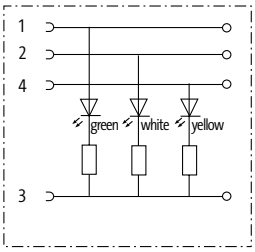
– Insulation displacement technology

Approvals:

Female

90° with LED



1 Form	12671 me	12691 me
Type	3-pole with 2 × LED (PNP)	4-pole with 3 × LED (PNP)
Circuit diagram		
Connection cross section	0.25...0.5 mm²	
Contact layout	Female 	Female 

Technical Data

Operating voltage	24 V DC ±25 %
Operating current per contact	max. 4 A
Connection cross section	0.25...0.5 mm² (conductor diameter min. 0.1 mm)
Sealing range (cable diameter)	4...5.1 mm
Wire isolation	PVC, PP, TPE
Outer wire diameter	1.2...1.6 mm
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7000	– _____	– 000	0000
7005	M12 Lite (plastic hexagonal screw) on request		

	1 Form		

Notes

Other versions on request.

Field-wireable

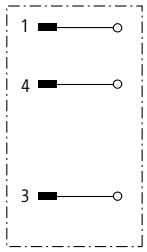
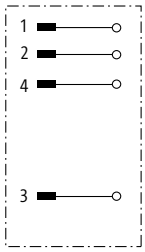
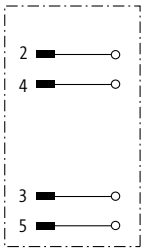
– Insulation displacement technology

Approvals:

Male
straight



1 Form

	12501 me	12521 me	12515 me
Type	3-pole	4-pole	4-pole
Circuit diagram			
Connection cross section	0.5...1.0 mm²		
Contact layout	Male 	Male 	Male 

Technical Data

Operating voltage	max. 32 V AC/DC
Operating current per contact	max. 4 A
Connection cross section	0.5...1.0 mm² (conductor diameter min. 0.1 mm)
Sealing range (cable diameter)	5.5...8 mm
Wire isolation	PVC, PP, TPE
Outer wire diameter	1.6...2.0 mm
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7000	– _____	– 000	0000
7005	M12 Lite (plastic hexagonal screw) on request		

1 Form		

Notes

Other versions on request.

M12 ROUND PLUG CONNECTORS

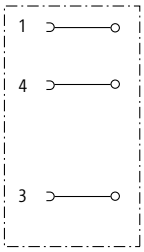
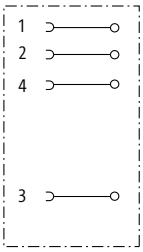
Field-wireable

– Insulation displacement technology

Approvals:

Female
straight



1 Form	12621 me	12641 me
Type	**3-pole**	**4-pole**
Circuit diagram		
Connection cross section	**0.5…1.0 mm²**	
Contact layout	Female 	Female 

Technical Data

Operating voltage	max. 32 V AC/DC
Operating current per contact	max. 4 A
Connection cross section	0.5…1.0 mm² (conductor diameter min. 0.1 mm)
Sealing range (cable diameter)	5.5…8 mm
Wire isolation	PVC, PP, TPE
Outer wire diameter	1.6…2.0 mm
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25…+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7000	– _____	– 000	0000
7005	**M12 Lite** (plastic hexagonal screw) on request		

	1 Form		

Notes

Other versions on request.

Field-wireable

– Screw terminals

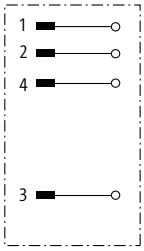
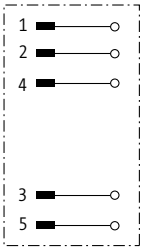
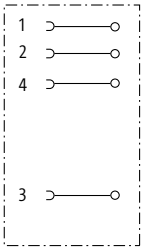
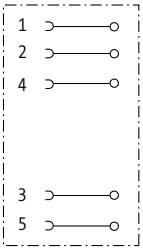
Approvals: cULus

Male
straight



Female
straight



1 Form	12701 me	12721 me	12901 me	12921 me
Type	4-pole	5-pole	4-pole	5-pole
Circuit diagram				
Sealing range (cable diameter)	4...6 mm			
Contact layout	Male 	Male 	Female 	Female 

Technical Data

Operating voltage	max. 250 V AC/DC	max. 125 V AC/DC	max. 250 V AC/DC	max. 125 V AC/DC
Operating current per contact	max. 4 A			
Connection cross section	max. 0.75 mm²			
Sealing range (cable diameter)	4...6 mm			
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing			
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)			
Temperature range	-25...+85 °C			

Article No.

The composition of your article number is explained on page 3.1.i

7000	– _____	– 000	0000
	1 Form		

Notes

Other versions on request.

M12 ROUND PLUG CONNECTORS

Field-wireable

– Screw terminals

Approvals:

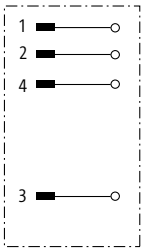
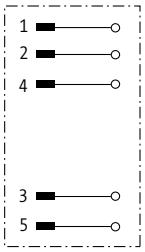
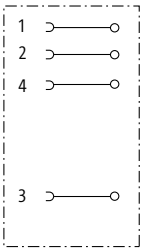
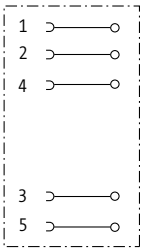
Male
straight



Female
straight



1 Form

	12741 me✖	12761 me✖	12941 me✖	12961 me✖
Type	**4-pole**	**5-pole**	**4-pole**	**5-pole**
Circuit diagram				
Sealing range (cable diameter)	**6...8 mm**			
Contact layout	Male 	Male 	Female 	Female 

Technical Data

Operating voltage	max. 250 V AC/DC	max. 125 V AC/DC	max. 250 V AC/DC	max. 125 V AC/DC
Operating current per contact	max. 4 A			
Connection cross section	max. 0.75 mm²			
Sealing range (cable diameter)	6...8 mm			
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing			
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)			
Temperature range	-25...+85 °C			

Article No.

The composition of your article number is explained on page 3.1.i

7000	– _____	– 000	0000
	1 Form		

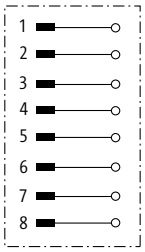
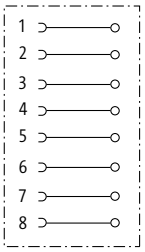
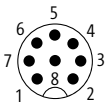
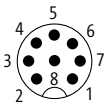
Notes

Other versions on request.

Field-wireable

– Screw terminals

Approvals:

	Male straight	**Female** straight
		
1 Form	**17301** me	**17321** me
Type	**8-pole**	**8-pole**
Circuit diagram		
Sealing range (cable diameter)	**6...8 mm**	
Contact layout	Male 	Female 

Technical Data

Operating voltage	max. 60 V AC/DC
Operating current per contact	max. 2 A
Connection cross section	max. 0.5 mm²
Sealing range (cable diameter)	6...8 mm
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

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		1 Form			

Notes

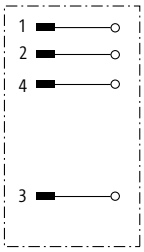
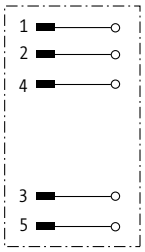
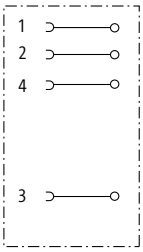
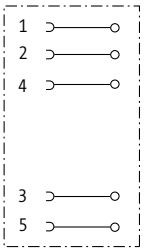
Other versions on request.

M12 ROUND PLUG CONNECTORS

Field-wireable

– Screw terminals

Approvals:

	Male 90°		**Female** 90°	
				
1 Form	**12821 me**	**12841 me**	**12981 me**	**13001 me**
Type	**4-pole**	**5-pole**	**4-pole**	**5-pole**
Circuit diagram				
Sealing range (cable diameter)	**4...6 mm**			
Contact layout	Male 	Male 	Female 	Female 
Technical Data				
Operating voltage	max. 250 V AC/DC	max. 125 V AC/DC	max. 250 V AC/DC	max. 125 V AC/DC
Operating current per contact	max. 4 A			
Connection cross section	max. 0.75 mm²			
Sealing range (cable diameter)	4...6 mm			
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing			
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)			
Temperature range	-25...+85 °C			
Article No.				
The composition of your article number is explained on page 3.1.i	**7 0 0 0 – _ _ _ _ _ – 0 0 0**			**0 0 0 0**
		1 Form		

Notes

Other versions on request.

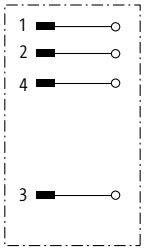
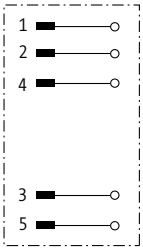
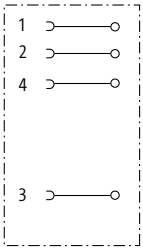
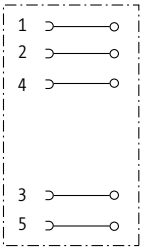
M12 ROUND PLUG CONNECTORS

MURR ELEKTRONIK
stay connected

Field-wireable

– Screw terminals

Approvals: cULus

	Male		Female	
	90°		90°	
				
1 Form	12861 mex	12881 mex	13021 mex	13041 mex
Type	4-pole	5-pole	4-pole	5-pole
Circuit diagram				
Sealing range (cable diameter)	6...8 mm			
Contact layout	Male 	Male 	Female 	Female 
Technical Data				
Operating voltage	max. 250 V AC/DC	max. 125 V AC/DC	max. 250 V AC/DC	max. 125 V AC/DC
Operating current per contact	max. 4 A			
Connection cross section	max. 0.75 mm²			
Sealing range (cable diameter)	6...8 mm			
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing			
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)			
Temperature range	-25...+85 °C			
Article No.				
The composition of your article number is explained on page 3.1.i	7 0 0 0 – _ _ _ _ _ – 0 0 0			0 0 0 0
		1 Form		

Notes

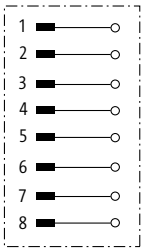
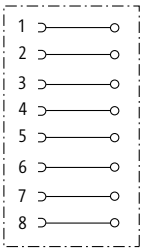
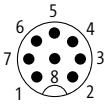
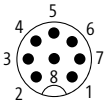
Other versions on request.

M12 ROUND PLUG CONNECTORS

Field-wireable

– Screw terminals

Approvals:

	Male 90°	**Female** 90°
		
1 Form	**17311** me	**17331** me
Type	**8-pole**	**8-pole**
Circuit diagram		
Sealing range (cable diameter)	**6...8 mm**	
Contact layout	Male 	Female 

Technical Data

Operating voltage	max. 60 V AC/DC
Operating current per contact	max. 2 A
Connection cross section	max. 0.5 mm²
Sealing range (cable diameter)	6...8 mm
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

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		1 Form			

Notes

Other versions on request.

Field-wireable

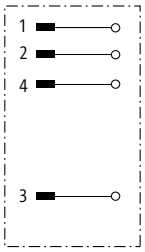
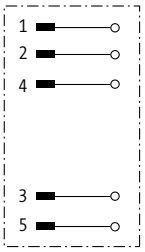
– Screw terminals

Approvals:

Y connector

Male straight



1 Form	12781	12801
Type	4-pole	5-pole
Circuit diagram		
Sealing range (cable diameter)	2.1...3/4...5 mm	
Contact layout	Male 	Male 

Technical Data		
Operating voltage	max. 250 V AC/DC	max. 125 V AC/DC
Operating current per contact	max. 4 A	
Connection cross section	max. 0.75 mm²	
Sealing range (cable diameter)	2.1...3/4...5 mm (2 cable entries)	
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C	

Article No.

The composition of your article number is explained on page 3.1.i

7000	– _____	– 000	0000
	1 Form		

Notes

Other versions on request.

M12 ROUND PLUG CONNECTORS

Field-wireable

– Screw terminals

– shielded

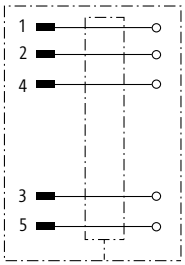
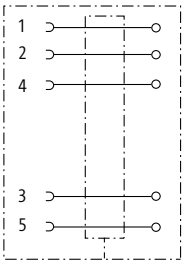
Approvals:

Male
straight



Female
straight



1 Form	**13301**	**13321**	**13381**	**13401**
Type	**5-pole**	**5-pole**	**5-pole**	**5-pole**
Circuit diagram				
Sealing range (cable diameter)	**4...6 mm**	**6...8 mm**	**4...6 mm**	**6...8 mm**
Contact layout	Male 		Female 	

Technical Data

Operating voltage	max. 125 V AC/DC			
Operating current per contact	max. 4 A			
Connection cross section	max. 0.75 mm²			
Sealing range (cable diameter)	4...6 mm	6...8 mm	4...6 mm	6...8 mm
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)			
Housing	CuZn, nickel plated			
Temperature range	-25...+85 °C			

Article No.

The composition of your article number is explained on page 3.1.i	**7 0 0 0** – _ _ _ _ _ – **0 0 0**			**0 0 0 0**
		1 Form		

Notes

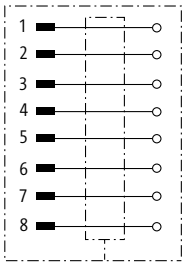
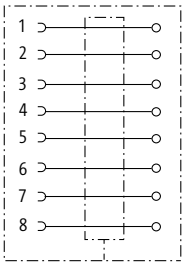
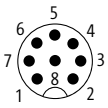
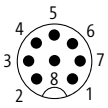
Other versions on request.

Field-wireable

– Screw terminals

– shielded

Approvals:

	Male	Female
	straight	straight
		
1 Form	**17341**	**17361**
Type	**8-pole**	**8-pole**
Circuit diagram		
Sealing range (cable diameter)	**6...8 mm**	
Contact layout	Male 	Female 

Technical Data

Operating voltage	max. 60 V AC/DC
Operating current per contact	max. 2 A
Connection cross section	max. 0.5 mm²
Sealing range (cable diameter)	6...8 mm
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Housing	CuZn, nickel plated
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_____	–	000	0000
		1 Form			

Notes

Other versions on request.

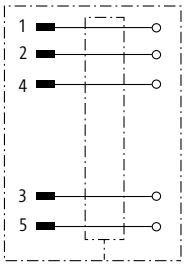
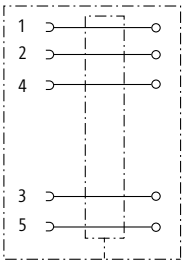
M12 ROUND PLUG CONNECTORS

Field-wireable

– Screw terminals

– shielded

Approvals:

	Male 90°		**Female** 90°	
				
1 Form	**13341**	**13361**	**13421**	**13441**
Type	**5-pole**	**5-pole**	**5-pole**	**5-pole**
Circuit diagram				
Sealing range (cable diameter)	**4...6 mm**	**6...8 mm**	**4...6 mm**	**6...8 mm**
Contact layout	Male 		Female 	

Technical Data

Operating voltage	max. 125 V AC/DC			
Operating current per contact	max. 4 A			
Connection cross section	max. 0.75 mm²			
Sealing range (cable diameter)	4...6 mm	6...8 mm	4...6 mm	6...8 mm
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)			
Housing	CuZn, nickel plated			
Temperature range	-25...+85 °C			

Article No.

The composition of your article number is explained on page 3.1.i	**7 0 0 0 – _ _ _ _ _ – 0 0 0**			**0 0 0 0**
		1 Form		

Notes

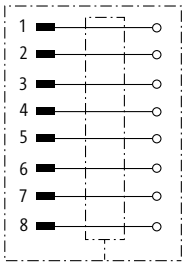
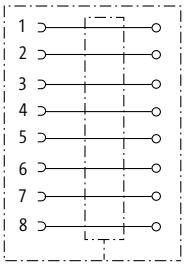
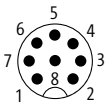
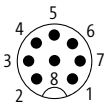
Other versions on request.

Field-wireable

– Screw terminals

– shielded

Approvals:

	Male	Female
	90°	90°
		
1 Form	**17351**	**17371**
Type	**8-pole**	**8-pole**
Circuit diagram		
Sealing range (cable diameter)	**6...8 mm**	
Contact layout	Male 	Female 

Technical Data

Operating voltage	max. 60 V AC/DC
Operating current per contact	max. 2 A
Connection cross section	max. 0.5 mm²
Sealing range (cable diameter)	6...8 mm
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Housing	CuZn, nickel plated
Temperature range	-25...+85 °C

Article No.

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		1 Form			

Notes

Other versions on request.



T-COUPLERS
VERSATILE ADAPTERS

- **Slimline saves space**
- **Minimizes wiring efforts**
- **Many different configurations**

T-COUPLERS FOR PERFECT SYSTEM INSTALLATIONS

Increasingly, automation requires a large number of sensors and with each sensor comes more wiring.

By using T-couplers you reduce the number of cables required and you can combine inputs and outputs depending on the application. Thanks to the slim design, you can connect several M12 ports to our Cube module. The handy torque wrench makes installation easy even in tight spaces and guarantees IP67 seals.

The slimline T-couplers feature a new female screw connection which makes the connection even safer and easier.

Connections



M12 male
T-coupler

M8 female
M12 female
T-coupler

Page 3.3.1



M12 male
T-coupler (slimline)

M8 female
M12 female
T-Coupler (slimline)

Page 3.3.2



7/8" male
Power distributor

7/8" female
Power distributor

Page 3.3.5

Connection cables

– M12 - M8

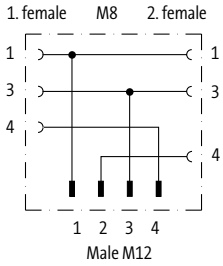
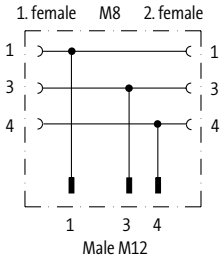
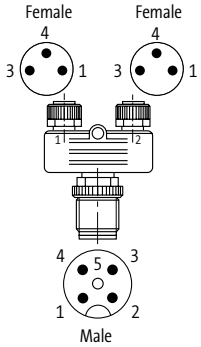
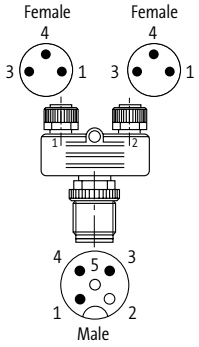
Approvals:

T-coupler

Male straight to female straight



1 Form

	41201	41221
Type	**4-pole**	**3-pole**
Circuit diagram		
Contact layout		

Technical Data

Operating voltage	max. 60 V AC/DC
Operating current per contact	max. 4 A
Locking of ports	Screw thread M8/M12 × 1 mm (recommended torque 0.4/0.6 Nm), self-securing
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7000	– _____	– 000	0000
	1 Form		

Notes

Other versions on request.

T-COUPLERS M8, M12, 7/8"

Connection cables

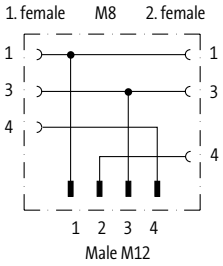
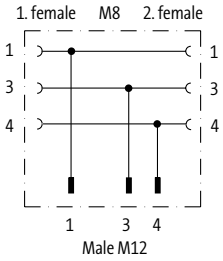
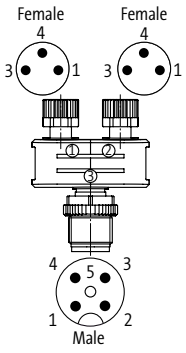
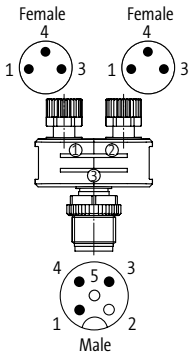
– M12 - M8

Approvals: cULus Listed

T-coupler (Slimline)

Male straight to female straight



1 Form	41211	41231
Type	**4-pole**	**3-pole**
Circuit diagram		
Contact layout		
Holding plate	**7000-99061-0000000**	
Holding plate and mounting set	**7000-99062-0000000**	

Technical Data

Operating voltage	max. 60 V AC/DC
Operating current per contact	max. 4 A
Locking of ports	Screw thread M8/M12 × 1 mm (recommended torque 0.4/0.6 Nm), self-securing
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7000	– _____	– 000	0000
	1 Form		

Notes

Other versions on request.

Connection cables

– M12 - M12

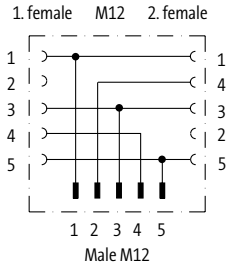
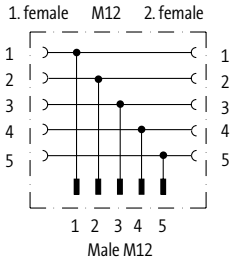
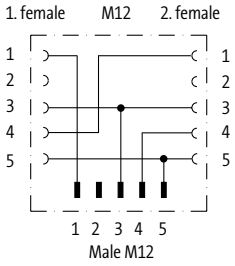
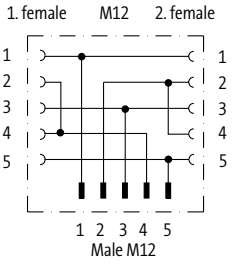
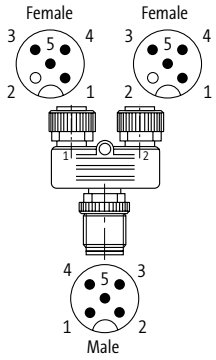
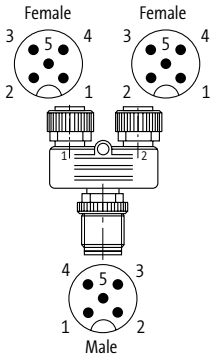
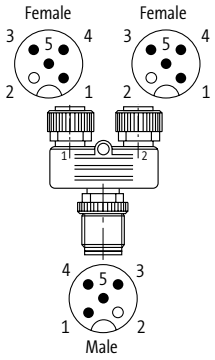
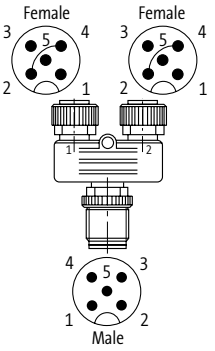
T-coupler

Male straight to female straight



Approvals:

1 Form

	41121	41141	41161	41181
Type	**5-pole**	**5-pole**	**4-pole**	**5-pole**
Circuit diagram				
Contact layout				

Technical Data

Operating voltage	max. 60 V AC/DC
Operating current per contact	max. 4 A
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_____	–	000	0000
		1 Form			

Notes

Other versions on request.

T-COUPLERS M8, M12, 7/8"

Connection cables

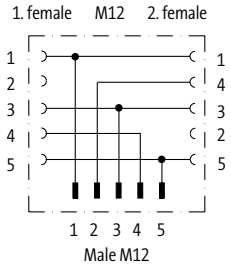
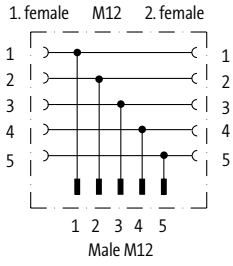
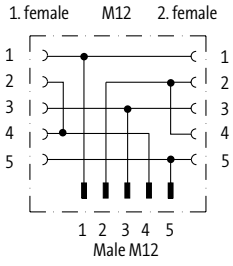
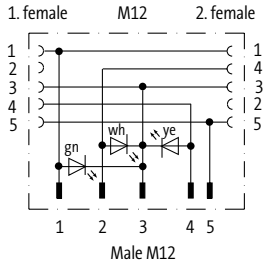
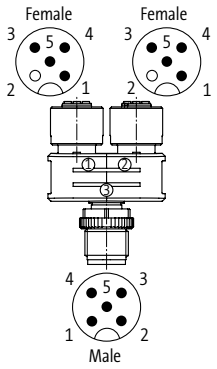
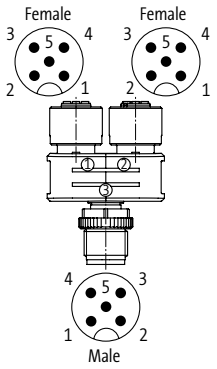
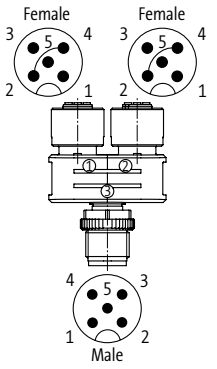
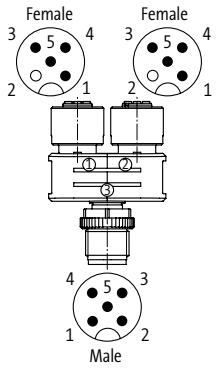
– M12 - M12

T-coupler (Slimline)

Male straight to female straight



Approvals: cULus Listed

1 Form	41131	41151	41191	41135
Type	**5-pole**	**5-pole**	**5-pole**	**5-pole with 3 × LED (PNP)**
Circuit diagram				
Contact layout				
Holding plate	**7000-99061-0000000**			
Holding plate and mounting set	**7000-99062-0000000**			
Technical Data				
Operating voltage	max. 60 V AC/DC			24 V DC ±25 %
Operating current per contact	max. 4 A			
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing			
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)			
Temperature range	-25...+85 °C			
Article No.				
The composition of your article number is explained on page 3.1.i	**7 0 0 0 – _ _ _ _ _ – 0 0 0**			**0 0 0 0**
		1 Form		

Notes

Other versions on request.

Connection cables

– 7/8"-7/8"

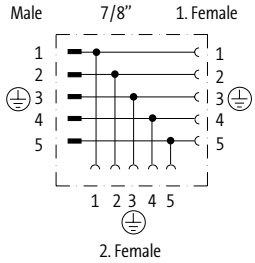
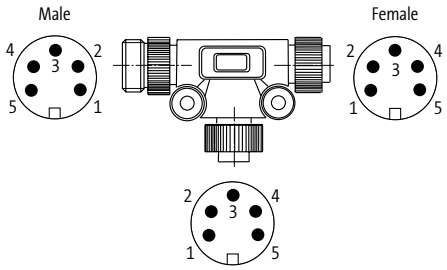
T-coupler

Male straight to female straight



Approvals:

1 Form — 50061

Type	**5-pole**
Circuit diagram	
Contact layout	

Technical Data

Operating voltage	max. 50 V AC/DC
Operating current per contact	max. 8 A
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-20...+80 °C

Article No.

The composition of your article number is explained on page 3.1.i

7000	– 50061	– 000	0000
	1 Form		

Notes

Other versions on request.



FLANGE CONNECTORS
READY FOR ANYTHING

- **Molded PP wires**
- **Anti-twist protection ensures convenient assembly**
- **Front and rear mounting**

COMPREHENSIVE RANGE TO CUSTOMER NEEDS

Murrelektronik has a wide range of M12 flange plug connectors and offers solutions for all kinds of applications. A special characteristic of Murrelektronik's flange connectors is the molded polypropylene wires in the metal housing. Short-circuits can be avoided with this protection. An integrated over-rotation protection makes assembly easy.

Don't see what you needed? Visit **onlineshop.murrelektronik.com** for other styles including V4A Stainless Steal for Food & Beverage applications.

M8



Male/female
- 3-pole
- 4-pole

Page 3.4.1

M12



Male/female
- 4-pole
- 5-pole
- 8-pole

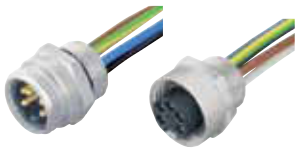
Page 3.4.2



Control Cabinet Entry System
Male/female
- 5-pole
- 5-pole, B-coded (for Profibus/Interbus)
- 6-pole (for Cube67)
- 8-pole

Page 3.4.5

7/8"



Male/female
- 4-pole
- 5-pole

Page 3.4.4

With multi-strand wire

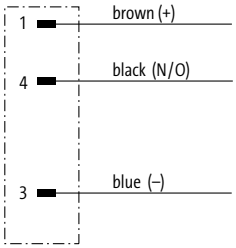
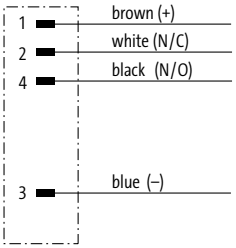
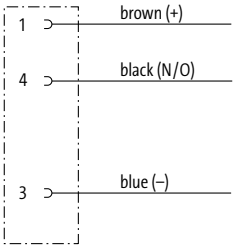
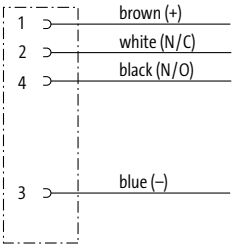
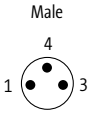
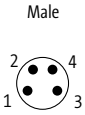
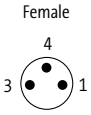
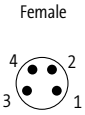
– M8

Male



Female



1	**Form**	**08551**	**08561**	**08571**	**08581**
	Type	**3-pole**	**4-pole**	**3-pole**	**4-pole**
	Circuit diagram				
	Contact layout				
2	**Wires**				
	TPE-S	**970**	**971**	**970**	**971**
	Hexagonal nut M8 × 0.5	**7000-08591-0000000**			
	Technical Data				
	Operating voltage	max. 30 V AC/DC	max. 60 V AC/DC	max. 30 V AC/DC	max. 60 V AC/DC
	Protection	IP65 and IP67 when plugged and screwed down (EN 60529)			
	Temperature range	-25...+85 °C			
	Article No.				
	The composition of your article number is explained on page 3.1.i	**7 0 0 0** – _ _ _ _ _ – _ _ _			**0 0 2 0**
			1 Form	**2 Wires**	

Notes

Other versions on request.

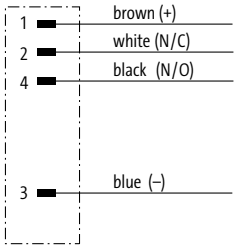
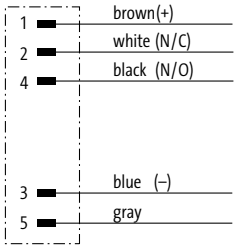
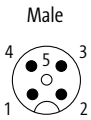
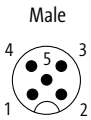
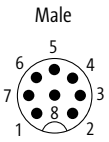
FLANGE CONNECTORS

With multi-strand wire

– M12

Male



1 Form	13501	13521	17161
Type	**4-pole**	**5-pole**	**8-pole**
Circuit diagram			
Contact layout			
2 Wires			
Wire diameter 0.34 mm²	**multi-colored**	**multi-colored**	**multi-colored**
TPE-S	**971**	**972**	
Wire diameter 0.25 mm²			
TPE-S			**973**
Hexagonal nut M16 × 1.5	**7000-13581-0000000**		
3 Wires Length			
0.2 m	**0020**		
0.5 m	**0050**		
1.0 m	**0100**		
Technical Data			
Operating voltage	max. 250 V AC/DC	max. 125 V AC/DC	max. 60 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)		
Temperature range	-25...+85 °C		
Article No.			
The composition of your article number is explained on page 3.1.i	**7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _**		
		1 Form	**2 Wires**	**3 Wires Length**

Notes

Other versions on request.

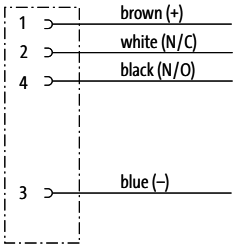
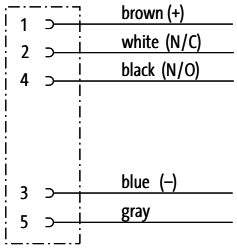
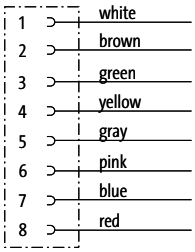
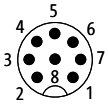
MURR ELEKTRONIK
stay connected

With multi-strand wire

– M12

Female



1	**Form**	**13541**	**13561**	**17181**
	Type	**4-pole**	**5-pole**	**8-pole**
	Circuit diagram			
	Contact layout	Female 	Female 	Female 
2	**Wires**			
	Wire diameter 0.34 mm²	**multi-colored**	**multi-colored**	**multi-colored**
	TPE-S	**971**	**972**	
	Wire diameter 0.25 mm²			
	TPE-S			**973**
	Hexagonal nut M16 × 1.5	**7000-13581-0000000**		
3	**Wires Length**			
	0.2 m	**0020**		
	0.5 m	**0050**		
	1.0 m	**0100**		
	Technical Data			
	Operating voltage	max. 250 V AC/DC	max. 125 V AC/DC	max. 60 V AC/DC
	Protection	IP65 and IP67 when plugged and screwed down (EN 60529)		
	Temperature range	-25...+85 °C		
	Article No.			
	The composition of your article number is explained on page 3.1.i	7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _

1 **Form**	**2** **Wires**	**3** **Wires Length**

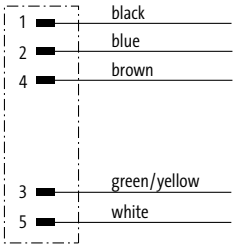
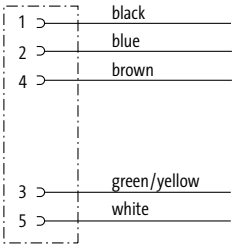
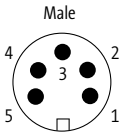
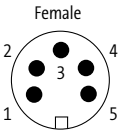
Notes

Other versions on request.

FLANGE CONNECTORS

With multi-strand wire

– 7/8"

	Male	Female
		
1 Form	**78341**	**78381**
Type	**5-pole**	**5-pole**
Circuit diagram		
Contact layout		
2 Wires		
TPE-O	**978**	**978**
Hexagonal nut PG 13.5	**7000-78391-0000000**	
3 Wires Length		
0.2 m	**0020**	
0.5 m	**0050**	
1.0 m	**0100**	
Technical Data		
Operating voltage	max. 250 V AC/DC	
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C	
Article No.		
The composition of your article number is explained on page 3.1.i	7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _	
		1 Form **2 Wires** **3 Wires Length**

Notes

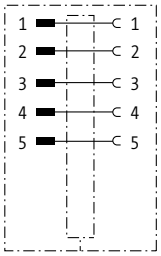
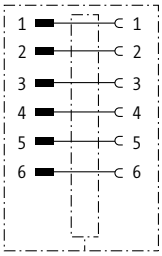
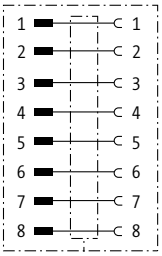
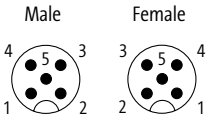
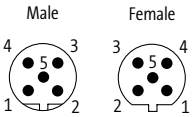
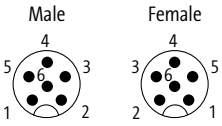
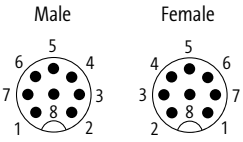
Other versions on request.

Control cabinet entry system

– M12 - M12

Male/Female



1 Form	42111	44111	46111	48111
Type	5-pole, shielded	5-pole, shielded, B-coded	6-pole, shielded	8-pole, shielded
Circuit diagram				
Contact layout				

Technical Data

Operating voltage	max. 24 V AC/DC		max. 30 V AC/DC	max. 24 V AC/DC
Operating current per contact	max. 4 A			max. 1.5 A
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)			
Temperature range	-25...+85 °C			

Article No.

The composition of your article number is explained on page 3.1.i	7000 – _____ –	000	0000
	1 Form		

Notes

Other versions on request.



THE MQ12 SYSTEM
THE CLEVER SOLUTION

- **Effective quick connection system**
- **Saves installation time – up to 80%**
- **Plug in, ¼ turn – done!**

COMPATIBLE, QUICK AND SAFE

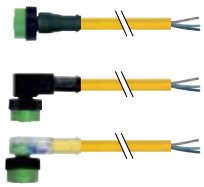
Simply clever – it's our quick connection system that doesn't require any changes on the sensor side. MQ12 is completely compatible and interchangeable with all standard systems.

More features:

- Fits on all existing sensor and distributor systems
- High resistance to shock and vibration
- IP67 sealed

MQ12™
Murrelektronik's Efficient Quick Connection System

With Open Ended Wires



MQ12 female
• Straight
• 90°
• 90° with LED

Page 3.5.1

Connection Cables





MQ12 male
• Straight

MQ12 female
• Straight
• 90°
• 90° with LED

Page 3.5.3

Field-Wireable



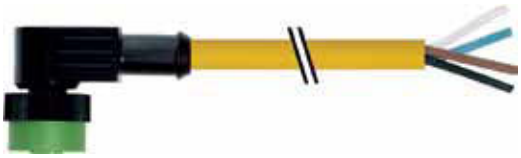
Insulation displacement technology
MQ12 male/female
• Straight

Page 3.5.5

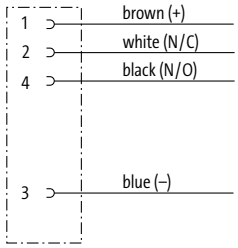
Open ended wires

– M12

Approvals:

	Female straight	**Female** 90°
		
1 Form	**12221**	**12341**
Type	**4-pole**	**4-pole**

Circuit diagram



Contact layout

Female



2 Cable Type	**Jacket Color**		**Jacket Color**	
Wire diameter 0.34 mm²	**yellow**	**black**	**yellow**	**black**
PVC (UL/CSA)	**014**	**614**	**014**	**614**
PUR (UL/CSA)	**034**	**634**	**034**	**634**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 250 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 5 0	– _ _ _ _ _	– _ _ _	_ _ _ _
	1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Open ended wires

– M12

Female

90° with LED



Approvals:

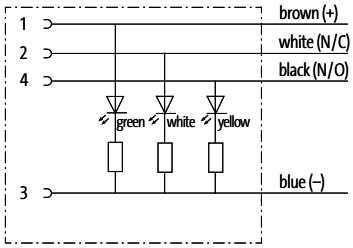
1 Form

12421

Type

4-pole with 3 × LED (PNP)

Circuit diagram



Contact layout

Female



2 Cable Type

Jacket Color

Wire diameter 0.34 mm²	yellow	black
PVC (UL/CSA)	014	614
PUR (UL/CSA)	034	634

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	24 V DC ±25 %
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7050	–	12421	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

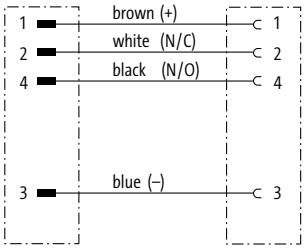
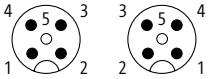
MURR ELEKTRONIK
stay connected

Connection cables

– M12 - M12

	Male straight	**Female** straight	**Male** straight	**Female** 90°
				

Approvals:

1	**Form**	**40021**	**40121**
	Type	**4-pole**	**4-pole**
	Circuit diagram		
	Contact layout		

2	**Cable Type**	**Jacket Color**		**Jacket Color**	
	Wire diameter 0.34 mm²	**yellow**	**black**	**yellow**	**black**
	PVC (UL/CSA)	**014**	**614**	**014**	**614**
	PUR (UL/CSA)	**034**	**634**	**034**	**634**

3	**Cable Length**
	0.3 m	**0030**
	0.6 m	**0060**
	1.0 m	**0100**
	1.5 m	**0150**
	2.0 m	**0200**

Technical Data

Operating voltage	max. 250 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 5 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MQ12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

Male
straight

Female
90° with LED

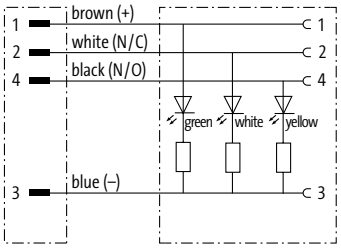


Approvals:

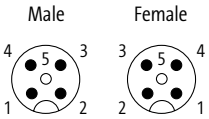
1 Form

Type	**40341**
	4-pole with 3 × LED (PNP)

Circuit diagram



Contact layout



2 Cable Type / Jacket Color

Wire diameter 0.34 mm²	yellow	black
PVC (UL/CSA)	014	614
PUR (UL/CSA)	034	634

3 Cable Length

0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data

Operating voltage	24 V DC ±25 %
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7050	–	40341	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

Field-wireable

– M12

– Insulation displacement technology

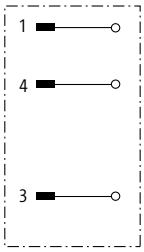
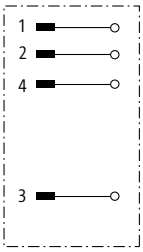
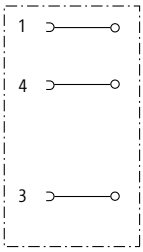
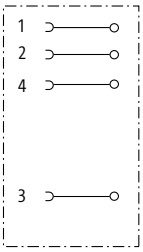
Approvals:

Male
straight



Female
straight



1 Form	12461	12481	12581	12601
Type	3-pole	4-pole	3-pole	4-pole
Circuit diagram				
Connection cross section	0.25...0.5 mm²			
Contact layout	Male 	Male 	Female 	Female 

Technical Data

Operating voltage	max. 32 V AC/DC
Operating current per contact	max. 4 A
Connection cross section	0.25...0.5 mm² (conductor diameter min. 0.1 mm)
Sealing range (cable diameter)	4...5.1 mm
Wire isolation	PVC, PP, TPE
Outer wire diameter	1.2...1.6 mm
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7050	– _____	– 000	0000
	1 Form		

Notes

Other versions on request.

MQ12 ROUND PLUG CONNECTORS

Field-wireable

– M12

– Insulation displacement technology

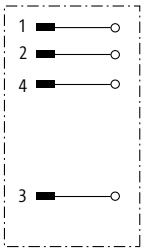
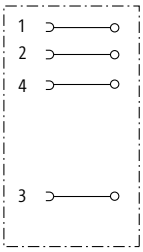
Approvals:

Male
straight



Female
straight



1 Form	12521	12641
Type	4-pole	4-pole
Circuit diagram		
Connection cross section	0.5...1.0 mm²	
Contact layout	Male 	Female 

Technical Data

Operating voltage	max. 32 V AC/DC
Operating current per contact	max. 4 A
Connection cross section	0.5...1.0 mm² (conductor diameter min. 0.1 mm)
Sealing range (cable diameter)	5.5...8 mm
Wire isolation	PVC, PP, TPE
Outer wire diameter	1.6...2.0 mm
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7050	– _____	– 000	0000
	1 Form		

Notes

Other versions on request.

Labeling accessories			Art-No.
	**Slip-on cable sleeve**		
	for ACS label plates (4 × 18 mm)	Cable diameter (4...6.5 mm)	**7000-99004-0000000**
	Snap-on cable sleeve		
	for ACS label plates (4 × 18 mm)	Cable diameter (4.2...5.6 mm)	**7000-99005-0000000**
	for ACS label plates (4 × 18 mm)	Cable diameter (5...7 mm)	**7000-99006-0000000**
	ACS label plate		
	for self marking (4 × 18 mm)	Cable sleeves	**7000-99002-0000000**
End fitting accessories			**Art-No.**
	**Tube adapter**		
	snap-in for corrugated tube (size 13mm)	Cable diameter (4...7 mm)	**7000-99081-0000000**



FIELDBUS
CONNECTORS

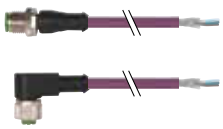
- **Wide range of M8, M12 and RJ45 connectors**
- **360° shielding**
- **Flex rated cables**

FROM AS INTERFACE TO ETHERNET TO PROFIBUS AND MORE...

Murrelektronik offers connection accessories for the fieldbus products. In addition to both field-wireable M12 and RJ45 connectors we have a wide range of pre-wired, molded models. Both the 15° locking mechanism and the PUR molding ensure an IP65/67 rated connection which make the connectors suitable for many aggressive industrial environments.

PROFIBUS · PROFINET · DeviceNet · EtherCAT · CANopen · AS-i · EtherNet/IP · cube67

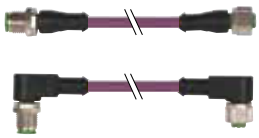
PROFIBUS



With open ended wires

M12 male/female (shielded)
• Straight/90°

Page 3.6.1

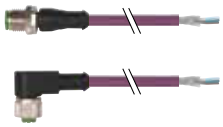


Connection Cables

M12 male – M12 female (shielded)
• Straight/90°

Page 3.6.3

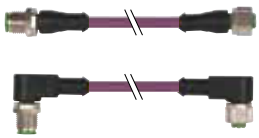
DeviceNet, CANopen



With open ended wires

M12 male/female (shielded)
• Straight/90°

Page 3.6.4

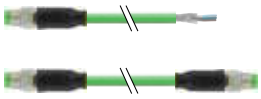


Connection Cables

M12 male – M12 female (shielded)
• Straight/90°

Page 3.6.6

EtherNet, EtherCAT, PROFINET



With open ended wires

M8 male (shielded)
• Straight/90°

Connection Cables

M8 male – M8 male (shielded)
• Straight/90°

Page 3.6.7



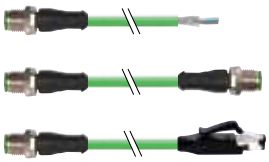
Connection Cables

M12 male – M8 male (shielded)
• Straight

Connection Cables

M8 male – RJ45 male (shielded)
• Straight/90°

Page 3.6.9



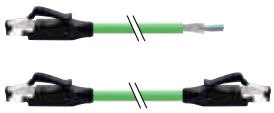
With open ended wires

M12 male (shielded)
• Straight/90°

Connection Cables

M12 male – M12 male / RJ45 male (shielded)
• Straight/90°

Page 3.6.12



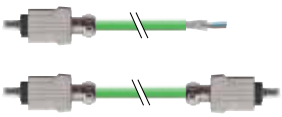
With open ended wires

RJ45 male (shielded)
• Straight/90°

Connection Cables

RJ45 male – RJ45 male (shielded)
• Straight/90°

Page 3.6.15



With open ended wires

RJ45 male Push Pull
• Straight

Connection Cables

RJ45 male Push Pull – RJ45 male Push Pull
• Straight

Page 3.6.18

AS Interface

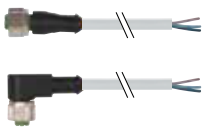


Connection Cables for MASI68

M12 male – M12 female
• Straight

Page 3.6.21

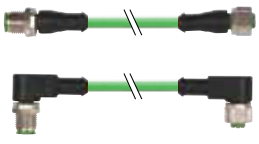
Cube67, 6-pole



With open ended wires

M12 female
• Straight/90°

Page 3.6.22



Connection Cables

M12 male – M12 female (shielded)
• Straight/90°

Page 3.6.23

NOTES

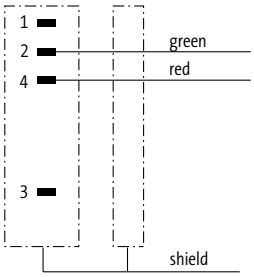
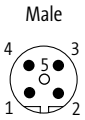
MURR ELEKTRONIK
stay connected

PROFIBUS

– With open ended wires M12

– shielded, B-coded

Approvals:

		Male straight	Male 90°
			
1	**Form**	**14051**	**14081**
	Type	**2-pole**	**2-pole**
	Circuit diagram		
	Contact layout		
2	**Cable Type**	**Jacket Color**	**Jacket Color**
	1 × 2 × Ø 0.64 mm	**violet**	**violet**
	PUR (UL/CSA), suitable for C-tracks	**841**	**841**
	PUR (UL/CSA), Highspeed C-track	**840**	**840**
	PUR (UL/CSA), Torsion	**843**	**843**
	PVC (UL/CSA)	**850**	**850**
	Terminator M12	**7000-14041-0000000**	
	Flange M12, B-coded	**7000-44111-0000000**	
3	**Cable Length**		
	1.5 m	**0150**	
	3.0 m	**0300**	
	5.0 m	**0500**	
	7.5 m	**0750**	
	10.0 m	**1000**	
	Technical Data		
	Operating voltage	max. 60 V AC/DC	
	Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
	Temperature range	-25...+85 °C, depending on cable quality	
	Article No.		
	The composition of your article number is explained on page 3.1.i	7 0 0 0 – _ _ _ _ _ – _ _ _	_ _ _ _
		1 Form	**2 Cable Type** / **3 Cable Length**

Notes

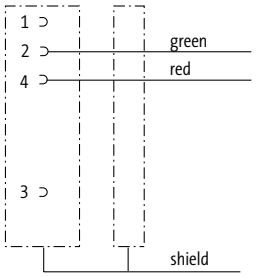
Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

PROFIBUS

– With open ended wires M12

– shielded, B-coded

Approvals:

	Female straight	Female 90°
		
1 Form	**14061**	**14071**
Type	**2-pole**	**2-pole**
Circuit diagram		
Contact layout	Female 	
2 Cable Type	**Jacket Color**	**Jacket Color**
1 × 2 × Ø 0.64 mm	**violet**	**violet**
PUR (UL/CSA), suitable for C-tracks	**841**	**841**
PUR (UL/CSA), Highspeed C-track	**840**	**840**
PUR (UL/CSA), Torsion	**843**	**843**
PVC (UL/CSA)	**850**	**850**
Terminator M12	**7000-14041-0000000**	
Flange M12, B-coded	**7000-44111-0000000**	
3 Cable Length		
1.5 m	**0150**	
3.0 m	**0300**	
5.0 m	**0500**	
7.5 m	**0750**	
10.0 m	**1000**	
Technical Data		
Operating voltage	max. 60 V AC/DC	
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	
Article No.		

The composition of your article number is explained on page 3.1.i

7 0 0 0	– _ _ _ _ _	– _ _ _	_ _ _ _
	1 Form	**2 Cable Type**	**3 Cable Length**

Notes

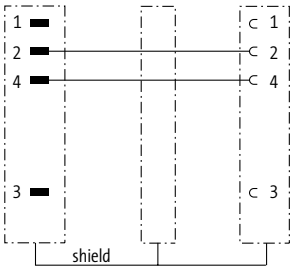
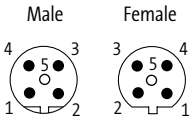
Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

PROFIBUS

– Connection cables M12 - M12

– shielded, B-coded

Approvals:

	Male straight	Female straight	Male 90°	Female 90°
				
1 Form	**44001**		**44021**	
Type	2-pole		2-pole	
Circuit diagram				
Contact layout				

2 Cable Type	**Jacket Color**	**Jacket Color**
1 × 2 × Ø 0.64 mm	**violet**	**violet**
PUR (UL/CSA), suitable for C-tracks	**841**	**841**
PUR (UL/CSA), Highspeed C-track	**840**	**840**
PUR (UL/CSA), Torsion	**843**	**843**
PVC (UL/CSA)	**850**	**850**

Terminator M12	**7000-14041-0000000**
Flange M12, B-coded	**7000-44111-0000000**

3 Cable Length	
0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data	
Operating voltage	max. 60 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

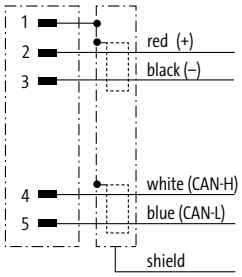
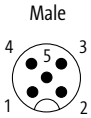
Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

DeviceNet, CANopen

– With open ended wires M12

– shielded

Approvals:

	Male straight	Male 90°
		
1 Form	**13105**	**13125**
Type	**5-pole**	**5-pole**
Circuit diagram		
Contact layout		
2 Cable Type	**Jacket Color**	**Jacket Color**
2×0.25 + 2×0.34 mm²	**violet**	**violet**
PUR (UL/CSA), suitable for C-tracks	**803**	**803**
Terminator M12	**7000-13461-0000000**	
Control cabinet entry system M12	**7000-42111-0000000**	
3 Cable Length		
1.5 m	**0150**	
3.0 m	**0300**	
5.0 m	**0500**	
7.5 m	**0750**	
10.0 m	**1000**	
Technical Data		
Operating voltage	max. 60 V AC/DC	
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	
Article No.		
The composition of your article number is explained on page 3.1.i	**7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _**	
		1 Form **2 Cable Type** **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

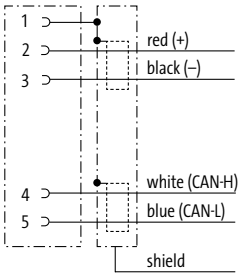
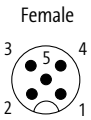
DeviceNet, CANopen

– With open ended wires M12

– shielded

DeviceNet CANopen

Approvals: cULus PCT cULus Listed

	Female	Female
	straight	90°
		
1 Form	**13225**	**13251**
Type	**5-pole**	**5-pole**
Circuit diagram		
Contact layout		
2 Cable Type	**Jacket Color**	**Jacket Color**
2×0.25 + 2×0.34 mm²	**violet**	**violet**
PUR (UL/CSA), suitable for C-tracks	**803**	**803**
Terminator M12	**7000-13461-0000000**	
Control cabinet entry system M12	**7000-42111-0000000**	
3 Cable Length		
1.5 m	**0150**	
3.0 m	**0300**	
5.0 m	**0500**	
7.5 m	**0750**	
10.0 m	**1000**	
Technical Data		
Operating voltage	max. 60 V AC/DC	
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	
Article No.		

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

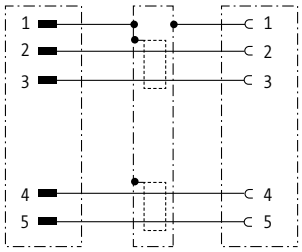
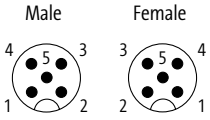
DeviceNet, CANopen

– Connection cables M12 - M12

– shielded

DeviceNet CANopen

Approvals: cULus Listed

	Male straight	**Female** straight	**Male** 90°	**Female** 90°
				
1 Form	**40531**		**40551**	
Type	**5-pole**		**5-pole**	
Circuit diagram				
Contact layout				
2 Cable Type	**Jacket Color**		**Jacket Color**	
2×0.25 + 2×0.34 mm²	**violet**		**violet**	
PUR (UL/CSA), suitable for C-tracks	**803**		**803**	
Terminator M12	**7000-13461-0000000**			
Control cabinet entry system M12	**7000-42111-0000000**			
3 Cable Length				
1.5 m	**0150**			
3.0 m	**0300**			
5.0 m	**0500**			
7.5 m	**0750**			
10.0 m	**1000**			
Technical Data				
Operating voltage	max. 60 V AC/DC			
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)			
Temperature range	-25...+85 °C, depending on cable quality			
Article No.				
The composition of your article number is explained on page 3.1.i	7 0 0 0 – _ _ _ _ _ –		_ _ _	_ _ _ _
		1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

MURR ELEKTRONIK
stay connected

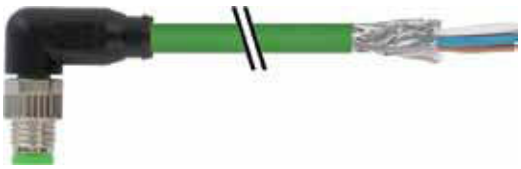
Ethernet CAT 5e

– With open ended wires M8

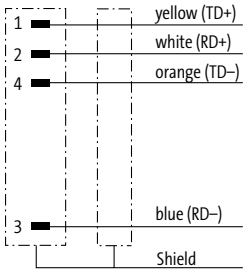
– shielded

EtherCAT

Approvals:

	Male straight	**Male** 90°
		
1 Form	**08811**	**08821**
Type	**4-pole**	**4-pole**

Circuit diagram



Contact layout

Male



2 Cable Type	**Jacket Color**		**Jacket Color**	
Wire diameter 0.15 mm²		**green**		**green**
PUR (UL/CSA)		**791**		**791**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data	
Operating voltage	30 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

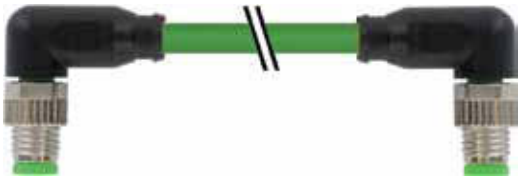
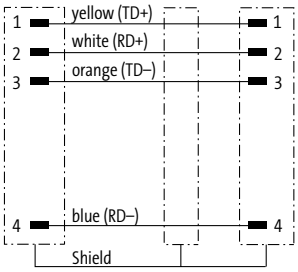
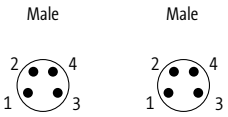
Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

Ethernet CAT 5e

– Connection cables M8 - M8

– shielded

EtherCAT

	Male straight	**Male** straight	**Male** 90°	**Male** 90°
				
1 Form	**89701**		**89771**	
Approvals	**GOST**		**cCSAus**	
Type	**4-pole**		**4-pole**	
Circuit diagram				
Contact layout				
2 Cable Type	**Jacket Color**		**Jacket Color**	
Wire diameter 0.15 mm²	**green**		**green**	
PUR (UL/CSA)	**791**		**791**	
3 Cable Length				
1.5 m	**0150**			
3.0 m	**0300**			
5.0 m	**0500**			
7.5 m	**0750**			
10.0 m	**1000**			
Technical Data				
Operating voltage	30 V AC/DC			
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)			
Temperature range	-25...+85 °C, depending on cable quality			
Article No.				
The composition of your article number is explained on page 3.1.i	7 0 0 0 – _ _ _ _ _ – _ _ _			_ _ _ _
		1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

MURR ELEKTRONIK
stay connected

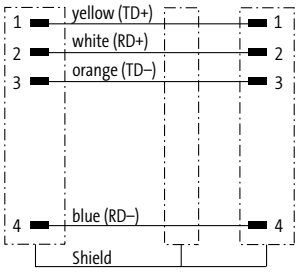
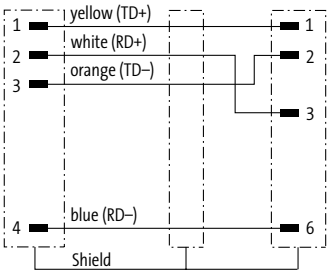
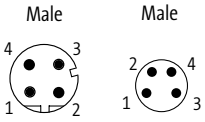
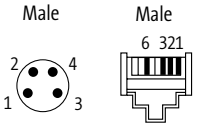
Ethernet CAT 5e

– Connection cables

– shielded

EtherCAT

	Male M12 straight	**Male M8** straight	**Male M8** 90°	**Male RJ45** straight
				

1	**Form**	**44901**	**89781**
	Approvals	**cCSAus, GOST**	
	Type	**4-pole**	**4-pole**
	Circuit diagram		
	Contact layout		
2	**Cable Type**	**Jacket Color**	**Jacket Color**
	Wire diameter 0.15 mm²	**green**	**green**
	PUR (UL/CSA)	**791**	**791**
3	**Cable Length**		
	1.5 m	**0150**	
	3.0 m	**0300**	
	5.0 m	**0500**	
	7.5 m	**0750**	
	10.0 m	**1000**	
	Technical Data		
	Operating voltage	30 V AC/DC	
	Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	IP65, IP67 (M8) - IP20 (RJ45)
	Temperature range	-25...+85 °C, depending on cable quality	-20...+80 °C, depending on cable quality
	Article No.		
	The composition of your article number is explained on page 3.1.i	7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _	
		1 Form	**2 Cable Type** / **3 Cable Length**

Notes

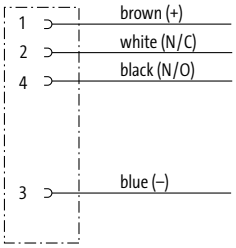
Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

Power cable

– With open ended wires M8

– EtherCat Power

Approvals:

	Female straight	**Female** 90°
		
1 Form	**08871**	**08881**
Type	**4-pole**	**4-pole**
Circuit diagram		
Contact layout	Female 	
2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 0.34 mm²	**black**	**black**
PUR (UL/CSA)	**634**	**634**
3 Cable Length		
1.5 m	**0150**	
3.0 m	**0300**	
5.0 m	**0500**	
7.5 m	**0750**	
10.0 m	**1000**	
Technical Data		
Operating voltage	max. 30 V AC/DC	
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	
Article No.		
The composition of your article number is explained on page 3.1.i	7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _	
	1 Form	**2 Cable Type** / **3 Cable Length**
Notes		
	Other versions on request.	

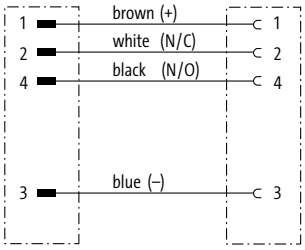
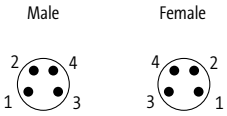
MURR ELEKTRONIK
stay connected

Power cable

– Connection cables M8 - M8

– EtherCat Power

Approvals:

	Male straight	**Female** straight	**Male** 90°	**Female** 90°
				
1 Form	**89401**		**89431**	
Type	**4-pole**		**4-pole**	
Circuit diagram				
Contact layout				
2 Cable Type	**Jacket Color**		**Jacket Color**	
Wire diameter 0.34 mm²	**black**		**black**	
PUR (UL/CSA)	**634**		**634**	
3 Cable Length				
0.3 m	**0030**			
0.6 m	**0060**			
1.0 m	**0100**			
1.5 m	**0150**			
2.0 m	**0200**			
Technical Data				
Operating voltage	max. 30 V AC/DC			
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)			
Temperature range	-25...+85 °C, depending on cable quality			
Article No.				
The composition of your article number is explained on page 3.1.i	7 0 0 0 – _ _ _ _ _ – _ _ _			_ _ _ _
		1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request.

FIELDBUS CONNECTORS

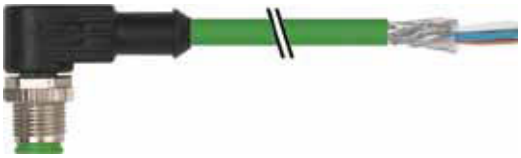
Ethernet CAT 5e

– With open ended wires M12

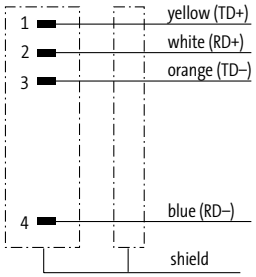
– shielded, D-coded (M12)

EtherNet/IP conformance tested EtherCAT PROFINET

Approvals: c SP us, PCT, c UL us Listed

	Male	Male
	straight	90°
		
1 Form	**14541**	**14561**
Type	**4-pole**	**4-pole**

Circuit diagram



Contact layout

Male



2 Cable Type	**Jacket Color**			**Jacket Color**		
Wire diameter 0.34 mm²		**green**	**violet**		**green**	**violet**
PUR (UL/CSA)		**794**			**794**	
PUR (UL/CSA), Torsion		**793**			**793**	
PUR (UL/CSA), suitable for C-tracks		**796**	**798**		**796**	**798**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data	
Operating voltage	60 V DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

MURR ELEKTRONIK
stay connected

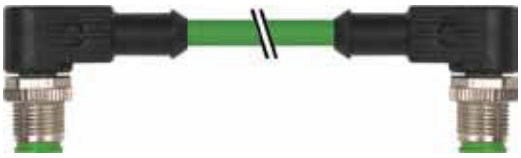
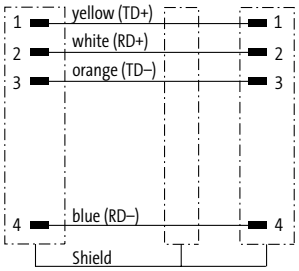
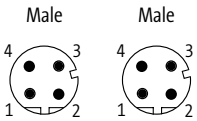
Ethernet CAT 5e

– Connection cables M12 - M12

– shielded, D-coded

EtherNet/IP conformance tested EtherCAT PROFINET

Approvals: cULus

	Male straight	Male straight	Male 90°	Male 90°
				
1 Form	**44511**		**44561**	
Type	**4-pole**		**4-pole**	
Circuit diagram				
Contact layout				

2 Cable Type	**Jacket Color**			**Jacket Color**		
Wire diameter 0.34 mm²		**green**	**violet**		**green**	**violet**
PUR (UL/CSA)		**794**			**794**	
PUR (UL/CSA), Torsion		**793**			**793**	
PUR (UL/CSA), suitable for C-tracks		**796**	**798**		**796**	**798**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data	
Operating voltage	60 V DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_____	–	___	____
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

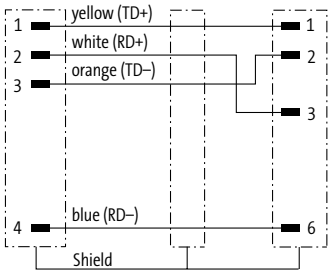
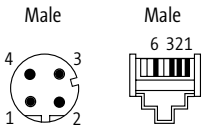
Ethernet CAT 5e

– Connection cables

– shielded, D-coded (M12)

EtherNet/IP conformance tested EtherCAT PROFINET

Approvals:

	Male M12 straight	**Male RJ45** straight	**Male M12** straight	**Male RJ45** 45° on bottom
				
1 Form	**44711**		**44731**	
Type	**4-pole**		**4-pole**	
Circuit diagram				
Contact layout				

2 Cable Type	**Jacket Color**			**Jacket Color**		
Wire diameter 0.34 mm²		**green**	**violet**		**green**	**violet**
PUR (UL/CSA)		**794**			**794**	
PUR (UL/CSA), Torsion		**793**			**793**	
PUR (UL/CSA), suitable for C-tracks		**796**	**798**		**796**	**798**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data		
Operating voltage	60 V DC	
Protection	IP65, IP67 (M12) - IP20 (RJ45)	
Temperature range	-25...+85 °C, depending on cable quality	-25...+70 °C

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	– _ _ _ _ _	– _ _ _	_ _ _ _
	1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

MURR ELEKTRONIK
stay connected

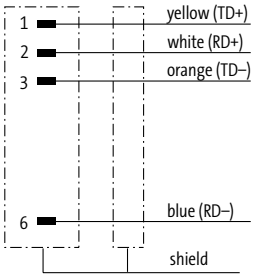
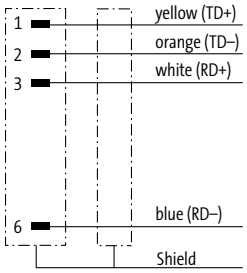
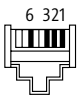
Ethernet CAT 5e

– with open ended wires RJ45

– shielded

EtherNet✓IP conformance tested EtherCAT PROFINET

Approvals:

	Male	Male	Male
	straight	45° on top	on bottom
			
1 Form	**74101**	**74121**	**74141**
Type	**4-pole**	**4-pole**	**4-pole**
Circuit diagram			
Contact layout	Male 		

2 Cable Type	**Jacket Color**			**Jacket Color**			**Jacket Color**		
Wire diameter 0.34 mm²		**green**	**violet**		**green**	**violet**		**green**	**violet**
PUR (UL/CSA)		**794**			**794**			**794**	
PUR (UL/CSA), Torsion		**793**			**793**			**793**	
PUR (UL/CSA), suitable for C-tracks		**796**	**798**		**796**	**798**		**796**	**798**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data	
Operating voltage	60 V DC
Protection	IP20
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

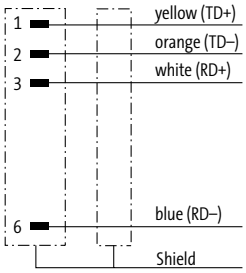
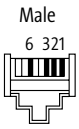
Ethernet CAT 5e

– with open ended wires RJ45

– shielded

EtherNet/IP conformance tested EtherCAT PROFINET

Approvals:

	Male 45° left	**Male** 45° right
		
1 Form	**74161**	**74181**
Type	**4-pole**	**4-pole**
Circuit diagram		
Contact layout		
2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 0.34 mm²	**green** / **violet**	**green** / **violet**
PUR (UL/CSA)	**794**	**794**
PUR (UL/CSA), Torsion	**793**	**793**
PUR (UL/CSA), suitable for C-tracks	**796** / **798**	**796** / **798**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data	
Operating voltage	60 V DC
Protection	IP20
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_____	–	___	____
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

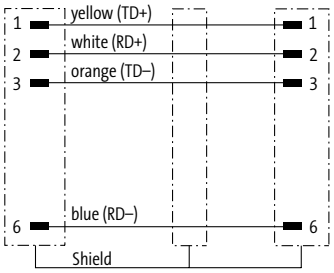
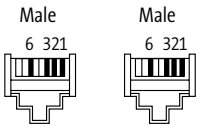
Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

Ethernet CAT 5e

– with open ended wires RJ45

– shielded

EtherNet/IP conformance tested EtherCAT PROFINET Approvals:

	Male RJ45 straight	Male RJ45 straight	Male RJ45 45° on bottom	Male RJ45 45° right
				
1 Form	**74301**		**74521**	
Type	**4-pole**		**4-pole**	
Circuit diagram				
Contact layout				

2 Cable Type	**Jacket Color**			**Jacket Color**		
Wire diameter 0.34 mm²		**green**	**violet**		**green**	**violet**
PUR (UL/CSA)		**794**			**794**	
PUR (UL/CSA), Torsion		**793**			**793**	
PUR (UL/CSA), suitable for C-tracks		**796**	**798**		**796**	**798**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data	
Operating voltage	60 V DC
Protection	IP20
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

Ethernet CAT 5e

– Push Pull

– AIDA-conform

PROFI NET

Male RJ45
straight

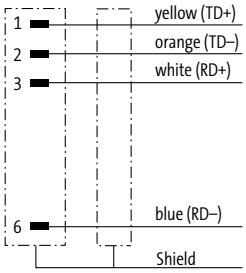


1 Form

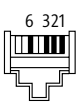
74601

Type: **4-pole**

Circuit diagram



Contact layout



2 Cable Type

	Jacket Color
Wire diameter 0.34 mm²	**green**
PUR (UL/CSA)	**794**
PUR (UL/CSA), suitable for C-tracks	**796**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 60 V DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-40...+70 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	74601	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Further cable lengths on request.
Connection accessories and general accessories can be found at the end of chapter 3.6.

MURR ELEKTRONIK
stay connected

Ethernet CAT 5e

– Push Pull

– AIDA-conform

PROFI NET

Male RJ45
straight

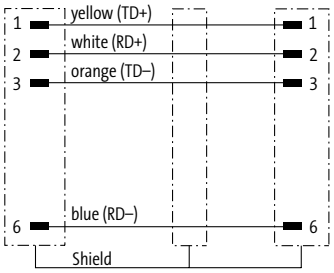
Male RJ45
straight



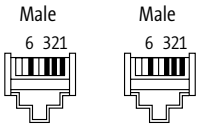
1 Form — 74641

Type — **4-pole**

Circuit diagram



Contact layout



2 Cable Type — Jacket Color

Wire diameter 0.34 mm²	**green**
PUR (UL/CSA)	**794**
PUR (UL/CSA), suitable for C-tracks	**796**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 60 V DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-40...+70 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

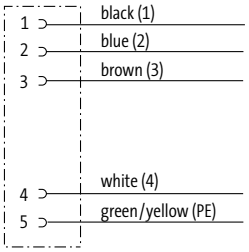
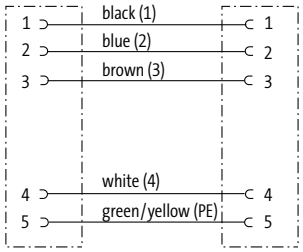
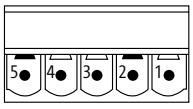
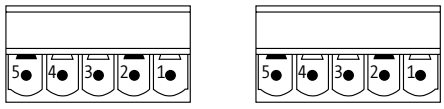
7000	–	74641	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Further cable lengths on request.
Connection accessories and general accessories can be found at the end of chapter 3.6.

Power plug

– Push Pull

	Power (male) straight	**Power (male)** straight	**Power (male)** straight
			
1 Form	**99621**	**99641**	
Type	**5-pole**	**5-pole**	
Circuit diagram			
Contact layout			
2 Cable Type	**Jacket Color**	**Jacket Color**	
Wire diameter 2.5 mm²	**gray**	**gray**	
PUR (UL/CSA)	**962**	**962**	
3 Cable Length			
1.5 m	**0150**		
3.0 m	**0300**		
5.0 m	**0500**		
7.5 m	**0750**		
10.0 m	**1000**		
Technical Data			
Operating voltage	max. 24 V AC/DC		
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)		
Temperature range	-40...+70 °C, depending on cable quality		
Article No.			
The composition of your article number is explained on page 3.1.i	7 0 0 0 – _ _ _ _ _ – _ _ _	**1 Form**	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Further cable lengths on request.
Connection accessories and general accessories can be found at the end of chapter 3.6.

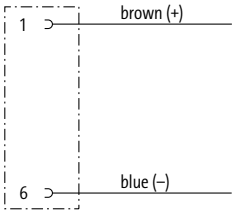
MURR ELEKTRONIK
stay connected

Cube67, 6-pole

– With open ended wires M12

– Actuator supply external

Approvals:

	Female straight	**Female** 90°
		
1 Form	**15001**	**15021**
Type	**2-pole**	**2-pole**
Circuit diagram		
Contact layout		
2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 0.5 mm²	**gray**	**gray**
PUR (UL/CSA)	**414**	**414**
3 Cable Length		
1.5 m	**0150**	
3.0 m	**0300**	
5.0 m	**0500**	
7.5 m	**0750**	
10.0 m	**1000**	
Technical Data		
Operating voltage	max. 30 V AC/DC	
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	
Article No.		
The composition of your article number is explained on page 3.1.i	**7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _**	
	1 Form	**2 Cable Type** **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

FIELDBUS CONNECTORS

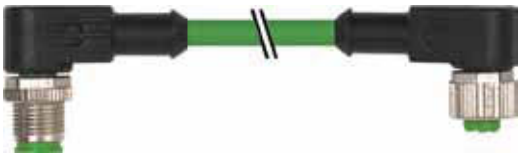
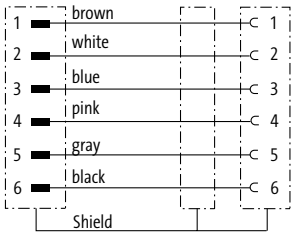
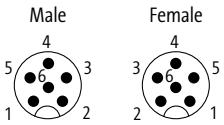
Cube67, 6-pole

– Connection cables M12 - M12

– shielded

– Hybrid cable for communication and supply

Approvals:

	Male straight	**Female** straight	**Male** 90°	**Female** 90°
				
1 Form	**46041**		**46061**	
Type	**6-pole**		**6-pole**	
Circuit diagram				
Contact layout				
2 Cable Type	**Jacket Color**		**Jacket Color**	
4×0.5 + 2×0.25 mm²		**green**		**green**
PUR (UL/CSA)		**802**		**802**
Terminator M12	**7000-15041-0000000**			
Control cabinet entry system M12	**7000-46111-0000000**			
T-coupler M12/M12, female/male	**7000-46101-0000000**			
3 Cable Length				
0.15 m	**0015**			
0.3 m	**0030**			
0.6 m	**0060**			
1.0 m	**0100**			
1.5 m	**0150**			
2.0 m	**0200**			
Technical Data				
Operating voltage	max. 30 V AC/DC			
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)			
Temperature range	-25...+85 °C, depending on cable quality			
Article No.				

The composition of your article number is explained on page 3.1.i

7 0 0 0	– _ _ _ _ _	– _ _ _	_ _ _ _
	1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

MURR ELEKTRONIK
stay connected

AS-Interface

– Connection cables M12 - M12

– for MASI68

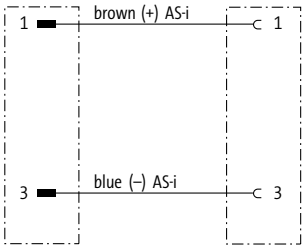
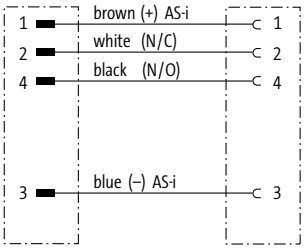
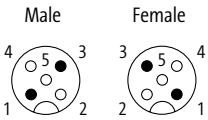
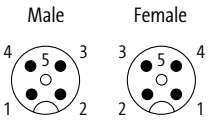
Approvals: cULus

Male
straight

Female
straight



1 Form

	40005	40021
Type	**2-pole**	**4-pole**
Circuit diagram		
Contact layout		

2 Cable Type

	Jacket Color	Jacket Color
Wire diameter 1.5 mm²	**gray**	**gray**
PUR (UL/CSA)	**588**	
Wire diameter 0.75 mm²		
PUR (UL/CSA), suitable for C-tracks		**862**

3 Cable Length

0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data

Operating voltage	max. 250 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7060	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

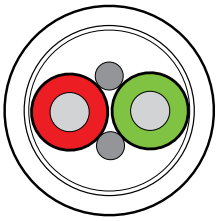
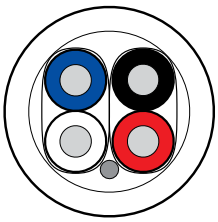
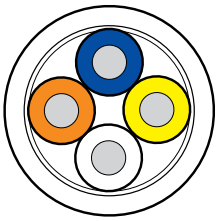
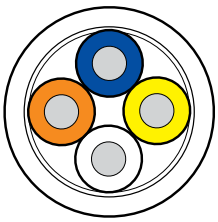
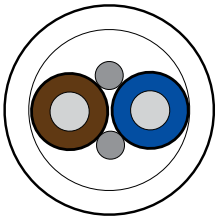
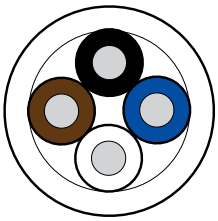
FIELDBUS CONNECTORS

Connection accessories			Art-No.
	**T-coupler M12/M12, female/male**		
	straight, A-coded, 6-pole, shielded	Cube67 additional actuator power supply	**7000-46101-0000000**
	straight, A-coded, 4-pole	MASI68 additional actuator power supply	**7060-42701-0000000**
	**Male M12, field-wireable, screw terminals**		
	straight, B-coded, 5-pole, shielded	PROFIBUS, Interbus Cable diameter (6...8 mm)	**7000-14001-0000000**
	**Female M12, field-wireable, screw terminals**		
	straight, B-coded, 5-pole, shielded	PROFIBUS, Interbus Cable diameter (6...8 mm)	**7000-14021-0000000**
	**Male M12, field-wireable, screw terminals**		
	90°, B-coded, 5-pole, shielded	PROFIBUS, Interbus Cable diameter (6...8 mm)	**7000-14011-0000000**
	90°, D-coded, 4-pole, shielded	Ethernet CAT 5 Cable diameter (6...8 mm)	**7000-14581-0000000**
	**Female M12, field-wireable, screw terminals**		
	90°, B-coded, 5-pole, shielded	PROFIBUS, Interbus Cable diameter (6...8 mm)	**7000-14031-0000000**
	**Male M12, field-wireable, IDC terminals**		
	straight, B-coded, 3-pole, shielded	PROFIBUS Cable diameter (7...8.8 mm)	**7000-14201-0000000**
	straight, D-coded, 4-pole, shielded	Ethernet CAT 5 Cable diameter (5.5...7.2 mm)	**7000-14521-0000000**
	**Female M12, field-wireable, IDC terminals**		
	straight, B-coded, 3-pole, shielded	PROFIBUS Cable diameter (7...8.8 mm)	**7000-14221-0000000**
	straight, D-coded, 4-pole, shielded	Ethernet CAT 5 Cable diameter (5.5...7.2 mm)	**7000-14621-0000000**
	**Male M12, field-wireable, screw terminals**		
	straight, A-coded, 5-pole	DeviceNet, CANopen Cable diameter (6...8 mm)	**7000-12761-0000000**

Connection accessories			Art-No.
	**Female M12, field-wireable, screw terminals**		
	straight, A-coded, 5-pole	DeviceNet, CANopen Cable diameter (6...8 mm)	**7000-12961-0000000**
	**Male M12, field-wireable, screw terminals**		
	90°, A-coded, 5-pole	DeviceNet, CANopen Cable diameter (6...8 mm)	**7000-12881-0000000**
	**Female M12, field-wireable, screw terminals**		
	90°, A-coded, 5-pole	DeviceNet, CANopen Cable diameter (6...8 mm)	**7000-13041-0000000**
	**Male RJ45, CAT 5, field-wireable, IDC terminals**		
	straight, IP20, 4-pole, shielded	Ethernet CAT 5 Cable diameter (6.5...6.9 mm)	**7000-99051-0000000**
	**Adapter M12/RJ45, CAT 5 female/female**		
	90°, D-coded, 4-pole	Ethernet CAT 5	**7000-99052-0000000**
	**Terminator M12**		
	straight, A-coded, 5-pole	DeviceNet, CANopen	**7000-13461-0000000**
	straight, B-coded, 4-pole	PROFIBUS	**7000-14041-0000000**
	straight, A-coded, 6-pole	Cube67	**7000-15041-0000000**
	**Terminator 7/8"**		
	straight, screw fixing, 5-pole	DeviceNet, CANopen	**7000-78301-0000000**

FIELDBUS CONNECTORS

Connection accessories			Art-No.
	**Control cabinet entry system M12**		
	straight, A-coded, 5-pole	DeviceNet, CANopen shielded	**7000-42111-0000000**
	straight, B-coded, 5-pole	PROFIBUS, Interbus shielded	**7000-44111-0000000**
	straight, D-coded, 4-pole, shielded (female/female)	Ethernet CAT 5	**7000-44611-0000000**
	straight, A-coded, 6-pole, shielded	Cube67	**7000-46111-0000000**
	**Flange M12 male, pre-wired 0.2 m**		
	straight, B-coded, 5-pole	PROFIBUS, Interbus	**7000-14121-9750020**
	A-coded, 5-pole	DeviceNet, CANopen	**7000-13521-9720020**
	**Flange M12 female, pre-wired 0.2 m**		
	straight, B-coded, 5-pole	PROFIBUS, Interbus	**7000-14161-9750020**
	A-coded, 5-pole	DeviceNet, CANopen	**7000-13561-9720020**
	**Flange M12 female, CAT 5, pre-wired 0.2 m**		
	straight, D-coded, 4-pole, shielded	Ethernet CAT 5	**7000-14501-9760020**
	**Push Pull Power connector, spring clamp terminals**		
	straight, 5-pole	PROFINET IO Cable diameter (9...13 mm)	**7000-99601-0000000**
	**Push Pull RJ45 data connector, IDC terminals**		
	straight, 4-pole	PROFINET IO Cable diameter (5...8 mm)	**7000-99611-0000000**
	**Push Pull SCRJ POF male, field-wireable**		
	straight, IP65/67, for POF 1 mm	PROFINET IO, cable diameter 6.5...9.5 mm	**7000-99701-0000000**

Connection accessories			Art-No.
	**Cable drum (100 m)**		
	1 × 2 × Ø 0.64 mm, (violet) Suitable for C-tracks	PROFIBUS	**7000-C0201-8400000**
	**Cable drum (100 m)**		
	2×0.25 + 2×0.34 mm², violet Suitable for C-tracks	DeviceNet, CANopen	**7000-C0201-8030000**
	**Cable drum (100 m)**		
	2 × 2 × 0.34 mm², green Suitable for C-tracks	Ethernet CAT 5, PROFINET IO, EtherCAT	**7000-C0201-7960000**
	**Cable drum (100 m)**		
	2 × 2 × 0.34 mm², violet Suitable for C-tracks	Ethernet CAT 5, PROFINET IO, EtherCAT	**7000-C0201-7980000**
	**Cable drum (100 m)**		
	2 × 1.5 mm², gray	AS-Interface, MASI68	**7000-C0201-5880000**
	**Cable drum (100 m)**		
	4 × 0.75 mm², gray	AS-Interface, MASI68	**7000-C0201-8620000**
	**Bus Connection Plug 90°**		
	SUB-D9 (female), screw terminals	CANopen	**55760**
	SUB-D9 (male), screw terminals	PROFIBUS	**55762**

FIELDBUS CONNECTORS

Connection accessories			Art-No.
	**Bus Connection Plug 180°**		
	SUB-D9 (male), cut clamps, flexible cable	PROFIBUS	**55583**
	SUB-D9 (male), cut clamps, rigid cable	PROFIBUS	**55584**
	**Bus Connection Plug 90°**		
	SUB-D9 (male), cut clamps, rigid cable	PROFIBUS	**55585**
	SUB-D9 (male), cut clamps, flexible cable	PROFIBUS	**55587**
	**Bus Connection Plug 90°**		
	SUB-D9 (male), cut clamps, rigid cable, programming device conn.	PROFIBUS	**55586**
	SUB-D9 (male), cut clamps, flexible cable, programming device conn.	PROFIBUS	**55588**
	**Bus Connection Plug 90°**		
	SUB-D9 (male); M12 × 1, B-coded	PROFIBUS	**7000-99441-0000000**

Labeling accessories			Art-No.
	**Slip-on cable sleeve**		
	for ACS label plates (4 × 18 mm)	Cable diameter (4...6.5 mm)	**7000-99004-0000000**
	Snap-on cable sleeve		
	for ACS label plates (4 × 18 mm)	Cable diameter (4.2...5.6 mm)	**7000-99005-0000000**
	for ACS label plates (4 × 18 mm)	Cable diameter (5...7 mm)	**7000-99006-0000000**
	ACS label plate		
	for self marking (4 × 18 mm)	Cable sleeves	**7000-99002-0000000**

Mounting accessories			Art-No.
	**Torque wrench set**		
	M8 (0.4 Nm, AF9)		**7000-99101-0000000**

Mounting accessories			Art-No.
	**Torque wrench set**		
	M12 (0.6 Nm, AF13)	M12 Round Plug Connectors	**7000-99102-0000000**

End fitting accessories			Art-No.
	**Tube adapter**		
	snap-in for corrugated tube (size 13mm)	Cable diameter (4...7 mm)	**7000-99081-0000000**



PLUG CONNECTORS FOR **FOOD & BEVERAGE**

- **Made with stainless steel**
- **Food grade quality**
- **High protection degree**

MEETS DEMANDING HYGIENIC STANDARDS

The food and beverage industry needs an extremely clean environment – perfect hygiene is required. Products and components have to be highly resistant and handle tough environments. Murrelektronik offers a wide connector range for this industry and each product meets the tough requirements. All metal parts are made of stainless steel and the cables feature a PVC or TPE-S jacket.

Murrelektronik is closely connected to this industry and can fulfill all the important requirements of the food and beverage industry. And Murrelektronik offers even more:

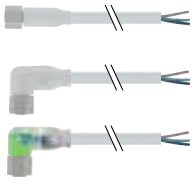
- System solutions
- Comprehensive diagnostic options
- Vibration-proof products
- Excellent logistics for fast deliveries
- Specialists with industry-specific knowledge

ECOLAB

C SA US

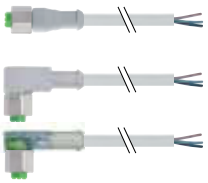
STAINLESS STEEL

With Open Ended Wires



M8 female
- Straight
- 90°
- 90° with LED

Page 3.7.1



M12 female
- Straight
- 90°
- 90° with LED

Page 3.7.4



M12 Steel female
- Straight

Page 3.7.7



Valve Connectors
- Form A (18 mm)
- Form B (10 mm)
- Form BI (11 mm)
- Form C (8 mm)
- Form CI (9.4 mm)

Page 3.7.8

Connection Cables



M12 male
- Straight

M12 female
- Straight
- 90°
- 90° with LED

Page 3.7.11



M12 Steel male
- Straight

M12 Steel female
- Straight

Page 3.7.13

Field-Wireable



Insulation Displacement Technology

M12 male
- Straight

M12 female
- Straight
- 90°

Page 3.7.14



Screw Terminals

M12 male/female
- Straight
- 90°

Page 3.7.15

NOTES

Open ended wires

– M8

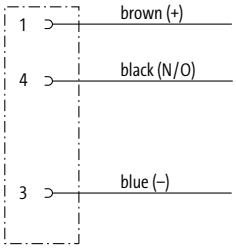
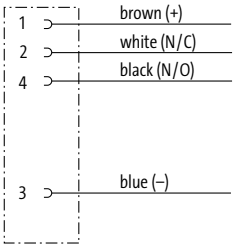
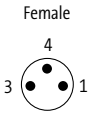
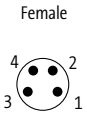
– Stainless Steel 1.4404 (V4A)

Approvals: cULus ECOLAB

Female
straight



1 Form

	08041	08061
Type	**3-pole**	**4-pole**
Circuit diagram		
Contact layout		

2 Cable Type

	Jacket Color	Jacket Color
Wire diameter 0.25 mm²	**gray**	**gray**
PVC (UL/CSA)	**210**	**211**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 60 V AC/DC	max. 30 V AC/DC
Protection	IP65, IP67, IP68 inserted and tightened (EN 60529)	
Temperature range	-25...+85 °C	

Article No.

The composition of your article number is explained on page 3.1.i

7014	– _ _ _ _ _	– _ _ _	_ _ _ _
	1 Form	2 Cable Type	3 Cable Length

Notes

Other versions on request. Further cable lengths on request.

Open ended wires

– M8

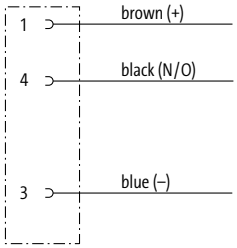
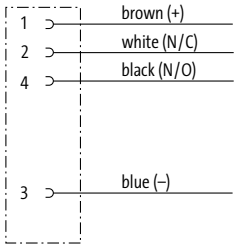
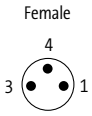
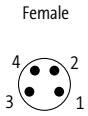
– Stainless Steel 1.4404 (V4A)

Approvals:

Female

90°



1 Form	08081	08101
Type	3-pole	4-pole
Circuit diagram		
Contact layout		
2 Cable Type	Jacket Color	Jacket Color
Wire diameter 0.25 mm²	gray	gray
PVC (UL/CSA)	210	211
3 Cable Length		
1.5 m	0150	
3.0 m	0300	
5.0 m	0500	
7.5 m	0750	
10.0 m	1000	
Technical Data		
Operating voltage	max. 60 V AC/DC	max. 30 V AC/DC
Protection	IP65, IP67, IP68 inserted and tightened (EN 60529)	
Temperature range	-25...+85 °C	
Article No.		
The composition of your article number is explained on page 3.1.i	7014 – _____ – ___	____
	1 Form	**2** Cable Type / **3** Cable Length

Notes

Other versions on request. Further cable lengths on request.

Open ended wires

– M8

– Stainless Steel 1.4404 (V4A)

Approvals: cULus ECOLAB

Female

90° with LED

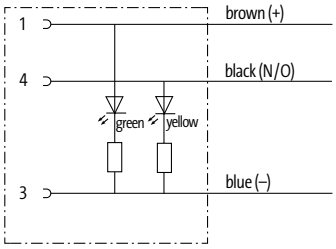


1 Form

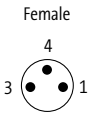
08121

Type	**3-pole with 2 × LED (PNP)**
	(NPN) on request

Circuit diagram



Contact layout



2 Cable Type

	Jacket Color
Wire diameter 0.25 mm²	**gray**
PVC (UL/CSA)	**210**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	24 V DC ±25 %
Protection	IP65, IP67, IP68 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7014	–	08121	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Further cable lengths on request.

PLUG CONNECTORS FOR FOOD & BEVERAGE

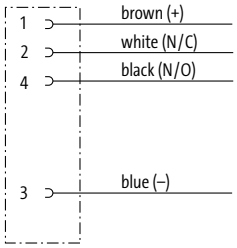
Open ended wires

– M12

– Stainless Steel 1.4404 (V4A)

– Profile gasket

Approvals:

	Female straight	**Female** 90°
		
1 Form	**12221**	**12341**
Type	**4-pole**	**4-pole**
Circuit diagram		
Contact layout	Female 	
2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 0.34 mm²	**gray**	**gray**
PVC (UL/CSA)	**214**	**214**
3 Cable Length		
1.5 m	**0150**	
3.0 m	**0300**	
5.0 m	**0500**	
7.5 m	**0750**	
10.0 m	**1000**	
Technical Data		
Operating voltage	max. 250 V AC/DC	
Protection	IP65, IP67, IP68 inserted and tightened (EN 60529)	
Temperature range	-25...+85 °C	
Article No.		
The composition of your article number is explained on page 3.1.i	**7014** – _____ – ___ ____	
	1 Form	**2 Cable Type** **3 Cable Length**
Notes		
	Other versions on request. Further cable lengths on request.	

Open ended wires

– M12

– Stainless Steel 1.4404 (V4A)

– Profile gasket

Approvals: cULus ECOLAB

Female

90° with LED

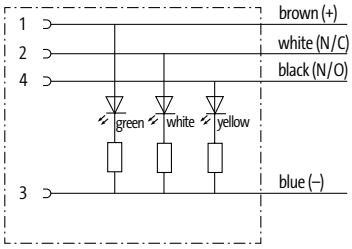


1 Form

12421

Type	**4-pole with 3 × LED (PNP)** **(NPN) on request**

Circuit diagram



Contact layout

Female



2 Cable Type

	Jacket Color
Wire diameter 0.34 mm²	**gray**
PVC (UL/CSA)	**214**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	24 V DC ±25 %
Protection	IP65, IP67, IP68 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7014	–	12421	–	___	____
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Further cable lengths on request.

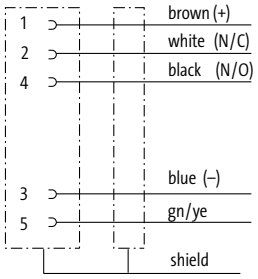
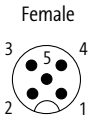
Open ended wires

– M12, shielded

– Stainless Steel 1.4404 (V4A)

– Profile gasket

Approvals: cULus ECOLAB

	Female straight	**Female** 90°
		
1 Form	**13221**	**13281**
Type	**5-pole**	**5-pole**
Circuit diagram		
Contact layout		
2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 0.34 mm²	**gray**	**gray**
PVC	**348**	**348**
3 Cable Length		
1.5 m	**0150**	
3.0 m	**0300**	
5.0 m	**0500**	
7.5 m	**0750**	
10.0 m	**1000**	
Technical Data		
Operating voltage	max. 60 V AC/DC	
Protection	IP65, IP67, IP68 inserted and tightened (EN 60529)	
Temperature range	-25...+85 °C	
Article No.		
The composition of your article number is explained on page 3.1.i	7 0 1 4 – _ _ _ _ _ – _ _ _	_ _ _ _
		1 Form / **2 Cable Type** / **3 Cable Length**
Notes		
	Other versions on request. Further cable lengths on request.	

MURR ELEKTRONIK
stay connected

Open ended wires

– M12-Steel

– Stainless Steel 1.4404 (V4A)

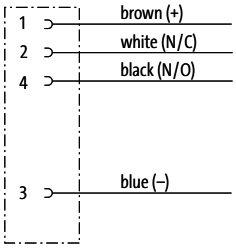
Female
straight



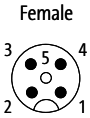
Approvals:

1 Form

12221

Type	**4-pole**
Circuit diagram	

Contact layout



2 Cable Type

	Jacket Color
Wire diameter 0.34 mm²	**gray**
PVC (UL/CSA)	**214**
TPE-S	**336**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 32 V AC/DC
Protection	IP65, IP68, IP69K when plugged and screwed down (EN 60529)
Temperature range	-40...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7044	–	12221	–	___	____
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Further cable lengths on request.

Open ended wires

– Valve Connectors

– Screw, Stainless Steel 1.4404 (V4A)

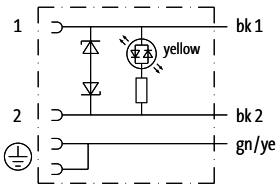
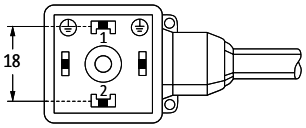
Form A (18 mm)



Approvals:

1 Form

18021

Type	**24 V AC/DC**
	LED and suppression
Circuit diagram	
Contact layout	

2 Cable Type

Wire diameter 0.75 mm²	Jacket Color
PVC	gray 216

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	24 V AC/DC ±25 %
Protection	IP65, IP68, IP69K when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7014	–	18021	–	___	____
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

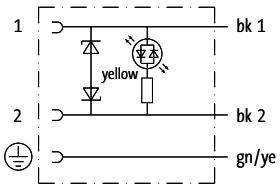
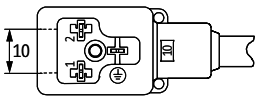
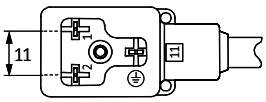
Other versions on request. Further cable lengths on request.

Open ended wires

– Valve Connectors

– Screw, Stainless Steel 1.4404 (V4A)

Approvals: cULus ECOLAB

	Form B (10 mm)	Form BI (11 mm)
		Industrial standard
		
1 Form	**10021**	**11021**
Type	**24 V AC/DC** **LED and suppression**	**24 V AC/DC** **LED and suppression**
Circuit diagram		
Contact layout		
2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 0.75 mm²	**gray**	**gray**
PVC	**216**	**216**
3 Cable Length		
1.5 m	**0150**	
3.0 m	**0300**	
5.0 m	**0500**	
7.5 m	**0750**	
10.0 m	**1000**	
Technical Data		
Operating voltage	24 V AC/DC ±25 %	
Protection	IP65, IP68, IP69K when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C	
Article No.		
The composition of your article number is explained on page 3.1.i	**7014 – _____ – ___ ____**	
		1 Form **2 Cable Type** **3 Cable Length**

Notes

Other versions on request. Further cable lengths on request.

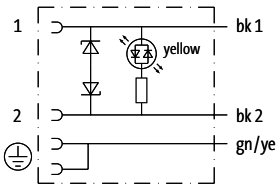
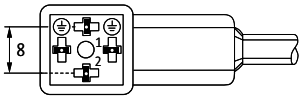
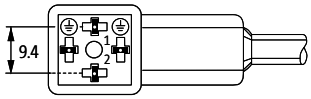
PLUG CONNECTORS FOR FOOD & BEVERAGE

Open ended wires

– Valve Connectors

– Screw, Stainless Steel 1.4404 (V4A)

Approvals:

	Form C (8 mm)	Form CI (9.4 mm) Industrial standard
		
1 Form	**80021**	**94021**
Type	**24 V AC/DC** **LED and suppression**	**24 V AC/DC** **LED and suppression**
Circuit diagram		
Contact layout		
2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 0.75 mm²	**gray**	**gray**
PVC	**216**	**216**
3 Cable Length		
1.5 m	**0150**	
3.0 m	**0300**	
5.0 m	**0500**	
7.5 m	**0750**	
10.0 m	**1000**	
Technical Data		
Operating voltage	24 V AC/DC ±25 %	
Protection	IP65, IP68, IP69K when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C	
Article No.		
The composition of your article number is explained on page 3.1.i	**7 0 1 4 – _ _ _ _ _ – _ _ _ _ _ _ _**	
		1 Form / **2 Cable Type** / **3 Cable Length**
Notes		
	Other versions on request. Further cable lengths on request.	

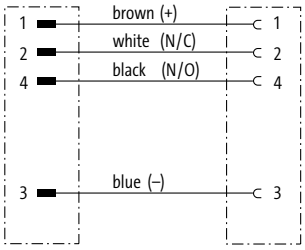
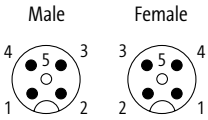
Connection cables

– M12 - M12

– Stainless Steel 1.4404 (V4A)

– Profile gasket

Approvals: cULus ECOLAB

	Male straight	**Female** straight	**Male** straight	**Female** 90°
				
1 Form	**40021**		**40121**	
Type	**4-pole**		**4-pole**	
Circuit diagram				
Contact layout				
2 Cable Type	**Jacket Color**		**Jacket Color**	
Wire diameter 0.34 mm²	**gray**		**gray**	
PVC (UL/CSA)	**214**		**214**	
3 Cable Length				
0.3 m	**0030**			
0.6 m	**0060**			
1.0 m	**0100**			
1.5 m	**0150**			
2.0 m	**0200**			
Technical Data				
Operating voltage	max. 250 V AC/DC			
Protection	IP65, IP67, IP68 inserted and tightened (EN 60529)			
Temperature range	-25...+85 °C			
Article No.				
The composition of your article number is explained on page 3.1.i	7014 – _____ – ___			____
		1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Further cable lengths on request.

Connection cables

– M12 - M12

– Stainless Steel 1.4404 (V4A)

– Profile gasket

Approvals: cULus ECOLAB

Male
straight

Female
90° with LED

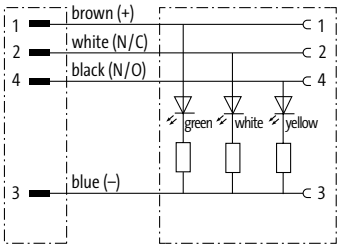


1 Form

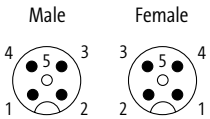
40341

Type
4-pole with 3 × LED (PNP)
(NPN) on request

Circuit diagram



Contact layout



2 Cable Type

	Jacket Color
Wire diameter 0.34 mm²	**gray**
PVC (UL/CSA)	**214**

3 Cable Length

0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data

Operating voltage	24 V DC ±25 %
Protection	IP65, IP67, IP68 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7014	–	40341	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Further cable lengths on request.

Connection cables

– M12-Steel

– Stainless Steel 1.4404 (V4A)

Male
straight

Female
straight



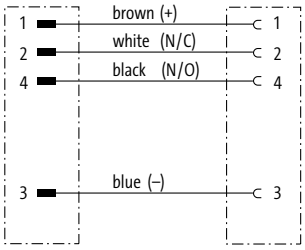
Approvals: cULus ECOLAB

1 Form

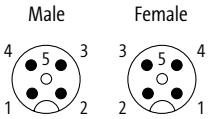
40021

Type: **4-pole**

Circuit diagram



Contact layout



2 Cable Type / Jacket Color

Wire diameter 0.34 mm²	**gray**
PVC (UL/CSA)	**214**
TPE-S	**336**

3 Cable Length

0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data

Operating voltage	max. 32 V AC/DC
Protection	IP65, IP68, IP69K when plugged and screwed down (EN 60529)
Temperature range	-40...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7044	–	40021	–	___	____
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Further cable lengths on request.

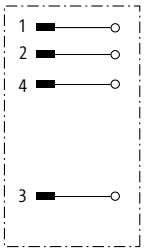
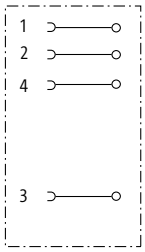
PLUG CONNECTORS FOR FOOD & BEVERAGE

Field-wireable

– M12

– Insulation displacement technology

– Stainless Steel 1.4305 (V2A)

	Male straight	**Female** straight	**Female** 90°
			
1 Form	**12481**	**12601**	**12681**
Type	**4-pole**	**4-pole**	**4-pole**
Circuit diagram			
Connection cross section			
Contact layout	Male 	Female 	

Technical Data

Operating voltage	max. 32 V AC/DC
Operating current per contact	max. 4 A
Connection cross section	0.25...0.5 mm² (conductor diameter min. 0.1 mm)
Sealing range (cable diameter)	4...5.1 mm
Wire isolation	PVC, PP, TPE
Outer wire diameter	1.2...1.6 mm
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Locking material	Stainless Steel 1.4305 (V2A)
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7002	–	_____	–	000	0000
		1 Form			

Notes

Other versions on request.

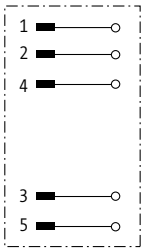
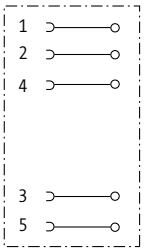
MURR ELEKTRONIK
stay connected

Field-wireable

– M12

– Screw terminals

– Stainless Steel 1.4404 (V4A)

	Male straight	**Male** 90°	**Female** straight	**Female** 90°
				
1 Form	**12761**	**12881**	**12961**	**13041**
Type	**5-pole**	**5-pole**	**5-pole**	**5-pole**
Circuit diagram				
Sealing range (cable diameter)	**6...8 mm**			
Contact layout	Male 		Female 	

Technical Data

Operating voltage	max. 125 V AC/DC
Operating current per contact	max. 4 A
Connection cross section	max. 0.75 mm²
Sealing range (cable diameter)	6...8 mm
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Locking material	Stainless Steel 1.4404 (V4A)
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7004	– _____	– 000	0000
	1 Form		

Notes

Other versions on request.

PLUG CONNECTORS FOR FOOD & BEVERAGE

Labeling accessories			Art-No.
	**Slip-on cable sleeve**		
	for ACS label plates (4 × 18 mm)	Cable diameter (4...6.5 mm)	**7000-99004-0000000**
	Snap-on cable sleeve		
	for ACS label plates (4 × 18 mm)	Cable diameter (4.2...5.6 mm)	**7000-99005-0000000**
	for ACS label plates (4 × 18 mm)	Cable diameter (5...7 mm)	**7000-99006-0000000**
	ACS label plate		
	for self marking (4 × 18 mm)	Cable sleeves	**7000-99002-0000000**
Mounting accessories			**Art-No.**
	**Torque wrench set**		
	M8 (0.4 Nm, AF9)		**7000-99101-0000000**
	**Torque wrench set**		
	M12 (0.6 Nm, AF13)	M12 Round Plug Connectors	**7000-99102-0000000**
	**Torque wrench**		
	M12 (SW18)		**7000-99103-0000000**
End fitting accessories			**Art-No.**
	**Tube adapter**		
	snap-in for corrugated tube (size 13mm)	Cable diameter (4...7 mm)	**7000-99081-0000000**



M23 ROUND PLUG CONNECTORS MADE FOR DISTRIBUTION BOXES

- **Highly resistant, halogen-free molding**
- **Safely sealed – acc. to IP67**
- **Reliable – 100 % tested**

COMPACT CONNECTOR FOR SAFE SIGNAL TRANSFER

Murrelektronik's M23 connectors are specially designed for distribution systems with M23 connections. They ensure a safe signal transfer from the distribution box to the control cabinet and a safe power supply to the distributor as well as the sensors and actuators connected to it.

With Open Ended Wires



M23 female, 12-pole
- Straight/90°
- For unshielded distribution boxes

Page 3.8.1



M23 female, 19-pole
- Straight/90°
- For unshielded distribution boxes

Page 3.8.2



M23 female, 12- and 19-pole
- Straight
- For shielded distribution boxes

Page 3.8.3

Field-Wireable



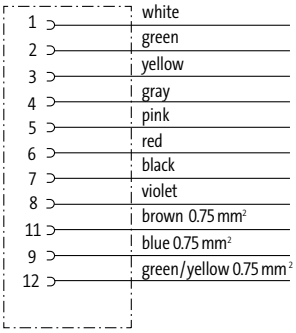
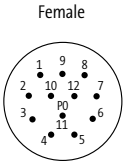
With solder connection

M23 female, 12- and 19-pole
- Straight/90°
- For unshielded distribution boxes

Page 3.8.4

Open ended wires

– 12-pole

	Female straight	**Female** 90°
		
1 Form	**23051**	**23151**
Type	**11-pole used** **for 8-way distribution box, 4-pole**	**11-pole used** **for 8-way distribution box, 4-pole**
Circuit diagram		
Contact layout		
2 Cable Type	**Jacket Color** – No./diameter of wires	
	gray	**gray**
PUR/PVC	**362** – 8 × 0.34 + 3 × 0.75 mm²	**362** – 8 × 0.34 + 3 × 0.75 mm²
3 Cable Length		
5.0 m	**0500**	
10.0 m	**1000**	
15.0 m	**1500**	
Technical Data		
Operating voltage	max. 125 V AC/DC	
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	
Article No.		

The composition of your article number is explained on page 3.1.i

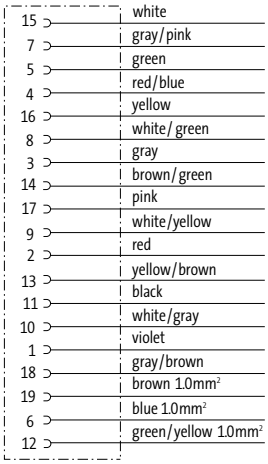
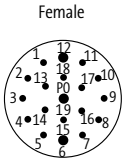
7000	–	_____	–	___	____
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request.

Open ended wires

– 19-pole

	Female straight	**Female** 90°
		
1 Form	**23251**	**23351**
Type	**19-pole used** **for 8-way distribution boxes, 5-pole**	**19-pole used** **for 8-way distribution boxes, 5-pole**
Circuit diagram		
Contact layout		

2 Cable Type	**Jacket Color** – No./diameter of wires	
	gray	**gray**
PUR/PVC	**398** – 16 × 0.34 + 3 × 0.75 mm²	**398** – 16 × 0.34 + 3 × 0.75 mm²
PUR (UL/CSA)	**452** – 16 × 0.5 + 3 × 1.0 mm²	**452** – 16 × 0.5 + 3 × 1.0 mm²
3 Cable Length		
5.0 m	**0500**	
10.0 m	**1000**	
15.0 m	**1500**	
Technical Data		
Operating voltage	max. 125 V AC/DC	
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	
Article No.		
The composition of your article number is explained on page 3.1.i	**7 0 0 0** – _ _ _ _ _ – _ _ _	_ _ _ _
	1 Form	**2 Cable Type** / **3 Cable Length**

Notes

Other versions on request.

Open ended wires

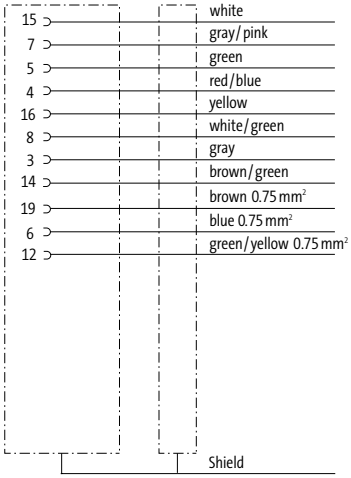
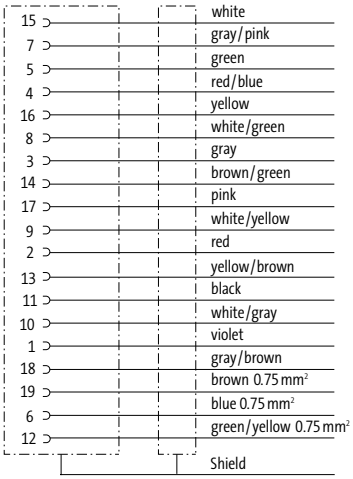
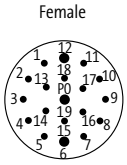
– 19-pole

– shielded

Female
straight



1 Form

	23711	23751
Type	**11-pole used** **for 4-way distribution boxes, 5-pole**	**19-pole used** **for 8-way distribution boxes, 5-pole**
Circuit diagram		
Contact layout		

2 Cable Type

Jacket Color – No./diameter of wires

	gray	gray
PUR (UL/CSA)	**373** – 8 × 0.34 + 3 × 0.75 mm²	**401** – 16 × 0.34 + 3 × 0.75 mm²

3 Cable Length

5.0 m	**0500**
10.0 m	**1000**
15.0 m	**1500**

Technical Data

Operating voltage	max. 125 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request.

Field-wireable

– 12-pole or 19-pole

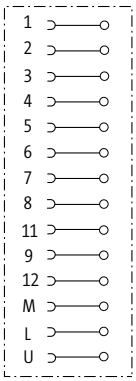
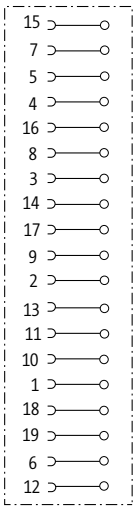
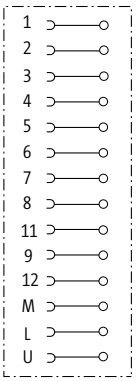
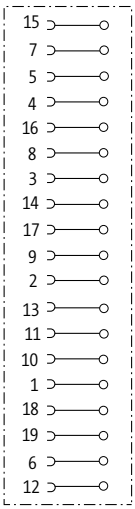
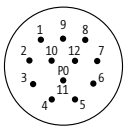
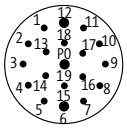
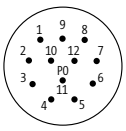
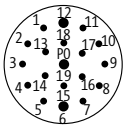
– Solder connection

Female
straight



Female
90°



1 Form	23061	23261	23161	23361
Type	12-pole for 4...8-way distribution boxes, 4-pole	19-pole for 4...8-way distribution boxes, 5-pole	12-pole for 4...8-way distribution boxes, 4-pole	19-pole for 4...8-way distribution boxes, 5-pole
Circuit diagram				
Contact layout	Female 	Female 	Female 	Female 

Technical Data

Operating voltage	max. 125 V AC/DC
Operating current per contact	max. 8 A
Connection cross section	max. 1 mm²
Sealing range (cable diameter)	8...14 mm
Connection	Solder buckets
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	– _ _ _ _ _	– 0 0 0	0 0 0 0
	1 Form		

Notes

Other versions on request.



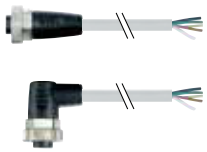
7/8" ROUND PLUG CONNECTORS
POWERFUL AND SAFE

- **Tough and reliable**
- **Molded connector**
- **Easy, safe connections with thread**

THE CONNECTOR FOR LARGE POWER TRANSMISSION

Murrelektronik's 7/8" round plug connector is designed for optimum performance and the pre-wired versions can transmit power up to 12 A/contact at max. 400 V AC/DC. Of course, all connectors are 100 % tested.

With Open Ended Wires



7/8" female
- Straight
- 90°

Page 3.9.1

Connection Cables



7/8" male
- Straight
- 90°

7/8" female
- Straight
- 90°

Page 3.9.2

Field-Wireable



Insulation Displacement Technology

7/8" male/female
- Straight

Page 3.9.3



Screw Terminals

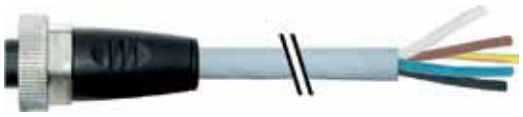
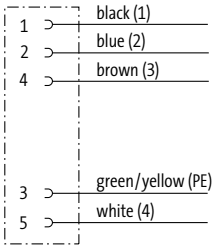
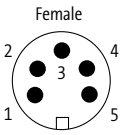
7/8" male/female
- Straight
- 90°

Page 3.9.4

MURR ELEKTRONIK
stay connected

Open ended wires

Approvals: cULus

	Female straight	**Female** 90°
		
1 Form	**78021**	**78051**
Type	**5-pole** **Power cable**	**5-pole** **Power cable**
Circuit diagram		
Contact layout		

2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 1.0 mm²	**gray**	**gray**
PUR/PVC	**965**	**965**
Wire diameter 1.5 mm²		
PUR (UL/CSA)	**961**	**961**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data	
Operating voltage	max. 230/400 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_____	–	___	____
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

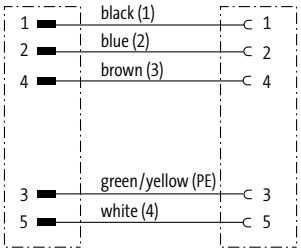
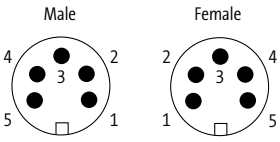
Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

7/8" ROUND PLUG CONNECTORS

Connection cables

– 7/8"- 7/8"

Approvals:

	Male straight	**Female** straight	**Male** 90°	**Female** 90°
				
1 Form	**50021**		**50051**	
Type	**5-pole** **Power cable**		**5-pole** **Power cable**	
Circuit diagram				
Contact layout				
2 Cable Type	**Jacket Color**		**Jacket Color**	
Wire diameter 1.0 mm²		**gray**		**gray**
PUR/PVC		**965**		**965**
Wire diameter 1.5 mm²				
PUR (UL/CSA)		**961**		**961**
3 Cable Length				
0.3 m	**0030**			
0.6 m	**0060**			
1.0 m	**0100**			
1.5 m	**0150**			
2.0 m	**0200**			
Technical Data				
Operating voltage	max. 230/400 V AC/DC			
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)			
Temperature range	-25...+85 °C, depending on cable quality			
Article No.				
The composition of your article number is explained on page 3.1.i	**7 0 0 0** – _ _ _ _ _ –		_ _ _	_ _ _ _
		1 Form	**2 Cable Type**	**3 Cable Length**

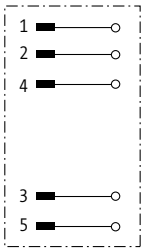
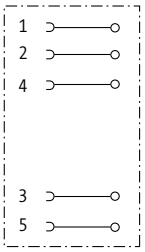
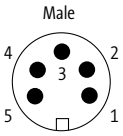
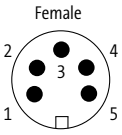
Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

Field-wireable

– IDC terminals

	Male straight	**Female** straight
		
1 Form	**78091**	**78211**
Type	**5-pole**	**5-pole**
Circuit diagram		
Connection cross section	**0.75...1.5 mm²**	
Contact layout		

Technical Data

Operating voltage	max. 230/400 V AC/DC
Operating current per contact	max. 10 A
Connection cross section	0.75...1.5 mm² (conductor diameter min. 0.15 mm)
Sealing range (cable diameter)	6.8...9.5 mm
Wire isolation	PVC, PP, TPE
Outer wire diameter	max. 2.8 mm
Locking of ports	Screw thread 7/8" (recommended torque 1.5 Nm) self-securing
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-40...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7000	– _____	– 000	0000
	1 Form		

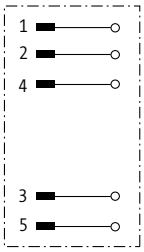
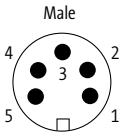
Notes

Other versions on request.

7/8" ROUND PLUG CONNECTORS

Field-wireable

– Screw terminals

	Male straight		**Male** 90°
			
1 Form	**78081**	**78101**	**78141**
Type	**5-pole**	**5-pole**	**5-pole**
Circuit diagram			
Sealing range (cable diameter)	**6...8 mm**	**10...12 mm**	**6...8 mm**
Contact layout			

Technical Data

Operating voltage	max. 250 V AC/DC		
Operating current per contact	max. 9 A		
Connection cross section	max. 1.5 mm²		
Sealing range (cable diameter)	6...8 mm	10...12 mm	6...8 mm
Locking of ports	Screw thread 7/8" (recommended torque 1.5 Nm) self-securing		
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)		
Temperature range	-25...+85 °C		

Article No.

The composition of your article number is explained on page 3.1.i

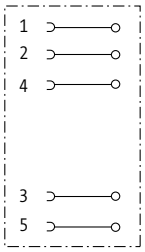
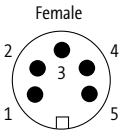
7000	–	_____	–	000	0000
		1 Form			

Notes

Other versions on request.

Field-wireable

– Screw terminals

	Female straight		**Female** 90°
			
1 Form	**78201**	**78221**	**78261**
Type	**5-pole**	**5-pole**	**5-pole**
Circuit diagram			
Sealing range (cable diameter)	**6...8 mm**	**10...12 mm**	**6...8 mm**
Contact layout			

Technical Data

Operating voltage	max. 250 V AC/DC		
Operating current per contact	max. 9 A		
Connection cross section	max. 1.5 mm²		
Sealing range (cable diameter)	6...8 mm	10...12 mm	6...8 mm
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)		
Temperature range	-25...+85 °C		
Locking of ports	Screw thread 7/8" (recommended torque 1.5 Nm) self-securing		

Article No.

The composition of your article number is explained on page 3.1.i

7000	– _____	– 000	0000
	1 Form		

Notes

Other versions on request.

7/8" ROUND PLUG CONNECTORS

Connection accessories			Art-No.
	**Flange 7/8" male, pre-wired 0.2 m**		
	5-pole	7/8" Round Plug Connectors	**7000-78341-9780020**
	**Flange 7/8" female, pre-wired 0.2 m**		
	5-pole	7/8" Round Plug Connectors	**7000-78381-9780020**
	**T-coupler 7/8"-7/8", female/male**		
	5-pole		**7000-50061-0000000**
Mounting accessories			**Art-No.**
	**Torque wrench set**		
	7/8" (1.5 Nm, AF22)	IDC terminals	**7000-99104-0000000**
	**Torque wrench**		
	7/8" (SW24)		**7000-99097-0000000**



VALVE CONNECTORS
MORE MODELS THAN EVER

- **Molded construction – resistant to shock and vibration**
- **Tested to ensure reliability**
- **IP65 to IP67 Rated**

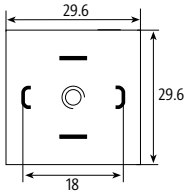
THE CONNECTOR FOR VALVES AND PRESSURE SWITCHES

25 years ago, Murrelekronik developed and produced the first pre-wired and molded valve connector. It was a revolution! Now, more than ever, Murrelektronik's valve plugs enjoy long-running success as a result of continuous improvement. A captive gasket, integrated LED status indicator and suppression are the top features of Murrelektronik's MSUD valve plug.

With Open Ended Wires

Valve Diagram

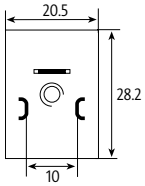




MSUD Valve Connector
- Form A
  acc. to EN 175301-803 (ISO 4400)
  Pin spacing 18 mm

Page 3.10.1

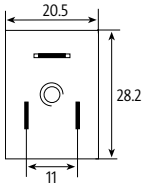




MSUD Valve Connector
- Form B
  acc. to EN 175301-803 (ISO 6952)
  Pin spacing 10 mm

Page 3.10.4

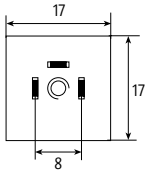




MSUD Valve Connector
- Form BI
  Industrial standard
  Pin spacing 11 mm

Page 3.10.6

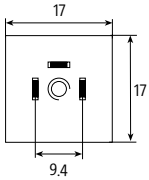




MSUD Valve Connector
- Form C
  acc. to EN 175301-803 (ISO 6952)
  Pin spacing 8 mm

Page 3.10.8





MSUD Valve Connector
- Form CI
  Industrial standard
  Pin spacing 9.4 mm

Page 3.10.10

With Open Ended Wires

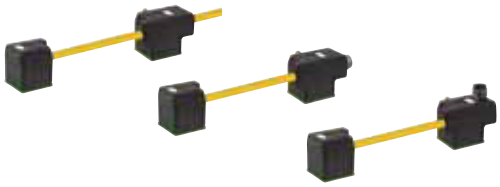


Junior Timer Valve Connector

2-pole
- Straight

Page 3.10.12

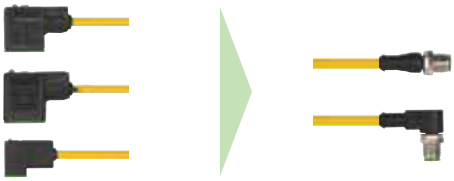
Connection Cables



MSUD Double Valve Connector
With connection cable
- Form A
- Form B
- Form BI

M12 male
- Top connection
- Rear connection
- With connection cable

Page 3.10.13



MSUD Valve Connector
- Form A
- Form B
- Form BI
- Form C
- Form CI

M12 male
- Straight
- 90°

Page 3.10.16



MSUD Valve Connector Adapter
- Form A
- Form B
- Form BI

M12 male
- Top connection
- Rear connection

Page 3.10.20

Field-Wireable



Screw Terminals

SVS Valve Connector
- Form A
- Form B
- Form BI

Page 3.10.23



Insulation Displacement Technology

MOSA Valve Connector
- Form C
- Form CI

Page 3.10.31



Screw Terminals

SVS Eco Valve Connector
- Form A
- Form B
- Form BI
- Form C
- Form CI

Page 3.10.32

NOTES

VALVE CONNECTORS

MURR ELEKTRONIK
stay connected

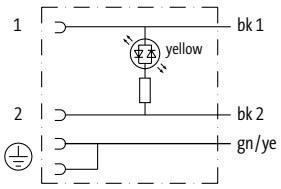
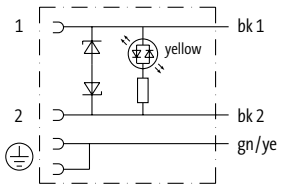
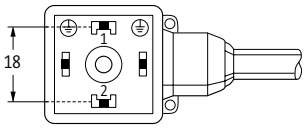
MSUD

– with open ended wires

Form A (18 mm)



Approvals:

1 Form	**18001**	**18021**	**18041**
Type	**24 V AC/DC**	**24 V AC/DC**	**110 V AC/DC**
	LED	**LED and suppression**	**LED and suppression**
Circuit diagram			
Contact layout			

2 Cable Type	**Jacket Color**			**Jacket Color**			**Jacket Color**		
Wire diameter 0.75 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
PVC	**016**	**216**	**616**	**016**	**216**	**616**	**016**	**216**	**616**
PUR/PVC	**026**	**226**	**626**	**026**	**226**	**626**	**026**	**226**	**626**
PUR (UL/CSA)	**036**	**236**	**636**	**036**	**236**	**636**	**036**	**236**	**636**
PUR (UL/CSA), welding spark res.	**056**	**256**	**656**	**056**	**256**	**656**	**056**	**256**	**656**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data		
Operating voltage	24 V AC/DC ±25 %	110 V AC/DC ±10 %
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

VALVE CONNECTORS

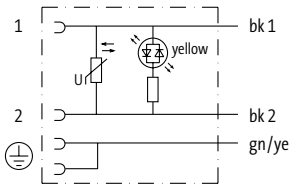
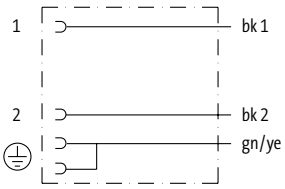
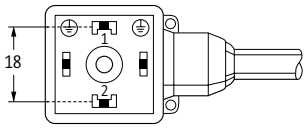
MSUD

– with open ended wires

Form A (18 mm)



Approvals:

1	**Form**	**18061**			**18081**	
	Type	**230 V AC/DC**			**0...230 V AC/DC**	
		LED and suppression			**without components**	
	Circuit diagram					
	Contact layout					
2	**Cable Type**	**Jacket Color**			**Jacket Color**	
	Wire diameter 0.75 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
	PVC	**016**	**216**	**616**	**016**	**216**	**616**
	PUR/PVC	**026**	**226**	**626**	**026**	**226**	**626**
	PUR (UL/CSA)	**036**	**236**	**636**	**036**	**236**	**636**
	PUR (UL/CSA), welding spark res.	**056**	**256**	**656**	**056**	**256**	**656**
3	**Cable Length**						
	1.5 m	**0150**					
	3.0 m	**0300**					
	5.0 m	**0500**					
	7.5 m	**0750**					
	10.0 m	**1000**					
	Technical Data						
	Operating voltage	230 V AC/DC ±10 %			max. 230 V AC/DC		
	Protection	IP65 and IP67 when plugged and screwed down (EN 60529)					
	Temperature range	-25...+85 °C, depending on cable quality					
	Article No.						
	The composition of your article number is explained on page 3.1.i	**7 0 0 0** – _ _ _ _ _ – _ _ _			_ _ _ _		
			1 Form		**2 Cable Type**		**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

MSUD

– with open ended wires

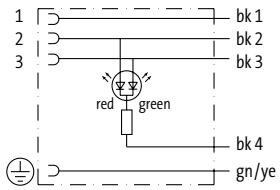
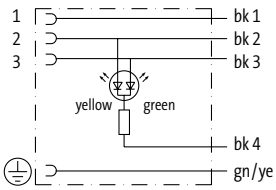
– for pressure switches

Form A (18 mm)

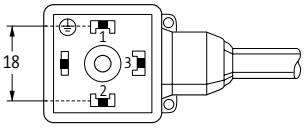


Approvals:

1 Form

	18121	18141
Type	24 V DC LED (red/green)	24 V DC LED (yellow/green)
Circuit diagram		

Contact layout



2 Cable Type

Wire diameter 0.75 mm²	Jacket Color: yellow	gray	black	Jacket Color: yellow	gray	black
PVC	018	218	618	018	218	618
PUR/PVC	028	228	628	028	228	628
PUR (UL/CSA)	038	238	638	038	238	638

3 Cable Length

1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	24 V DC ±25 %
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_____	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

VALVE CONNECTORS

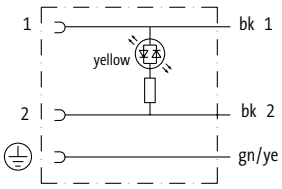
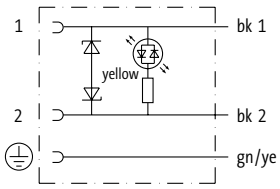
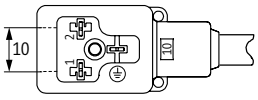
MSUD

– with open ended wires

Form B (10 mm)



Approvals:

1 Form	10001	10021	10041
Type	24 V AC/DC LED	24 V AC/DC LED and suppression	110 V AC/DC LED and suppression
Circuit diagram			
Contact layout			

2 Cable Type	Jacket Color			Jacket Color			Jacket Color		
Wire diameter 0.75 mm²	yellow	gray	black	yellow	gray	black	yellow	gray	black
PVC	016	216	616	016	216	616	016	216	616
PUR/PVC	026	226	626	026	226	626	026	226	626
PUR (UL/CSA)	036	236	636	036	236	636	036	236	636
PUR (UL/CSA), welding spark res.	056	256	656	056	256	656	056	256	656

3 Cable Length	
1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data		
Operating voltage	24 V AC/DC ±25 %	110 V AC/DC ±10 %
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

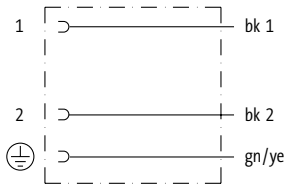
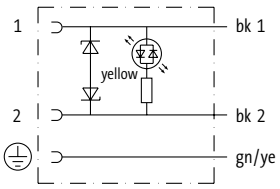
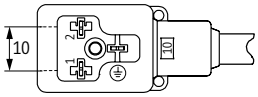
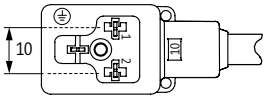
MSUD

– with open ended wires

Form B (10 mm)



Approvals:

1	**Form**	**10061**	**10081**
	Type	**0...230 V AC/DC** **without components**	**24 V AC/DC** **LED and suppression**
	Circuit diagram		
	Contact figure	**0°, PE at cable outlet**	**180°, PE opposite cable outlet**
	Contact layout		

2	**Cable Type**	**Jacket Color**			**Jacket Color**		
	Wire diameter 0.75 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
	PVC	**016**	**216**	**616**	**016**	**216**	**616**
	PUR/PVC	**026**	**226**	**626**	**026**	**226**	**626**
	PUR (UL/CSA)	**036**	**236**	**636**	**036**	**236**	**636**
	PUR (UL/CSA), welding spark res.	**056**	**256**	**656**	**056**	**256**	**656**

3	**Cable Length**	
	1.5 m	**0150**
	3.0 m	**0300**
	5.0 m	**0500**
	7.5 m	**0750**
	10.0 m	**1000**

	Technical Data		
	Operating voltage	max. 230 V AC/DC	24 V AC/DC ±25 %
	Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
	Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

VALVE CONNECTORS

MSUD

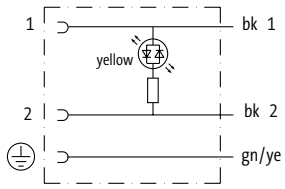
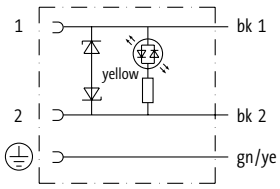
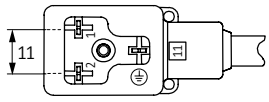
– with open ended wires

Approvals:

Form BI (11 mm)
Industrial standard



1 Form

	11001	11021	11041
Type	**24 V AC/DC**	**24 V AC/DC**	**110 V AC/DC**
	LED	**LED and suppression**	**LED and suppression**
Circuit diagram			
Contact layout			

2 Cable Type

Wire diameter 0.75 mm²	Jacket Color yellow	gray	black	Jacket Color yellow	gray	black	Jacket Color yellow	gray	black
PVC	016	216	616	016	216	616	016	216	616
PUR/PVC	026	226	626	026	226	626	026	226	626
PUR (UL/CSA)	036	236	636	036	236	636	036	236	636
PUR (UL/CSA), welding spark res.	056	256	656	056	256	656	056	256	656

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	24 V AC/DC ±25 %	110 V AC/DC ±10 %
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_____	–	___	____
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

MSUD

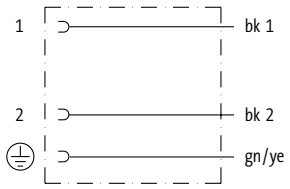
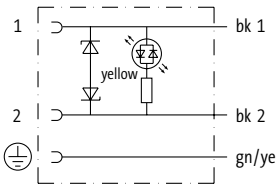
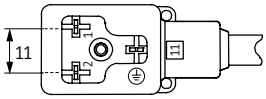
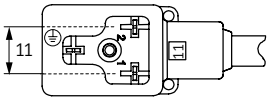
– with open ended wires

Approvals:

Form BI (11 mm)
Industrial standard



1 Form

	11061	11081
Type	**0...230 V AC/DC** **without components**	**24 V AC/DC** **LED and suppression**
Circuit diagram		
Contact figure	**0°, PE at cable outlet**	**180°, PE opposite cable outlet**
Contact layout		

2 Cable Type

	Jacket Color			Jacket Color		
Wire diameter 0.75 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
PVC	**016**	**216**	**616**	**016**	**216**	**616**
PUR/PVC	**026**	**226**	**626**	**026**	**226**	**626**
PUR (UL/CSA)	**036**	**236**	**636**	**036**	**236**	**636**
PUR (UL/CSA), welding spark res.	**056**	**256**	**656**	**056**	**256**	**656**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	230 V AC/DC	24 V AC/DC ±25 %
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

VALVE CONNECTORS

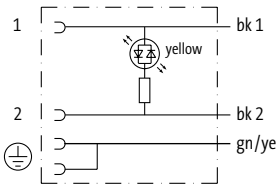
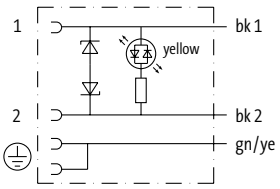
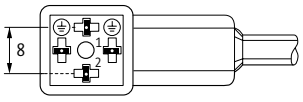
MSUD

– with open ended wires

Form C (8 mm)



Approvals:

1 Form	**80001**	**80021**
Type	**24 V AC/DC**	**24 V AC/DC**
	LED	**LED and suppression**
Circuit diagram		
Contact layout		

2 Cable Type	**Jacket Color**			**Jacket Color**		
Wire diameter 0.75 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
PVC	**016**	**216**	**616**	**016**	**216**	**616**
PUR/PVC	**026**	**226**	**626**	**026**	**226**	**626**
PUR (UL/CSA)	**036**	**236**	**636**	**036**	**236**	**636**
PUR (UL/CSA), welding spark res.	**056**	**256**	**656**	**056**	**256**	**656**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data	
Operating voltage	24 V AC/DC ±25 %
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

MSUD

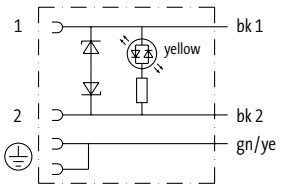
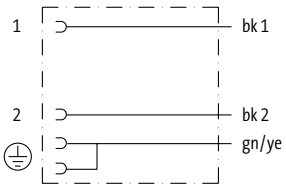
– with open ended wires

Form C (8 mm)

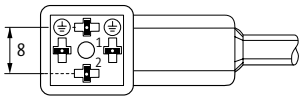


Approvals:

1 Form

	80041	80061
Type	110 V AC/DC LED and suppression	0...230 V AC/DC without components
Circuit diagram		

Contact layout



2 Cable Type

Wire diameter 0.75 mm²	Jacket Color yellow	gray	black	Jacket Color yellow	gray	black
PVC	016	216	616	016	216	616
PUR/PVC	026	226	626	026	226	626
PUR (UL/CSA)	036	236	636	036	236	636
PUR (UL/CSA), welding spark res.	056	256	656	056	256	656

3 Cable Length

1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	110 V AC/DC ±10 %	max. 230 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

VALVE CONNECTORS

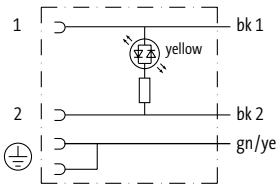
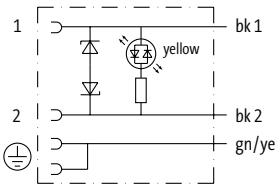
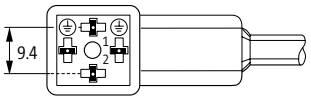
MSUD

– with open ended wires

Approvals:

Form CI (9.4 mm)
Industrial standard



1 Form	94001	94021
Type	24 V AC/DC LED	24 V AC/DC LED and suppression
Circuit diagram		
Contact layout		

2 Cable Type	Jacket Color			Jacket Color		
Wire diameter 0.75 mm²	yellow	gray	black	yellow	gray	black
PVC	016	216	616	016	216	616
PUR/PVC	026	226	626	026	226	626
PUR (UL/CSA)	036	236	636	036	236	636
PUR (UL/CSA), welding spark res.	056	256	656	056	256	656

3 Cable Length	
1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	24 V AC/DC ±25 %
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

MSUD

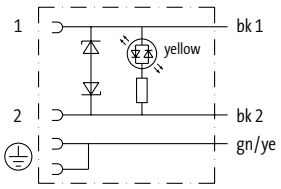
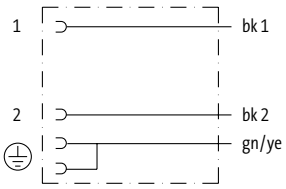
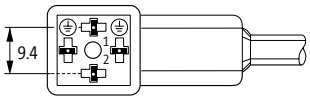
– with open ended wires

Form CI (9.4 mm)
Industrial standard



Approvals:

1 Form

	94041	94061
Type	**110 V AC/DC** **LED and suppression**	**0...230 V AC/DC** **without components**
Circuit diagram		
Contact layout		

2 Cable Type

Wire diameter 0.75 mm²	Jacket Color: yellow	gray	black	Jacket Color: yellow	gray	black
PVC	016	216	616	016	216	616
PUR/PVC	026	226	626	026	226	626
PUR (UL/CSA)	036	236	636	036	236	636
PUR (UL/CSA), welding spark res.	056	256	656	056	256	656

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	110 V AC/DC ±10 %	max. 230 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

VALVE CONNECTORS

Junior Timer

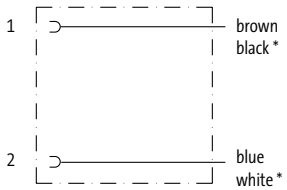
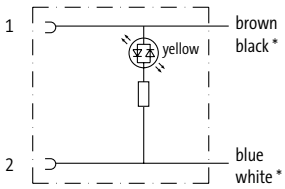
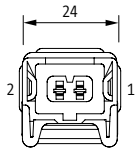
– with open ended wires

Male

straight



Approvals:

		70001	70021
1	**Form**		
	Type	**0...230 V AC/DC** **without components**	**10...30 V AC/DC** **LED**
	Circuit diagram	 * for cable type (740)	 * for cable type (740)
	Contact layout		
2	**Cable Type**	**Jacket Color**	**Jacket Color**
	Wire diameter 0.5 mm²	**black**	**black**
	PUR	**740**	**740**
	Wire diameter 0.75 mm²		
	PVC	**752**	**752**
	PUR/PVC	**750**	**750**
3	**Cable Length**		
	1.5 m	**0150**	
	3.0 m	**0300**	
	5.0 m	**0500**	
	7.5 m	**0750**	
	10.0 m	**1000**	
	Technical Data		
	Operating voltage	0...230 V AC/DC	10...30 V AC/DC
	Protection	IP65 inserted and tightened	
	Temperature range	-25...+85 °C, depending on cable quality	
	Article No.		
	The composition of your article number is explained on page 3.1.i	7 0 0 0 – _ _ _ _ _ – _ _ _	_ _ _ _
		1 Form	**2 Cable Type** / **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

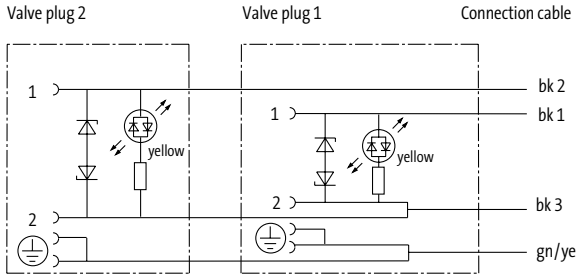
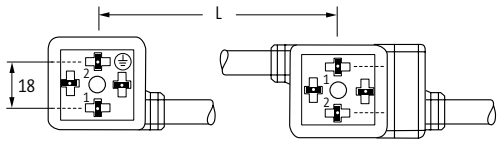
MSUD - MSUD

– Double valve plugs with connection cable

Form A (18 mm)



Approvals:

1 Form	58001	58021	58041
Type	24 V AC/DC LED and suppression L = 100 mm	24 V AC/DC LED and suppression L = 150 mm	24 V AC/DC LED and suppression L = 200 mm
Circuit diagram			
Contact layout			

2 Cable Type	Jacket Color			Jacket Color			Jacket Color		
Wire diameter 0.75 mm²	yellow	gray	black	yellow	gray	black	yellow	gray	black
PVC	017	217	617	017	217	617	017	217	617
PUR/PVC	027	227	627	027	227	627	027	227	627
PUR (UL/CSA)	037	237	637	037	237	637	037	237	637

3 Cable Length	
1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	24 V AC ±20 % / DC ±25 %
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_____	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

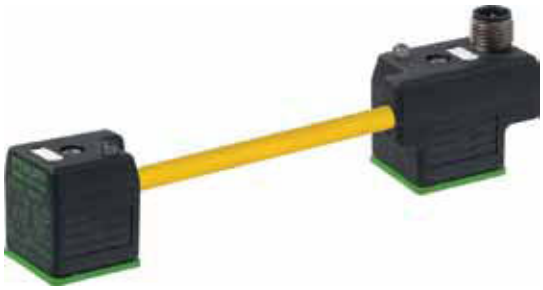
VALVE CONNECTORS

MSUD - MSUD

– Double valve plugs with M12 male, connector top entry

Approvals:

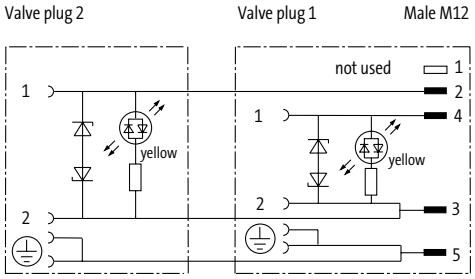
Form A (18 mm)



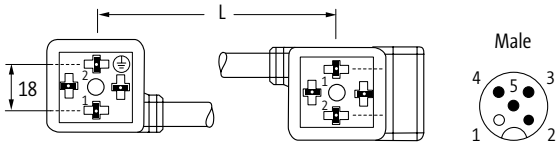
1 Form

	41501	41521	41541
Type	24 V AC/DC, M12 (4-pole)	24 V AC/DC, M12 (4-pole)	24 V AC/DC, M12 (4-pole)
	LED and suppression	LED and suppression	LED and suppression
	L = 100 mm	L = 150 mm	L = 200 mm

Circuit diagram



Contact layout



2 Cable Type

Cable Type	Jacket Color			Jacket Color			Jacket Color		
Wire diameter 0.75 mm²	yellow	gray	black	yellow	gray	black	yellow	gray	black
PVC	016	216	616	016	216	616	016	216	616
PUR/PVC	026	226	626	026	226	626	026	226	626
PUR (UL/CSA)	036	236	636	036	236	636	036	236	636

Technical Data

Operating voltage	24 V AC ±20 % / DC ±25 %
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_____	–	___	0000
		1 Form		**2 Cable Type**	

Notes

Other versions on request.

MURR ELEKTRONIK
stay connected

MSUD - MSUD

– Double valve plugs with M12 male, connector at the rear

Form A (18 mm)

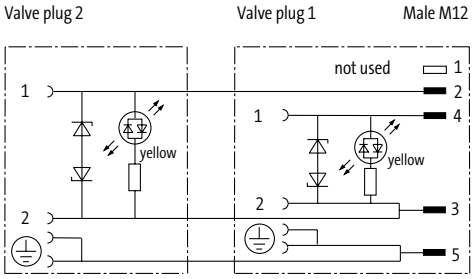


Approvals:

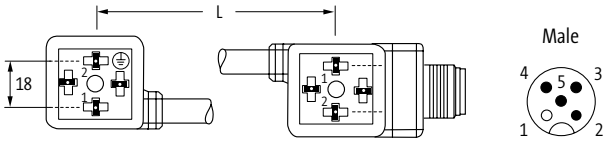
1 Form

	41561	41581	41601
Type	24 V AC/DC, M12 (4-pole)	24 V AC/DC, M12 (4-pole)	24 V AC/DC, M12 (4-pole)
	LED and suppression	LED and suppression	LED and suppression
	L = 100 mm	L = 150 mm	L = 200 mm

Circuit diagram



Contact layout



2 Cable Type

Wire diameter 0.75 mm²	Jacket Color			Jacket Color			Jacket Color		
	yellow	gray	black	yellow	gray	black	yellow	gray	black
PVC	016	216	616	016	216	616	016	216	616
PUR/PVC	026	226	626	026	226	626	026	226	626
PUR (UL/CSA)	036	236	636	036	236	636	036	236	636

Technical Data

Operating voltage	24 V AC ±20 % / DC ±25 %
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_____	–	___	0000
		1 Form		2 Cable Type	

Notes

Other versions on request.

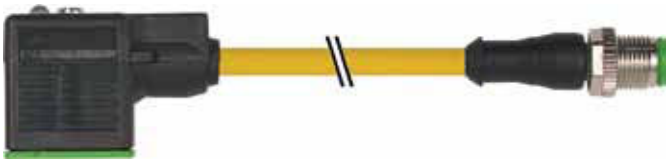
VALVE CONNECTORS

MSUD - M12

– Connection cables

Form A (18 mm)

Male M12
straight



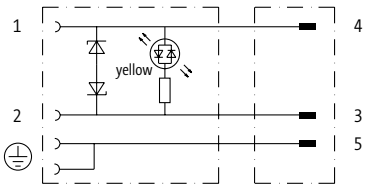
Approvals:

1 Form

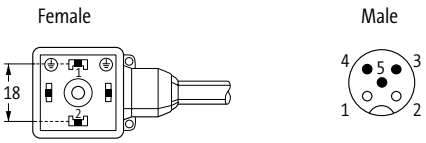
40881

Type	**24 V AC/DC, M12 (3-pole)**
	LED and suppression

Circuit diagram



Contact layout



2 Cable Type

Wire diameter 0.75 mm²	yellow	gray	black
PVC	016	216	616
PUR/PVC	026	226	626
PUR (UL/CSA)	036	236	636
PUR (UL/CSA), welding spark res.	056	256	656

3 Cable Length

0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data

Operating voltage	24 V AC ±20 % / DC ±25 %
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	40881	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

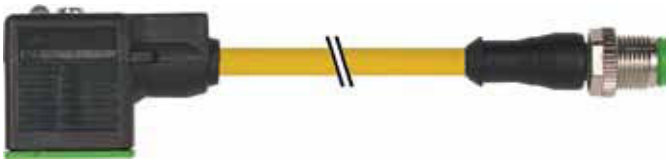
MSUD - M12

– Connection cables

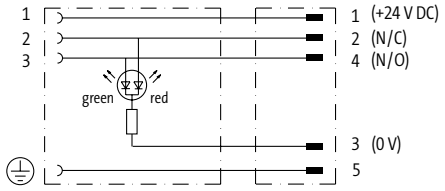
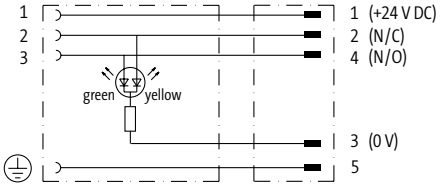
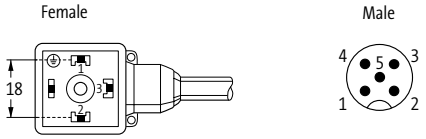
– for pressure switches

Form A (18 mm)

Male M12
straight



Approvals:

1	**Form**	**40921**	**40931**
	Type	**24 V DC, M12 (5-pole)** **LED (red/green)**	**24 V DC, M12 (5-pole)** **LED (yellow/green)**
	Circuit diagram		
	Contact layout		

2	**Cable Type**	**Jacket Color**			**Jacket Color**		
	Wire diameter 0.34 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
	PVC (UL/CSA)	**015**	**215**	**615**	**015**	**215**	**615**
	PUR/PVC	**025**	**225**	**625**	**025**	**225**	**625**
	PUR (UL/CSA)	**035 (126)**	**235**	**635 (732)**	**035 (126)**	**235**	**635 (732)**
	PUR (UL/CSA), welding spark res.	**055**	**255**	**655**	**055**	**255**	**655**

3	**Cable Length**	
	0.3 m	**0030**
	0.6 m	**0060**
	1.0 m	**0100**
	1.5 m	**0150**
	2.0 m	**0200**

	Technical Data	
	Operating voltage	24 V DC ±25 %
	Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
	Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

VALVE CONNECTORS

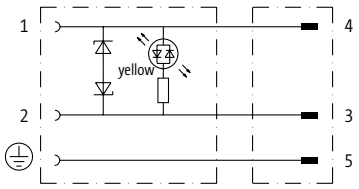
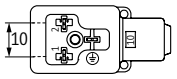
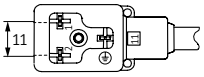
MSUD - M12

– Connection cables

Approvals:

	Form B (10 mm)	Male M12 straight	Form BI (11 mm) Industrial standard	Male M12 straight
				

1 Form

	41001	40961
Type	**24 V AC/DC, M12 (3-pole)** **LED and suppression**	**24 V AC/DC, M12 (3-pole)** **LED and suppression**
Circuit diagram		
Contact layout	Female  Male 	Female  Male 

2 Cable Type

	Jacket Color			Jacket Color		
Wire diameter 0.75 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
PVC	**016**	**216**	**616**	**016**	**216**	**616**
PUR/PVC	**026**	**226**	**626**	**026**	**226**	**626**
PUR (UL/CSA)	**036**	**236**	**636**	**036**	**236**	**636**
PUR (UL/CSA), welding spark res.	**056**	**256**	**656**	**056**	**256**	**656**

3 Cable Length

0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data

Operating voltage	24 V AC ±20 % / DC ±25 %
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

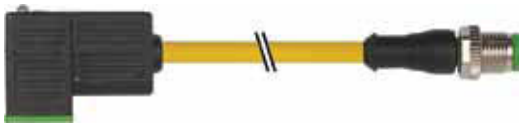
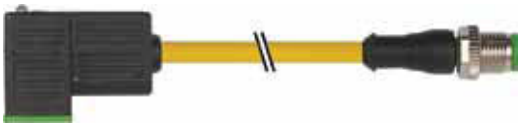
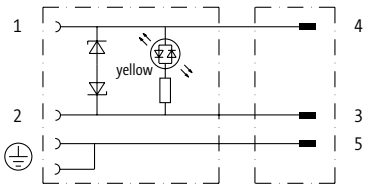
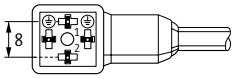
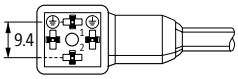
Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

MSUD - M12

– Connection cables

Approvals:

	Form C (8 mm)	**Male M12** straight	**Form CI (9.4 mm)** Industrial standard	**Male M12** straight
				
1 Form	**41081**		**41041**	
Type	**24 V AC/DC, M12 (3-pole)** **LED and suppression**		**24 V AC/DC, M12 (3-pole)** **LED and suppression**	
Circuit diagram				
Contact layout	Female  Male 		Female  Male 	

2 Cable Type	**Jacket Color**			**Jacket Color**		
Wire diameter 0.75 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
PVC	**016**	**216**	**616**	**016**	**216**	**616**
PUR/PVC	**026**	**226**	**626**	**026**	**226**	**626**
PUR (UL/CSA)	**036**	**236**	**636**	**036**	**236**	**636**
PUR (UL/CSA), welding spark res.	**056**	**256**	**656**	**056**	**256**	**656**

3 Cable Length	
0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data

Operating voltage	24 V AC ±20 % / DC ±25 %
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

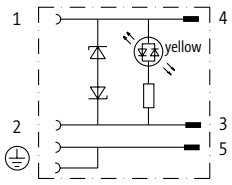
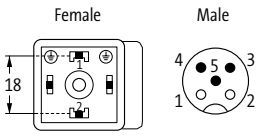
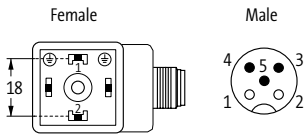
Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MSUD - M12

– Adapter

Approvals:

	Form A (18 mm) Top connection	**Form A (18 mm)** Rear connection
		
1 Form	**41301**	**41421**
Type	**M12 (3-pole)** **LED and suppression**	**M12 (3-pole)** **LED and suppression**
Circuit diagram		
Contact layout		

Technical Data

Operating voltage	24 V AC ±20 % / DC ±25 %
Operating current per contact	max. 4 A
Switch off peak	max. 55 V
Locking of ports	M3 (recommended torque 0.4 Nm)
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

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	1 Form		

Notes

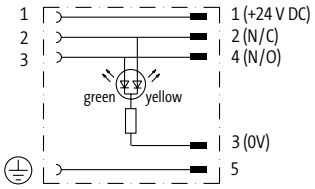
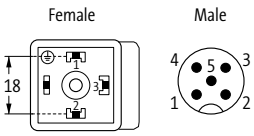
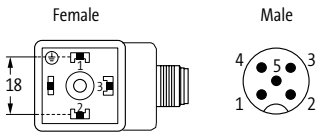
Other versions on request.

MURR ELEKTRONIK
stay connected

MSUD - M12

– Adapter

Approvals:

	Form A (18 mm)	Form A (18 mm)
	Top connection	Rear connection
		
1 Form	**41321**	**41441**
Type	**M12 (5-pole)** **for pressure switches**	**M12 (5-pole)** **for pressure switches**
Circuit diagram		
Contact layout		

Technical Data

Operating voltage	24 V AC/DC ±25 %	
Operating current per contact	max. 4 A	
Switch off peak	max. 55 V	–
Locking of ports	M3 (recommended torque 0.4 Nm)	
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C	

Article No.

The composition of your article number is explained on page 3.1.i

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		1 Form			

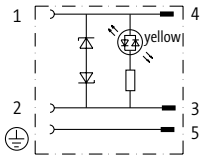
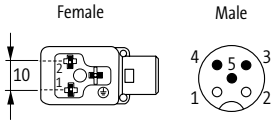
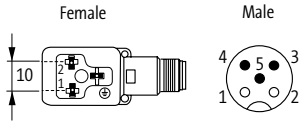
Notes

Other versions on request.

MSUD - M12

– Adapter

Approvals:

	Form B (10 mm) Top connection	**Form B (10 mm)** Rear connection
		
1 Form	**41901**	**41961**
Type	**M12 (3-pole)** **LED and suppression**	**M12 (3-pole)** **LED and suppression**
Circuit diagram		
Contact layout		

Technical Data

Operating voltage	24 V AC ±20 % / DC ±25 %
Operating current per contact	max. 4 A
Switch off peak	max. 55 V
Locking of ports	M3 (recommended torque 0.4 Nm)
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

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	1 Form		

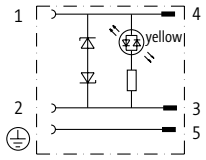
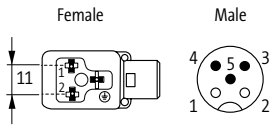
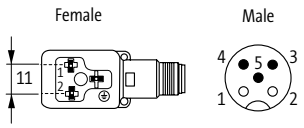
Notes

Other versions on request.

MSUD - M12

– Adapter

Approvals:

	Form BI (11 mm)	**Form BI (11 mm)**
	Industrial standard	Industrial standard
	Top connection	Rear connection
		
1 Form	**42021**	**42081**
Type	**M12 (3-pole)** **LED and suppression**	**M12 (3-pole)** **LED and suppression**
Circuit diagram		
Contact layout		

Technical Data

Operating voltage	24 V AC ±20 % / DC ±25 %
Operating current per contact	max. 4 A
Switch off peak	max. 55 V
Locking of ports	M3 (recommended torque 0.4 Nm)
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

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		1 Form			

Notes

Other versions on request.

SVS

– Field-wireable

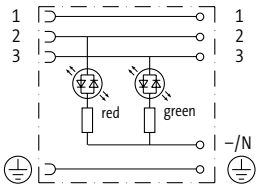
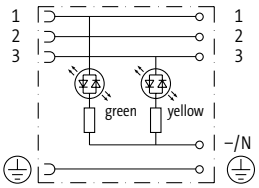
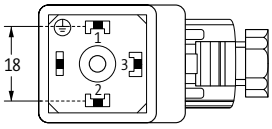
– Convenient connection, screw terminals

– for pressure switches

Approvals:

Form A (18 mm)



1 Form	29281	29301	29441	29461
Type	24...230 V AC/DC	24...230 V AC/DC	24 V AC/DC	24 V AC/DC
	LED red (2) green (3)	LED red (2) green (3)	LED green (1) yellow (3)	LED green (1) yellow (3)
	metric	PG 9	metric	PG 9
Circuit diagram				
Contact layout				

Technical Data

Operating voltage	24...230 V AC/DC		24 V AC/DC ±25 %	
Operating current per contact	max. 4 A			
Sealing range (cable diameter)	5...10 mm	6...8 mm	5...10 mm	6...8 mm
Locking of ports	M3 (recommended torque 0.4 Nm)			
Compression gland	M16 × 1.5 mm	PG 9; (PG11, NPT 1/2" o. r.)	M16 × 1.5 mm	PG 9; (PG11, NPT 1/2" o. r.)
Protection	IP65 inserted and tightened (EN 60529), with gland			
Temperature range	-20...+60 °C			

Article No.

The composition of your article number is explained on page 3.1.i

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	1 Form		

Notes

Other versions on request.

MURR ELEKTRONIK
stay connected

SVS

– Field-wireable

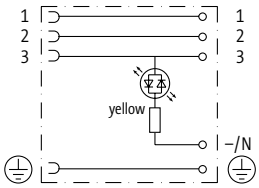
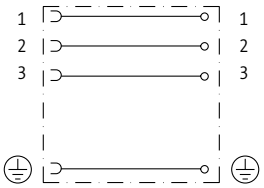
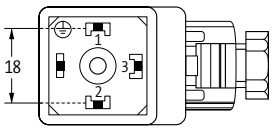
– Convenient connection, screw terminals

– for pressure switches

Approvals:

Form A (18 mm)



1 Form	29361	29381	29401	29421
Type	24...230 V AC/DC LED yellow (3) metric	24...230 V AC/DC LED yellow (3) PG 9	0...230 V AC/DC without components metric	0...230 V AC/DC without components PG 9
Circuit diagram				
Contact layout				

Technical Data

Operating voltage	24...230 V AC/DC		0...230 V AC/DC	
Operating current per contact	max. 4 A		max. 10 A	
Sealing range (cable diameter)	5...10 mm	6...8 mm	5...10 mm	6...8 mm
Locking of ports	M3 (recommended torque 0.4 Nm)			
Compression gland	M16 × 1.5 mm	PG 9; (PG11, NPT 1/2" o. r.)	M16 × 1.5 mm	PG 9; (PG11, NPT 1/2" o. r.)
Protection	IP65 inserted and tightened (EN 60529), with gland			
Temperature range	-20...+60 °C			

Article No.

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	1 Form		

Notes

Other versions on request.

VALVE CONNECTORS

SVS

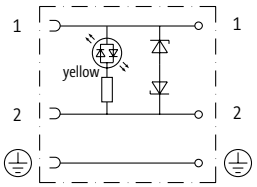
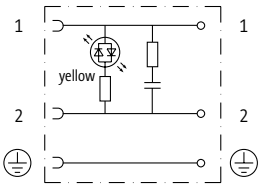
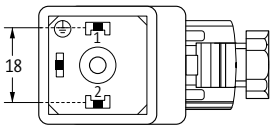
– Field-wireable

– Convenient connection, screw terminals

Approvals:

Form A (18 mm)



1 Form	29001	29021	29041	29061
Type	24 V AC/DC LED and Z-diode metric	24 V AC/DC LED and Z-diode PG 9	24 V AC/DC LED and RC metric	24 V AC/DC LED and RC PG 9
Circuit diagram				
Contact layout				

Technical Data

Operating voltage	24 V AC ±20 % / DC ±25 %		24 V AC/DC ±25 %	
Operating current per contact	max. 4 A		max. 2 A	
Switch off peak	max. 55 V		–	
Max. power (W)	max. 100 W(VA)		max. 50 W(VA)	
Connection cross section	4 mm² single core, with ferrule end 1.5 mm²		–	4 mm² single core, with ferrule end 1.5 mm²
Sealing range (cable diameter)	5...10 mm	6...8 mm	5...10 mm	6...8 mm
Locking of ports	M3 (recommended torque 0.4 Nm)			
Compression gland	M16 × 1.5 mm	PG 9; (PG11, NPT 1/2" o. r.)	M16 × 1.5 mm	PG 9; (PG11, NPT 1/2" o. r.)
Protection	IP65 inserted and tightened (EN 60529), with gland			
Temperature range	-20...+60 °C			

Article No.

The composition of your article number is explained on page 3.1.i

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	1 Form		

Notes

Other versions on request.

MURR ELEKTRONIK
stay connected

SVS

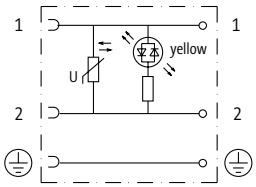
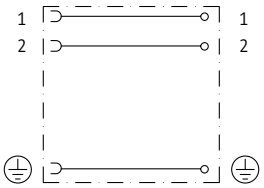
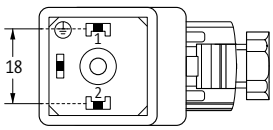
– Field-wireable

– Convenient connection, screw terminals

Approvals:

Form A (18 mm)



1 Form	29081	29101	29241	29261
Type	110 V AC/DC LED and VDR metric	110 V AC/DC LED and VDR PG 9	0...230 V AC/DC without components metric	0...230 V AC/DC without components PG 9
Circuit diagram				
Contact layout				

Technical Data

Operating voltage	110 V AC/DC ±10 %		0...230 V AC/DC	
Operating current per contact	max. 4 A		max. 10 A	
Switch off peak	max. 250 V		–	
Max. power (W)	max. 100 W(VA)		–	
Connection cross section	4 mm² single core, with ferrule end 1.5 mm²			
Sealing range (cable diameter)	5...10 mm	6...8 mm	5...10 mm	6...8 mm
Locking of ports	M3 (recommended torque 0.4 Nm)			
Compression gland	M16 × 1.5 mm	PG 9; (PG11, NPT 1/2" o. r.)	M16 × 1.5 mm	PG 9; (PG11, NPT 1/2" o. r.)
Protection	IP65 inserted and tightened (EN 60529), with gland			
Temperature range	-20...+60 °C			

Article No.

The composition of your article number is explained on page 3.1.i

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	1 Form		

Notes

Other versions on request.

VALVE CONNECTORS

SVS

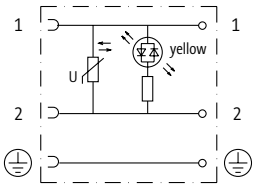
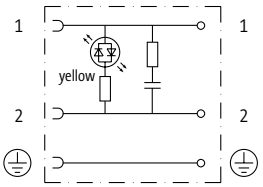
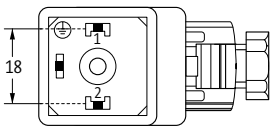
– Field-wireable

– Convenient connection, screw terminals

Approvals:

Form A (18 mm)



1 Form	29161	29181	29121	29141
Type	230 V AC/DC	230 V AC/DC	110 V AC/DC and 230 V AC/DC	110 V AC/DC and 230 V AC/DC
	LED and VDR	LED and VDR	LED and RC	LED and RC
	metric	PG 9	metric	PG 9
Circuit diagram				
Contact layout				

Technical Data				
Operating voltage	230 V AC/DC ±10 %		110 V AC/DC ±10 % and 230 V AC/DC ±10 %	
Operating current per contact	max. 1 A			
Switch off peak	max. 533 V		–	
Max. power (W)	max. 100 W(VA)		max. 50 W(VA)	
Connection cross section	4 mm² single core, with ferrule end 1.5 mm²			
Sealing range (cable diameter)	5...10 mm	6...8 mm	5...10 mm	6...8 mm
Locking of ports	M3 (recommended torque 0.4 Nm)			
Compression gland	M16 × 1.5 mm	PG 9; (PG11, NPT 1/2" o. r.)	M16 × 1.5 mm	PG 9; (PG11, NPT 1/2" o. r.)
Protection	IP65 inserted and tightened (EN 60529), with gland			
Temperature range	-20...+60 °C			

Article No.

The composition of your article number is explained on page 3.1.i

7000	– _____	– 000	0000
	1 Form		

Notes

Other versions on request.

SVS

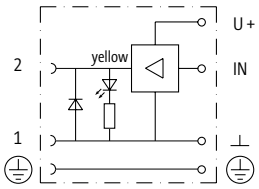
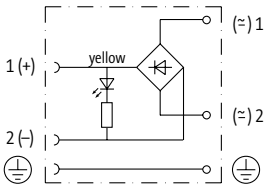
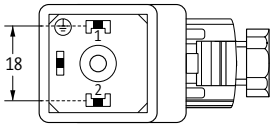
– Field-wireable

– Convenient connection, screw terminals

Approvals:

Form A (18 mm)



1 Form	29481	29501	29521	29541
Type	24 V DC LED and switching amplifier metric	24 V DC LED and switching amplifier PG 9	24...230 V AC/DC LED and bridge rectifier metric	24...230 V AC/DC LED and bridge rectifier PG 9
Circuit diagram				
Contact layout				

Technical Data

Operating voltage	24 V AC/DC ±25 %		24...230 V AC/DC	
Control voltage	ON: 10...30 V DC; OFF: 0...6 V DC (IN)		–	
Operating current per contact	max. 2 A (short-circuit protected)		max. 1.5 A	
Switch off peak	max. 46 V		–	
Connection cross section	–	4 mm² single core, with ferrule end 1.5 mm²		
Sealing range (cable diameter)	5...10 mm	6...8 mm	5...10 mm	6...8 mm
Locking of ports	M3 (recommended torque 0.4 Nm)			
Compression gland	M16 × 1.5 mm	PG 9; (PG11, NPT 1/2" o. r.)	M16 × 1.5 mm	PG 9; (PG11, NPT 1/2" o. r.)
Protection	IP65 inserted and tightened (EN 60529), with gland			
Temperature range	-20...+60 °C			

Article No.

The composition of your article number is explained on page 3.1.i

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	1 Form		

Notes

Other versions on request.

VALVE CONNECTORS

SVS

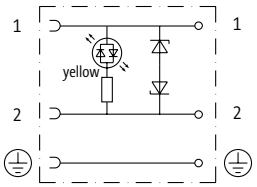
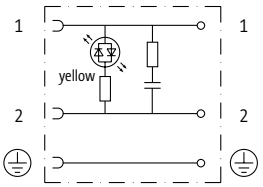
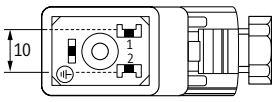
– Field-wireable

– Convenient connection, screw terminals

Approvals:

Form B (10 mm)



1 Form	29561	29581	29601	29621
Type	24 V AC/DC	24 V AC/DC	24 V AC/DC	24 V AC/DC
	LED and Z-diode	LED and Z-diode	LED and RC	LED and RC
	metric	PG 9	metric	PG 9
Circuit diagram				
Contact layout				

Technical Data				
Operating voltage	24 V AC ±20 % / DC ±25 %		24 V AC/DC ±25 %	
Operating current per contact	max. 4 A		max. 2 A	
Switch off peak	max. 55 V		–	
Max. power (W)	max. 100 W(VA)		max. 50 W(VA)	
Connection cross section	4 mm² single core, with ferrule end 1.5 mm²			
Sealing range (cable diameter)	5...10 mm	6...8 mm	5...10 mm	6...8 mm
Locking of ports	M3 (recommended torque 0.4 Nm)			
Compression gland	M16 × 1.5 mm	PG 9	M16 × 1.5 mm	PG 9
Protection	IP65 inserted and tightened (EN 60529), with gland			
Temperature range	-20...+60 °C			

Article No.

The composition of your article number is explained on page 3.1.i

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	1 Form		

Notes

Other versions on request.

SVS

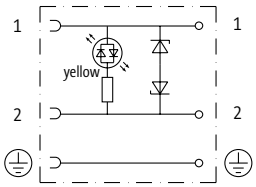
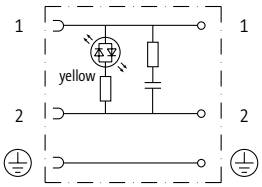
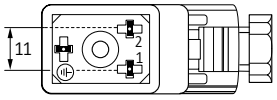
– Field-wireable

– Convenient connection, screw terminals

Approvals:

Form BI (11 mm)
Industrial standard



1 Form	29801	29821	29841	29861
Type	24 V AC/DC LED and Z-diode metric	24 V AC/DC LED and Z-diode PG 9	24 V AC/DC LED and RC metric	24 V AC/DC LED and RC PG 9
Circuit diagram				
Contact layout				

Technical Data

Operating voltage	24 V AC ±20 % / DC ±25 %		24 V AC/DC ±25 %	
Operating current per contact	max. 4 A		max. 2 A	
Switch off peak	max. 55 V		–	
Max. power (W)	max. 100 W(VA)		max. 50 W(VA)	
Connection cross section	4 mm² single core, with ferrule end 1.5 mm²			
Sealing range (cable diameter)	5...10 mm	6...8 mm	5...10 mm	6...8 mm
Locking of ports	M3 (recommended torque 0.4 Nm)			
Compression gland	M16 × 1.5 mm	PG 9	M16 × 1.5 mm	PG 9
Protection	IP65 inserted and tightened (EN 60529), with gland			
Temperature range	-20...+60 °C			

Article No.

The composition of your article number is explained on page 3.1.i

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	1 Form		

Notes

Other versions on request.

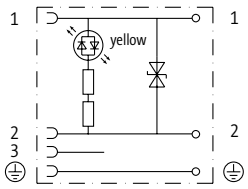
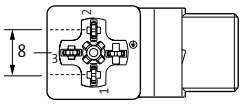
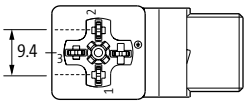
VALVE CONNECTORS

MOSA

– Field-wireable

– IDC terminals

Approvals:

	Form C (8 mm)	**Form CI (9.4 mm)** Industrial standard
		
1 Form	**80081**	**94081**
Type	**24 V AC/DC** **LED and suppression**	**24 V AC/DC** **LED and suppression**
Circuit diagram		
Contact figure	**Cable outlet can be turned in 3 × 90° steps**	
Contact layout		

Technical Data

Operating voltage	24 V AC/DC ±25 %
Operating current per contact	max. 3 A
Switch off peak	max. 53 V
Connection cross section	0.25...0.5 mm² (conductor diameter min. 0.1 mm)
Sealing range (cable diameter)	4...6 mm
Outer wire diameter	1.2...1.6 mm
Contact figure	Cable outlet can be turned in 3 × 90° steps
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

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		1 Form			

Notes

Other versions on request.

MURR ELEKTRONIK
stay connected

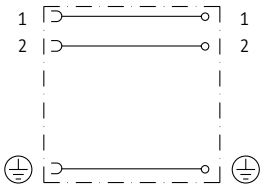
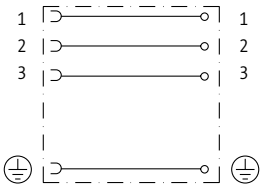
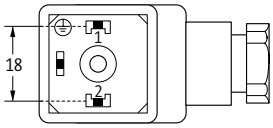
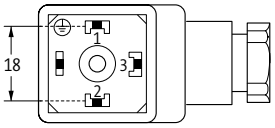
SVS Eco

– Field-wireable

– Screw terminals

– without components

Approvals:

	Form A (18 mm)	Form A (18 mm) for pressure switches
		
1 Form	**29245**	**29405**
Type	**0...230 V AC/DC** **without components** **metric**	**0...230 V AC/DC** **without components** **metric**
Circuit diagram		
Contact figure	**Cable outlet can be turned in 90° steps**	
Contact layout		

Technical Data

Operating voltage	0...230 V AC/DC
Operating current per contact	max. 10 A
Connection cross section	0.5...1.5 mm²
Sealing range (cable diameter)	6...8 mm
Locking of ports	M3 (recommended torque 0.4 Nm)
Contact figure	Cable outlet can be turned in 90° steps
Compression gland	M16 × 1.5 mm
Protection	IP65 inserted and tightened
Temperature range	-40...+80 °C

Article No.

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		1 Form			

Notes

Other versions on request.

VALVE CONNECTORS

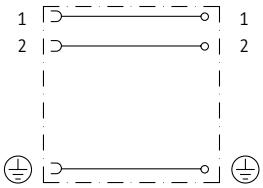
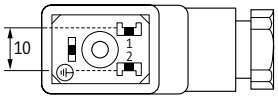
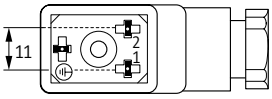
SVS Eco

– Field-wireable

– Screw terminals

– without components

Approvals:

	Form B (10 mm)	Form BI (11 mm)
		
1 Form	**29765**	**30005**
Type	**0...230 V AC/DC** **without components** **metric**	**0...230 V AC/DC** **without components** **metric**
Circuit diagram		
Contact figure	**Cable outlet can be turned in 180° steps**	
Contact layout		

Technical Data

Operating voltage	0...230 V AC/DC	
Operating current per contact	max. 10 A	
Connection cross section	0.5...1.5 mm²	
Sealing range (cable diameter)	6...8 mm	
Locking of ports	M3 (recommended torque 0.4 Nm)	
Contact figure	Cable outlet can be turned in 180° steps	
Compression gland	M16 × 1.5 mm	M12 × 1.75 mm
Protection	IP65 inserted and tightened	
Temperature range	-40...+80 °C	

Article No.

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	1 Form		

Notes

Other versions on request.

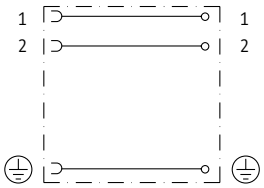
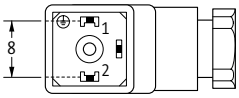
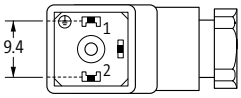
SVS Eco

– Field-wireable

– Screw terminals

– without components

Approvals:

	Form C (8 mm)	Form CI (9.4 mm) Industrial standard
		
1 Form	**30055**	**30155**
Type	**0...230 V AC/DC**	**0...110 V AC/DC**
	without components	**without components**
	metric	**metric**
Circuit diagram		
Contact figure	**Cable outlet can be turned in 90° steps**	
Contact layout		

Technical Data

Operating voltage	0...230 V AC/DC	0...110 V AC/DC
Operating current per contact	max. 6 A	
Connection cross section	0.34...0.5 mm²	
Sealing range (cable diameter)	4...6 mm	
Locking of ports	M2.5 (couple de serrage recommandé 0,4 Nm)	M3 (recommended torque 0.4 Nm)
Contact figure	Cable outlet can be turned in 90° steps	
Compression gland	M16 × 1.5 mm	M12 × 1.75 mm
Protection	IP65 inserted and tightened	
Temperature range	-40...+80 °C	

Article No.

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		1 Form			

Notes

Other versions on request.

VALVE CONNECTORS

SVS Eco, LED

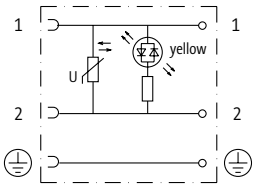
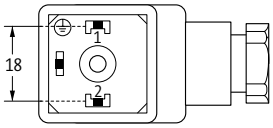
– Field-wireable

– Screw terminals

Approvals:

Form A (18 mm)



1 Form	**29005**	**29085**	**29165**
Type	**24 V AC/DC**	**110 V AC/DC**	**230 V AC/DC**
	LED and VDR	**LED and VDR**	**LED and VDR**
	metric	**metric**	**metric**
Circuit diagram			
Contact figure	**Cable outlet can be turned in 90° steps**		
Contact layout			

Technical Data			
Operating voltage	24 V AC/DC ±10 %	110 V AC/DC ±10 %	230 V AC/DC ±10 %
Operating current per contact	max. 1.5 A		
Connection cross section	0.5...1.5 mm²		
Sealing range (cable diameter)	6...8 mm		
Locking of ports	M3 (recommended torque 0.4 Nm)		
Compression gland	M16 × 1.5 mm		
Contact figure	Cable outlet can be turned in 90° steps		
Protection	IP65 inserted and tightened		
Temperature range	-40...+60 °C		

Article No.

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		1 Form			

Notes

Other versions on request.

MURR ELEKTRONIK
stay connected

SVS Eco, LED

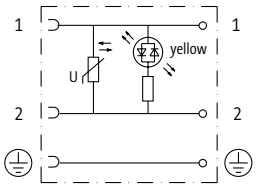
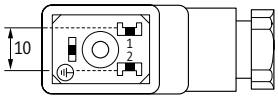
– Field-wireable

– Screw terminals

Form B (10 mm)



Approvals:

1 Form	29565	29645	29685
Type	24 V AC/DC LED and VDR metric	110 V AC/DC LED and VDR metric	230 V AC/DC LED and VDR metric
Circuit diagram			
Contact figure	Cable outlet can be turned in 180° steps		
Contact layout			

Technical Data			
Operating voltage	24 V AC/DC ±10 %	110 V AC/DC ±10 %	230 V AC/DC ±10 %
Operating current per contact	max. 1.5 A		
Connection cross section	0.5...1.5 mm²		
Sealing range (cable diameter)	6...8 mm		
Locking of ports	M3 (recommended torque 0.4 Nm)		
Compression gland	M16 × 1.5 mm		
Contact figure	Cable outlet can be turned in 180° steps		
Protection	IP65 inserted and tightened		
Temperature range	-40...+60 °C		

Article No.

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	1 Form		

Notes

Other versions on request.

VALVE CONNECTORS

SVS Eco, LED

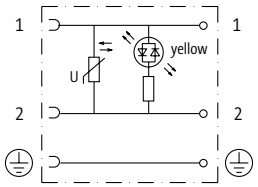
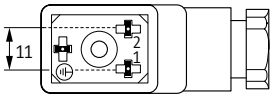
– Field-wireable

– Screw terminals

Approvals:

Form BI (11 mm)
Industrial standard



1 Form	29805	29885	29925
Type	24 V AC/DC	110 V AC/DC	230 V AC/DC
	LED and VDR	LED and VDR	LED and VDR
	metric	metric	metric
Circuit diagram			
Contact figure	Cable outlet can be turned in 180° steps		
Contact layout			

Technical Data			
Operating voltage	24 V AC/DC ±10 %	110 V AC/DC ±10 %	230 V AC ±10 %
Operating current per contact	max. 1.5 A		
Connection cross section	0.5...1.5 mm²		
Sealing range (cable diameter)	6...8 mm		
Locking of ports	M3 (recommended torque 0.4 Nm)		
Compression gland	M16 × 1.5 mm		
Contact figure	Cable outlet can be turned in 180° steps		
Protection	IP65 inserted and tightened		
Temperature range	-40...+60 °C		

Article No.

The composition of your article number is explained on page 3.1.i

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		1 Form			

Notes

Other versions on request.

MURR ELEKTRONIK
stay connected

SVS Eco, LED

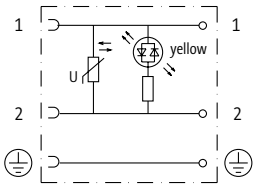
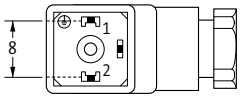
– Field-wireable

– Screw terminals

Form C (8 mm)



Approvals:

1 Form	30105	30115	30125
Type	24 V AC/DC	110 V AC/DC	230 V AC/DC
	LED and VDR	LED and VDR	LED and VDR
	metric	metric	metric
Circuit diagram			
Contact figure	Cable outlet can be turned in 90° steps		
Contact layout			

Technical Data			
Operating voltage	24 V AC/DC ±10 %	110 V AC/DC ±10 %	230 V AC/DC ±10 %
Operating current per contact	max. 1.5 A		
Connection cross section	0.34...0.5 mm²		
Sealing range (cable diameter)	4...6 mm		
Locking of ports	M2.5 (couple de serrage recommandé 0,4 Nm)		
Compression gland	M12 × 1.75 mm		
Contact figure	Cable outlet can be turned in 90° steps		
Protection	IP65 inserted and tightened		
Temperature range	-40...+60 °C		

Article No.

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		1 Form			

Notes

Other versions on request.

VALVE CONNECTORS

SVS Eco, LED

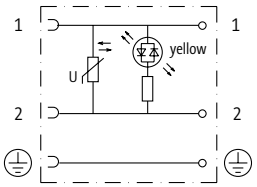
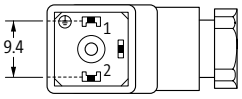
– Field-wireable

– Screw terminals

Approvals:

Form CI (9.4 mm)
Industrial standard



1 Form	30205	30215
Type	24 V AC/DC	110 V AC/DC
	LED and VDR	LED and VDR
	metric	metric
Circuit diagram		
Contact figure	Cable outlet can be turned in 90° steps	
Contact layout		

Technical Data		
Operating voltage	24 V AC/DC ±10 %	110 V AC/DC ±10 %
Operating current per contact	max. 1.5 A	
Connection cross section	0.34...0.5 mm²	
Sealing range (cable diameter)	4...6 mm	
Locking of ports	M3 (recommended torque 0.4 Nm)	
Compression gland	M12 × 1.75 mm	
Contact figure	Cable outlet can be turned in 90° steps	
Protection	IP65 inserted and tightened	
Temperature range	-40...+60 °C	

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_____	–	000	0000
		1 Form			

Notes

Other versions on request.

Labeling accessories			Art-No.
	**ACS label plate KM 5**		
	for self marking (9 × 20 mm)		**7000-99001-0000000**
	for self marking with ADEMARK markers		**7000-99003-0000000**
Gasket accessories			**Art-No.**
	**Silicon gasket**		
		Valve plug (form A)	**7000-99011-0000000**
		Valve plug (form A)	**7000-99012-0000000**
	**Silicon gasket**		
		Valve plug (form B, BI)	**7000-99013-0000000**
		Valve plug (form B, BI)	**7000-99014-0000000**
	**Accessories set**		
	Fixing screw, isolation plate, label plate, flat gasket	Valve plug (form A)	**7000-99015-0000000**
	Fixing screw, isolation plate, label plate, flat gasket	Valve plug (form A), field wireable	**7000-99016-0000000**
	Fixing screw, isolation plate, label plate, flat gasket	Valve plug (form B, BI)	**7000-99017-0000000**
	Fixing screw, isolation plate, label plate, flat gasket	Valve plug (form B, BI), field wireable	**7000-99018-0000000**
	Fixing screw, isolation plate, label plate, flat gasket	Valve plug (form C)	**7000-99019-0000000**
	Fixing screw, isolation plate, label plate, flat gasket	Valve plug (form CI)	**7000-99020-0000000**
	**Hexagonal screw**		
	Metal	Valve plug (form A)	**7000-99021-0000000**
	Metal	Valve plug (form A, B, BI), field wireable	**7000-99022-0000000**
	Plastic	Valve plug (form A)	**7000-99023-0000000**
	**Gasket for valve plug socket**		
	2 contacts + PE and 3 contacts + PE	Valve plug (form A)	**7000-99251-0000000**
	2 contacts + PE	Valve plug (form B)	**7000-99271-0000000**
	2 contacts + PE	Valve plug (form BI)	**7000-99261-0000000**
	2 contacts + PE and 3 contacts + PE	Valve plug (form C)	**7000-99291-0000000**
	2 contacts + PE and 3 contacts + PE	Valve plug (form CI)	**7000-99281-0000000**
End fitting accessories			**Art-No.**
	**Cable compression gland PG 9**		
	(gray)	Valve plug (form A, B, BI), field wireable	**7000-99025-0000000**
	(black)	Valve plug (form A, B, BI), field wireable	**7000-99026-0000000**

VALVE CONNECTORS

End fitting accessories			Art-No.
	**Tube adapter**		
	snap-in for corrugated tube (size 13mm)	Cable diameter (4...7 mm)	**7000-99081-0000000**
	**Valve plug socket**		
	2 contacts + PE	Valve plug (form A)	**7000-99201-0000000**
	2 contacts + PE	Valve plug (form B)	**7000-99221-0000000**
	2 contacts + PE	Valve plug (form BI)	**7000-99211-0000000**
	2 contacts + PE	Valve plug (form C)	**7000-99241-0000000**
	2 contacts + PE	Valve plug (form CI)	**7000-99231-0000000**
	**Valve plug socket**		
	3 contacts + PE	Valve plug (form A)	**7000-99205-0000000**
	3 contacts + PE	Valve plug (form C)	**7000-99245-0000000**
	3 contacts + PE	Valve plug (form CI)	**7000-99235-0000000**

Cables

violet	No./diameter of wires	Wire isolation	C-track properties	Jacket	Outer Ø mm	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
840 shielded	1×2×Ø 0.64mm	PE (rd, gn)	10 million	PUR (UL/CSA)	approx. 7.8	15 × outer Ø	-40...+80 °C	-20...+70 °C
841 shielded	1×2×Ø 0.64mm	PE (rd, gn)	3 million	PUR (UL/CSA)	approx. 7.7	15 × outer Ø	-40...+80 °C	-20...+70 °C
843 shielded	1×2×Ø 0.64mm	PE (rd, gn)		PUR (UL/CSA)	approx. 8.0	15 × outer Ø	-40...+80 °C	-20...+80 °C
850 shielded	1×2×Ø 0.64mm	PE (rd, gn)		PVC (UL/CSA)	approx. 7.8	15 × outer Ø	-20...+70 °C	-5...+60 °C

yellow	gray	black	No./diameter of wires	Wire isolation	C-track properties	Jacket	Outer Ø mm	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
010	**210**	**610**	3 × 0.25 mm²	PVC (br, bl, bk)		PVC (UL/CSA)	approx. 4.5	10 × outer Ø	-30...+80 °C	-5...+80 °C
020	**220**	**620**	3 × 0.25 mm²	PVC (br, bl, bk)	2 million	PUR/PVC	approx. 4.5	15 × outer Ø	-30...+80 °C	-5...+80 °C
030	**230**	**630**	3 × 0.25 mm²	PP (br, bl, bk)	5 million	PUR (UL/CSA)	approx. 4.1	10 × outer Ø	-40...+80 °C	-25...+80 °C
050	**250**	**650**	3 × 0.25 mm²	PP (br, bl, bk)	10 million	PUR (UL/CSA),welding spark res.	approx. 4.1	10 × outer Ø	-40...+90 °C	-25...+90 °C
011	**211**	**611**	4 × 0.25 mm²	PVC (br, wh, bl, bk)		PVC (UL/CSA)	approx. 4.8	10 × outer Ø	-30...+80 °C	-5...+80 °C
021	**221**	**621**	4 × 0.25 mm²	PVC (br, wh, bl, bk)	2 million	PUR/PVC	approx. 4.8	15 × outer Ø	-30...+80 °C	-5...+80 °C
031	**231**	**631**	4 × 0.25 mm²	PP (br, wh, bl, bk)	5 million	PUR (UL/CSA)	approx. 4.4	10 × outer Ø	-40...+80 °C	-25...+80 °C
051	**251**	**651**	4 × 0.25 mm²	PP (br, wh, bl, bk)	10 million	PUR (UL/CSA),welding spark res.	approx. 4.4	10 × outer Ø	-40...+90 °C	-25...+90 °C
013	**213**	**613**	3 × 0.34 mm²	PVC (br, bl, bk)		PVC (UL/CSA)	approx. 4.6	10 × outer Ø	-30...+80 °C	-5...+80 °C
023	**223**	**623**	3 × 0.34 mm²	PVC (br, bl, bk)	2 million	PUR/PVC	approx. 4.9	15 × outer Ø	-30...+80 °C	-5...+80 °C
033	**233**	**633**	3 × 0.34 mm²	PP (br, bl, bk)	5 million	PUR (UL/CSA)	approx. 4.3	10 × outer Ø	-40...+80 °C	-25...+80 °C
053	**253**	**653**	3 × 0.34 mm²	PP (br, bl, bk)	10 million	PUR (UL/CSA),welding spark res.	approx. 4.3	10 × outer Ø	-40...+90 °C	-25...+90 °C
014	**214**	**614**	4 × 0.34 mm²	PVC (br, wh, bl, bk)		PVC (UL/CSA)	approx. 5.0	10 × outer Ø	-30...+80 °C	-5...+80 °C
024	**224**	**624**	4 × 0.34 mm²	PVC (br, wh, bl, bk)	2 million	PUR/PVC	approx. 5.2	15 × outer Ø	-30...+80 °C	-5...+80 °C
034	**234**	**634**	4 × 0.34 mm²	PP (br, wh, bl, bk)	5 million	PUR (UL/CSA)	approx. 4.7	10 × outer Ø	-40...+80 °C	-25...+80 °C
054	**254**	**654**	4 × 0.34 mm²	PP (br, wh, bl, bk)	10 million	PUR (UL/CSA),welding spark res.	approx. 4.7	10 × outer Ø	-40...+90 °C	-25...+90 °C
015	**215**	**615**	5 × 0.34 mm²	PVC (br, wh, bl, bk, gnye)		PVC (UL/CSA)	approx. 5.2	10 × outer Ø	-30...+80 °C	-5...+80 °C
025	**225**	**625**	5 × 0.34 mm²	PVC (br, wh, bl, bk, gnye)	2 million	PUR/PVC	approx. 5.9	15 × outer Ø	-30...+80 °C	-5...+80 °C
035	**235**	**635**	5 × 0.34 mm²	PP (br, wh, bl, bk, gnye)	5 million	PUR (UL/CSA)	approx. 5.0	10 × outer Ø	-40...+80 °C	-25...+80 °C
126	**–**	**732**	5 × 0.34 mm²	PP (br, wh, bl, bk, gr)	5 million	PUR (UL/CSA)	approx. 5.0	10 × outer Ø	-40...+80 °C	-25...+80 °C
055	**255**	**655**	5 × 0.34 mm²	PP (br, wh, bl, bk, gnye)	10 million	PUR (UL/CSA),welding spark res.	approx. 5.0	10 × outer Ø	-40...+90 °C	-25...+90 °C

gray	black	No./diameter of wires	Wire isolation	C-track properties	Jacket	Outer Ø mm	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
200 shielded	**600 shielded**	3 × 0.34 mm²	PVC (br, bl, bk)		PVC (UL/CSA)	approx. 5.0	10 × outer Ø	-30...+80 °C	-5...+80 °C
201 shielded	**601 shielded**	4 × 0.34 mm²	PVC (br, wh, bl, bk)		PVC (UL/CSA)	approx. 5.3	10 × outer Ø	-30...+80 °C	-5...+80 °C
240 shielded	**640 shielded**	3 × 0.34 mm²	PP (br, bl, bk)	5 million	PUR (UL/CSA)	approx. 5.0	10 × outer Ø	-40...+80 °C	-25...+80 °C
241 shielded	**641 shielded**	4 × 0.34 mm²	PP (br, wh, bl, bk)	5 million	PUR (UL/CSA)	approx. 5.3	10 × outer Ø	-40...+80 °C	-25...+80 °C

Cables

yellow	black	No./diameter of wires	Wire isolation	C-track properties	Jacket	Outer Ø mm	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
014	**614**	4 × 0.34 mm²	PVC (br, wh, bl, bk)		PVC (UL/CSA)	approx. 5.0	10 × outer Ø	-30...+80 °C	-5...+80 °C
034	**634**	4 × 0.34 mm²	PP (br, wh, bl, bk)	5 million	PUR (UL/CSA)	approx. 4.7	10 × outer Ø	-40...+80 °C	-25...+80 °C

green	No./diameter of wires	Wire isolation	C-track properties	Jacket	Outer Ø mm	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
793 shielded	2 × 2 × 0.34 mm²	PE (wh, ye, bl, or)		PUR (UL/CSA)	approx. 6.7	12 × outer Ø	-40...+80 °C	-20...+60 °C
794 shielded	2 × 2 × 0.34 mm²	PE (wh, ye, bl, or)		PUR (UL/CSA)	approx. 6.7	12 × outer Ø	-40...+80 °C	-20...+60 °C

green	violet	No./diameter of wires	Wire isolation	C-track properties	Jacket	Outer Ø mm	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
796 shielded	**798 shielded**	2 × 2 × 0.34 mm²	PE (wh, ye, bl, or)	5 million	PUR (UL/CSA)	approx. 6.7	15 × outer Ø	-25...+80 °C	-20...+60 °C

gray	No./diameter of wires	Wire isolation	C-track properties	Jacket	Outer Ø mm	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
210	3 × 0.25 mm²	PVC (br, bl, bk)		PVC (UL/CSA)	approx. 4.5	10 × outer Ø	-30...+80 °C	-5...+80 °C
211	4 × 0.25 mm²	PVC (br, wh, bl, bk)		PVC (UL/CSA)	approx. 4.8	10 × outer Ø	-30...+80 °C	-5...+80 °C
214	4 × 0.34 mm²	PVC (br, wh, bl, bk)		PVC (UL/CSA)	approx. 5.0	10 × outer Ø	-30...+80 °C	-5...+80 °C
214	4 × 0.34 mm²	PVC (br, wh, bl, bk)		PVC (UL/CSA)	approx. 5.0	10 × outer Ø	-30...+80 °C	-5...+80 °C
291 shielded	8 × 0.25 mm²	PP (wh, br, gn, ye, gr, pk, bl, rd)	2 million	PUR	approx. 7.0	15 × outer Ø	-40...+80 °C	-20...+80 °C
292	8 × 0.25 mm²	PP (wh, br, gn, ye, gr, pk, bl, rd)	2 million	PUR	approx. 6.0	15 × outer Ø	-40...+80 °C	-20...+80 °C
294 shielded	8 × 0.25 mm²	PP (br, wh, bl, bk, gr, pk, vi, or)	2 million	PUR (UL/CSA)	approx. 7.0	10 × outer Ø	-40...+80 °C	-20...+80 °C
295	8 × 0.25 mm²	PP (br, wh, bl, bk, gr, pk, vi, or)	2 million	PUR (UL/CSA)	approx. 6.0	10 × outer Ø	-40...+80 °C	-20...+80 °C
301	12 × 0.25 mm²	PP (br, bl, wh, gn, pk, ye, bk, gr, rd, vi, grpk, rdbl)	3 million	PUR (UL/CSA)	approx. 6.9	15 × outer Ø	-40...+80 °C	-20...+80 °C
317 shielded	3 × 0.34 mm²	PVC (br, bl, bk)		PVC	approx. 5.9	15 × outer Ø	-40...+80 °C	-5...+80 °C
318 shielded	3 × 0.34 mm²	PVC (br, bl, bk)		PUR/PVC	approx. 5.9	15 × outer Ø	-30...+80 °C	-5...+70 °C
330 shielded	4 × 0.34 mm²	PVC (br, wh, bl, bk)		PVC	approx. 5.9	15 × outer Ø	-30...+80 °C	-5...+70 °C
330 shielded	4 × 0.34 mm²	PVC (br, wh, bl, bk)		PVC	approx. 5.9	15 × outer Ø	-30...+80 °C	-5...+70 °C
331 shielded	4 × 0.34 mm²	PVC (br, wh, bl, bk)		PUR/PVC	approx. 5.9	15 × outer Ø	-30...+80 °C	-5...+70 °C
331 shielded	4 × 0.34 mm²	PVC (br, wh, bl, bk)		PUR/PVC	approx. 5.9	15 × outer Ø	-30...+80 °C	-5...+70 °C
336	4 × 0.34 mm²	TPE-S (br, wh, bl, bk)		TPE-S	approx. 5.2	15 × outer Ø	-50...+125 °C	-30...+105 °C
348 shielded	5 × 0.34 mm²	PVC (br, wh, bl, bk, gnye)		PVC	approx. 5.9	15 × outer Ø	-30...+80 °C	-5...+70 °C
348 shielded	5 × 0.34 mm²	PVC (br, wh, bl, bk, gnye)		PVC	approx. 5.9	15 × outer Ø	-30...+80 °C	-5...+70 °C
349 shielded	5 × 0.34 mm²	PVC (br, wh, bl, bk, gnye)		PUR/PVC	approx. 5.9	15 × outer Ø	-40...+80 °C	-5...+70 °C
414	2 × 0.5 mm²	PP (br, bl)	5 million	PUR (UL/CSA)	approx. 4.4	10 × outer Ø	-25...+80 °C	-25..+80 °C

Cables

gray	No./diameter of wires	Wire isolation	C-track properties	Jacket	Outer Ø mm	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
588	2 × 1.5 mm²	PP (br, bl)		PUR (UL/CSA)	approx. 8.0	10 × outer Ø	-50...+80 °C	-25...+80 °C
862	4 × 0.75 mm²	PP (br, wh, bl, bk)	5 million	PUR (UL/CSA)	approx. 6.5	10 × outer Ø	-40...+80 °C	-20...+80 °C
961	5 × 1.5 mm²	PP (br, wh, bl, bk, gnye, num.)	5 million	PUR (UL/CSA)	approx. 8.7	10 × outer Ø	-50...+80 °C	-20...+80 °C
962	5 × 2.5 mm²	PP (br, wh, bl, bk, gnye, num.)	5 million	PUR (UL/CSA)	approx. 9.7	10 × outer Ø	-50...+80 °C	-20...+80 °C
965	5 × 1.0 mm²	PP (br, wh, bl, bk, gnye, num.)		PUR/PVC	approx. 7.2	10 × outer Ø	-30...+70 °C	-5...+70 °C

green	No./diameter of wires	Wire isolation	C-track properties	Jacket	Outer Ø mm	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
791	1 × 4 × 0.15 mm²	PE (wh, ye, bl, or)		PUR (UL/CSA)	approx. 4.9	12 × outer Ø	-20...+80 °C	-20...+50 °C
794 shielded	2 × 2 × 0.34 mm²	PE (wh, ye, bl, or)		PUR (UL/CSA)	approx. 6.7	12 × outer Ø	-40...+80 °C	-20...+60 °C
796 shielded	2 × 2 × 0.34 mm²	PE (wh, ye, bl, or)	5 million	PUR (UL/CSA)	approx. 6.7	15 × outer Ø	-25...+80 °C	-20...+60 °C
802 shielded	4×0.5 + 2×0.25 mm²	PP (br, bl, bk, wh), (gr, pk)	5 million	PUR (UL/CSA)	approx. 7.9	10 × outer Ø	-40...+90 °C	0...+90 °C
820 shielded	4 × 0.34 mm²	TPE (br, bl, bk, wh)		PUR	approx. 5.9	10 × outer Ø	-50...+80 °C	-40...+80 °C

violet	No./diameter of wires	Wire isolation	C-track properties	Jacket	Outer Ø mm	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
803 shielded	2×0.25 + 2×0.34 mm²	PE (rd, bk), (bl, wh)	5 million	PUR (UL/CSA)	approx. 6.9	15 × outer Ø	-40...+80 °C	-20...+80 °C

black	No./diameter of wires	Wire isolation	C-track properties	Jacket	Outer Ø mm	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
634	4 × 0.34 mm²	PP (br, wh, bl, bk)	5 million	PUR (UL/CSA)	approx. 4.7	10 × outer Ø	-40...+80 °C	-25...+80 °C
702	12 × 0.14 mm²	PVC (br, bl, wh, gn, pk, ye, bk, gr, rd, vi, grpk, rdbl)		PVC	approx. 6.0	10 × outer Ø	-30...+70 °C	-5...+70 °C
703 shielded	12 × 0.14 mm²	PVC (br, bl, wh, gn, pk, ye, bk, gr, rd, vi, grpk, rdbl)		PVC	approx. 6.5	10 × outer Ø	-30...+70 °C	-5...+70 °C
705	12 × 0.14 mm²	PP (br, bl, wh, gn, pk, ye, bk, gr, rd, vi, grpk, rdbl)	2 million	PUR (UL/CSA)	approx. 6.0	10 × outer Ø	-40...+85 °C	-25...+85 °C
706 shielded	12 × 0.14 mm²	PP (br, bl, wh, gn, pk, ye, bk, gr, rd, vi, grpk, rdbl)	2 million	PUR (UL/CSA)	approx. 6.5	10 × outer Ø	-40...+85 °C	-25...+85 °C
740	2 × 0.5 mm²	TPE-E (bk, wh)	2 million	PUR	approx. 5.0	10 × outer Ø	-50...+90 °C	-30...+90 °C
750	2 × 0.75 mm²	PVC (br, bl)		PUR/PVC	approx. 5.9	15 × outer Ø	-40...+80 °C	-5...+80 °C
752	2 × 0.75 mm²	PVC (br, bl)		PVC	approx. 5.2	15 × outer Ø	-30...+70 °C	-5...+70 °C

TECHNICAL APPENDIX

Cables

yellow	gray	black	No./diameter of wires	Wire isolation	C-track properties	Jacket	Outer Ø mm	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
016	**216**	**616**	3 × 0.75 mm²	PVC (bk, num, gnye)		PVC	approx. 5.9	10 × outer Ø	-30...+70 °C	-5...+70 °C
026	**226**	**626**	3 × 0.75 mm²	PVC (bk, num, gnye)	2 million	PUR/PVC	approx. 5.9	15 × outer Ø	-30...+80 °C	-5...+80 °C
036	**236**	**636**	3 × 0.75 mm²	PP (bk, num, gnye)	5 million	PUR (UL/CSA)	approx. 5.9	10 × outer Ø	-40...+80 °C	-25...+80 °C
056	**256**	**656**	3 × 0.75 mm²	TPE (bk, numbered, gnye)	10 million	PUR (UL/CSA),welding spark res.	approx. 5.2	10 × outer Ø	-40...+90 °C	-25...+90 °C
016	**216**	**616**	3 × 0.75 mm²	PVC (bk, num, gnye)		PVC	approx. 5.9	10 × outer Ø	-30...+70 °C	-5...+70 °C
026	**226**	**626**	3 × 0.75 mm²	PVC (bk, num, gnye)	2 million	PUR/PVC	approx. 5.9	15 × outer Ø	-30...+80 °C	-5...+80 °C
036	**236**	**636**	3 × 0.75 mm²	PP (bk, num, gnye)	5 million	PUR (UL/CSA)	approx. 5.9	10 × outer Ø	-40...+80 °C	-25...+80 °C
017	**217**	**617**	4 × 0.75 mm²	PVC (bk, num, gnye)		PVC	approx. 6.2	10 × outer Ø	-30...+70 °C	-5...+70 °C
027	**227**	**627**	4 × 0.75 mm²	PVC (bk, num, gnye)	2 million	PUR/PVC	approx. 6.5	15 × outer Ø	-30...+80 °C	-5...+80 °C
037	**237**	**637**	4 × 0.75 mm²	PP (bk, num, gnye)	5 million	PUR (UL/CSA)	approx. 6.5	10 × outer Ø	-40...+80 °C	-25...+80 °C
018	**218**	**618**	5 × 0.75 mm²	PVC (bk, num, gnye)		PVC	approx. 7.0	10 × outer Ø	-30...+70 °C	-5...+70 °C
028	**228**	**628**	5 × 0.75 mm²	PVC (bk, num, gnye)	2 million	PUR/PVC	approx. 7.0	15 × outer Ø	-30...+80 °C	-5...+80 °C
038	**238**	**638**	5 × 0.75 mm²	PP (bk, num, gnye)	5 million	PUR (UL/CSA)	approx. 7.0	10 × outer Ø	-40...+80 °C	-25...+80 °C

multi-colored	No./diameter of wires	Wire isolation		Outer Ø mm	Bend radius (moving)	Temperature range (fixed)
970	3 × 0.34 mm²	PP (br, bk, bl)		approx. 2.7	10 × outer Ø	-40...+80 °C
971	4 × 0.34 mm²	PP (br, wh, bl, bk)		approx. 3.0	10 × outer Ø	-40...+80 °C
972	5 × 0.34 mm²	PP (br, wh, bl, bk, gr)		approx. 3.4	10 × outer Ø	-40...+80 °C
973	8 × 0.25 mm²	PP (wh, br, gn, ye, gr, pk, bl, rd)		approx. 4.4	10 × outer Ø	-40...+80 °C

Wires	No./diameter of wires	Wire isolation	C-track properties	Outer Ø mm	Bend radius (moving)	Temperature range (fixed)
978	5 × 0.75 mm²	PVC (br, wh, bl, bk, gnye)		approx. 7.8	10 × outer Ø	-25...+85 °C

Cables

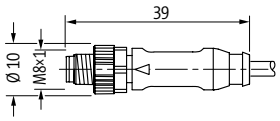
gray	No./diameter of wires	C-track properties	Jacket	Outer Ø mm	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
333	4×0.34 + 3×0.75 mm²	2 million	PUR/PVC	approx. 7.4	12 × outer Ø	-30...+80 °C	-5...+70 °C
334	4×0.34 + 2×0.75 mm²	5 million	PUR (UL/CSA), halogen free	approx. 7.6	10 × outer Ø	-40...+80 °C	-5...+80 °C
337	4×0.34 + 2×0.75 mm²	2 million	PUR/PVC	approx. 6.9	12 × outer Ø	-30...+80 °C	-5...+70 °C
350	6×0.34 + 2×0.75 mm²	2 million	PUR/PVC	approx. 7.8	12 × outer Ø	-30...+80 °C	-5...+70 °C
356	6×0.34 + 2×0.75 mm²	5 million	PUR (UL/CSA), halogen free	approx. 8.5	10 × outer Ø	-40...+80 °C	-5...+80 °C
357	8×0.34 + 2×0.75 mm²	2 million	PUR/PVC	approx. 8.6	12 × outer Ø	-30...+80 °C	-5...+70 °C
358	8×0.34 + 2×0.75 mm²	2 million	PUR/PVC	approx. 8.6	12 × outer Ø	-30...+80 °C	-5...+70 °C
359	8×0.34 + 2×0.75 mm²	5 million	PUR (UL/CSA), halogen free	approx. 9.2	10 × outer Ø	-40...+80 °C	-5...+80 °C
360	8×0.34 + 2×0.75 mm²	5 million	PUR (UL/CSA), halogen free	approx. 9.2	10 × outer Ø	-40...+80 °C	-5...+80 °C
362	8×0.34 + 3×0.75 mm²	2 million	PUR/PVC	approx. 8.1	12 × outer Ø	-30...+80 °C	-5...+70 °C
362	8×0.34 + 3×0.75 mm²	2 million	PUR/PVC	approx. 8.1	12 × outer Ø	-30...+80 °C	-5...+70 °C
363	8×0.34 + 3×0.75 mm²	2 million	PUR/PVC	approx. 8.1	12 × outer Ø	-30...+80 °C	-5...+70 °C
373 shielded	8×0.34 + 3×0.75 mm²	5 million	PUR (UL/CSA), halogen free	approx. 9.3	12 × outer Ø	-40...+90 °C	-40...+90 °C
374	8×0.34 + 5×0.75 mm²	2 million	PUR/PVC	approx. 10.5	12 × outer Ø	-30...+80 °C	-5...+70 °C
384	10×0.34 + 2×0.75 mm²	5 million	PUR (UL/CSA), halogen free	approx. 9.3	10 × outer Ø	-40...+80 °C	-5...+80 °C
385	10×0.34 + 2×0.75 mm²	2 million	PUR/PVC	approx. 8.3	12 × outer Ø	-30...+80 °C	-5...+70 °C
386	12×0.34 + 2×0.75 mm²	2 million	PUR/PVC	approx. 8.8	12 × outer Ø	-30...+80 °C	-5...+70 °C
389	12×0.34 + 2×0.75 mm²	5 million	PUR (UL/CSA), halogen free	approx. 9.5	10 × outer Ø	-40...+80 °C	-5...+80 °C
395	16×0.34 + 2×0.75 mm²	2 million	PUR/PVC	approx. 9.6	12 × outer Ø	-30...+80 °C	-5...+70 °C
396	16×0.34 + 2×0.75 mm²	5 million	PUR (UL/CSA), halogen free	approx. 10.4	10 × outer Ø	-40...+80 °C	-5...+80 °C
398	16×0.34 + 3×0.75 mm²	2 million	PUR/PVC	approx. 10.0	12 × outer Ø	-30...+80 °C	-5...+70 °C
398	16×0.34 + 3×0.75 mm²	2 million	PUR/PVC	approx. 10.0	12 × outer Ø	-30...+80 °C	-5...+70 °C
401 shielded	16×0.34 + 3×0.75 mm²	5 million	PUR (UL/CSA), halogen free	approx. 11.7	12 × outer Ø	-40...+90 °C	-40...+90 °C
403	16×0.34 + 5×0.75 mm²	5 million	PUR (UL/CSA), halogen free	approx. 11.5	10 × outer Ø	-40...+90 °C	-40...+90 °C
404	16×0.34 + 5×0.75 mm²	2 million	PUR/PVC	approx. 12.5	12 × outer Ø	-30...+80 °C	-5...+70 °C
407	20×0.34 + 3×0.75 mm²	2 million	PUR/PVC	approx. 10.0	12 × outer Ø	-30...+80 °C	-5...+70 °C
408	20×0.34 + 3×0.75 mm²	5 million	PUR (UL/CSA), halogen free	approx. 10.0	10 × outer Ø	-40...+90 °C	-40...+90 °C
411	20×0.34 + 2×0.75 mm²	5 million	PUR (UL/CSA), halogen free	approx. 11.3	10 × outer Ø	-40...+80 °C	-5...+80 °C
412	20×0.34 + 2×0.75 mm²	2 million	PUR/PVC	approx. 10.4	12 × outer Ø	-30...+80 °C	-5...+70 °C
447	8×0.5 + 3×1.0 mm²	5 million	PUR (UL/CSA), halogen free	approx. 9.4	10 × outer Ø	-40...+90 °C	-40...+90 °C
448	8×0.5 + 3×1.0 mm²	5 million	PUR (UL/CSA), halogen free	approx. 9.4	10 × outer Ø	-40...+90 °C	-40...+90 °C
448	8×0.5 + 3×1.0 mm²	5 million	PUR (UL/CSA), halogen free	approx. 9.4	10 × outer Ø	-40...+90 °C	-40...+90 °C
452	16×0.5 + 3×1.0 mm²	5 million	PUR (UL/CSA), halogen free	approx. 11.5	10 × outer Ø	-40...+90 °C	-40...+90 °C
452	16×0.5 + 3×1.0 mm²	5 million	PUR (UL/CSA), halogen free	approx. 11.5	10 × outer Ø	-40...+90 °C	-40...+90 °C
533	18 × 0.75 mm²	2 million	PUR/PVC	approx. 11.7	12 × outer Ø	-40...+80 °C	-5...+70 °C

TECHNICAL APPENDIX

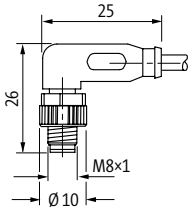
M8 Round Plug Connectors

Open ended wires

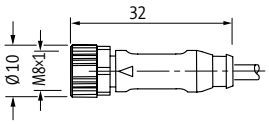
Male straight



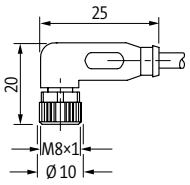
Male 90°



Female straight

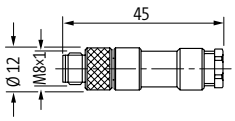


Female 90°



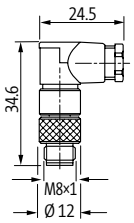
Field-wireable (solder pins)

Male straight



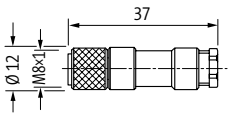
max. 0.25 mm²

Male 90°



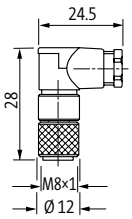
max. 0.25 mm²

Female straight



max. 0.25 mm²

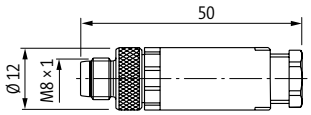
Female 90°



max. 0.25 mm²

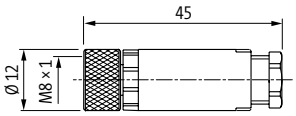
Field wireable (screw terminals)

Male straight



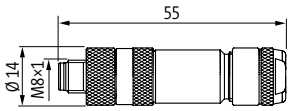
0.14... 0.5 mm²

Female straight



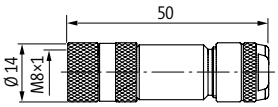
0.14... 0.5 mm²

Male straight, shielded



0.14... 0.5 mm²

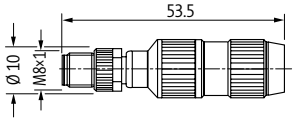
Female straight, shielded



0.14... 0.5 mm²

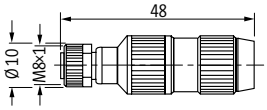
Field-wireable (IDC terminals)

Male straight



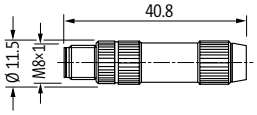
0.25...0.5 mm²

Female straight



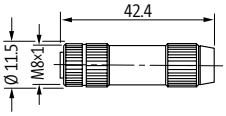
0.25...0.5 mm²

Male straight



0.14...0.34 mm²

Female straight

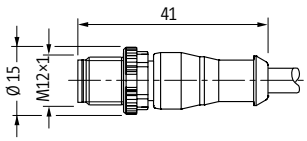


0.14...0.34 mm²

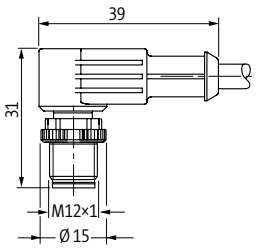
M12 Round Plug Connectors

Open ended wires

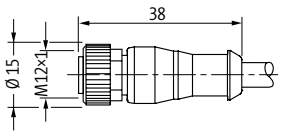
Male straight



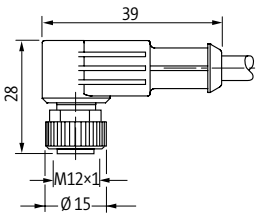
Male 90°



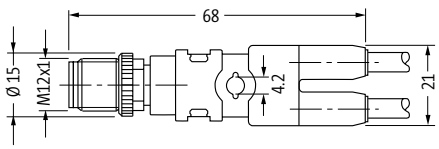
Female straight



Female 90°

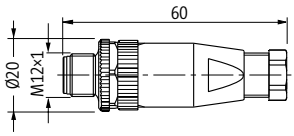


Male straight (Y connector)

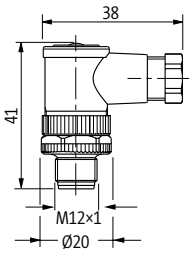


M12 Round Plug Connectors

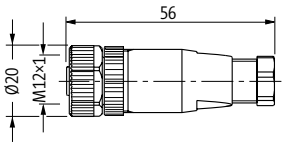
Male straight



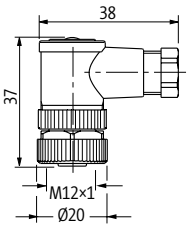
Male 90°



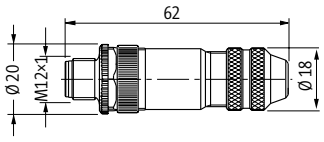
Female straight



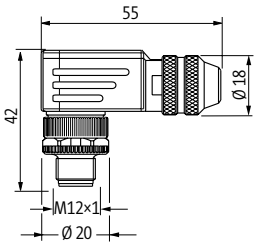
Female 90°



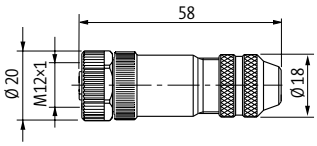
Male straight, shielded



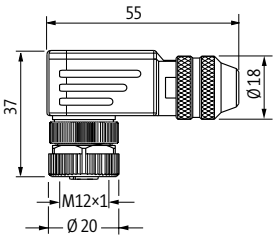
Male 90°, shielded



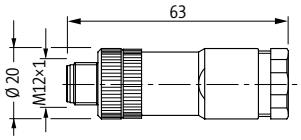
Female straight, shielded



Female 90°, shielded

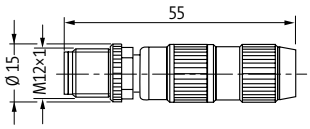


Male straight, shielded, Y connector



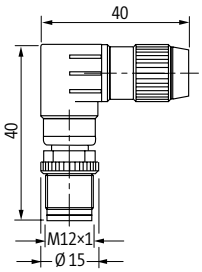
Field-wireable (IDC terminals)

Male straight



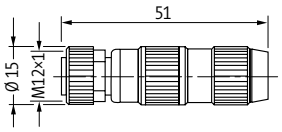
0.25...0.5 mm²

Male 90°



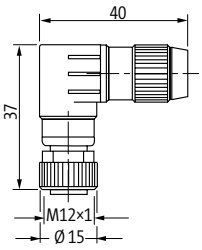
0.25...0.5 mm²

Female straight



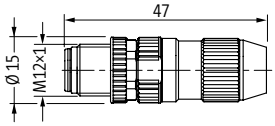
0.25...0.5 mm²

Female 90°



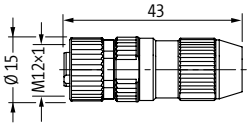
0.25...0.5 mm²

Male straight



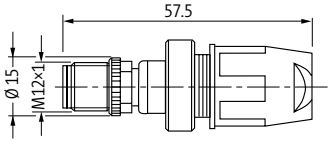
0.14...0.34 mm²

Female straight



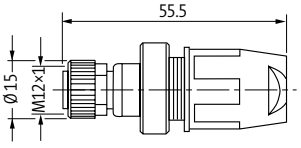
0.14...0.34 mm²

Male straight



0.5...1.0 mm²

Female straight

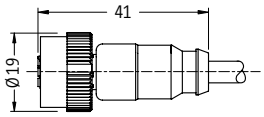


0.5...1.0 mm²

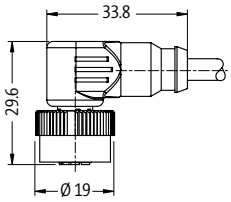
MQ12 Round Plug Connectors

Open ended wires

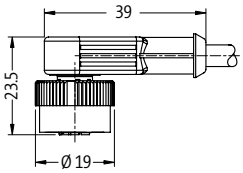
Female straight



Female 90°

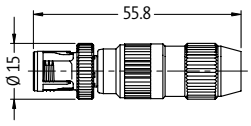


Female 90° with LED



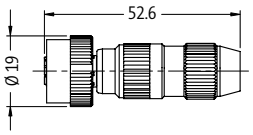
MQ12 Round Plug Connectors

Male straight



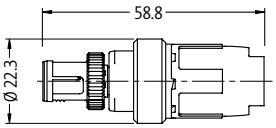
0.25...0.5 mm²

Female straight



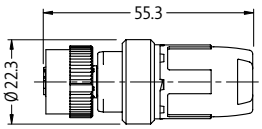
0.25...0.5 mm²

Male straight



0.5...1.0 mm²

Female straight

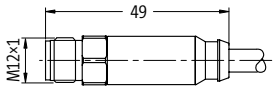


0.5...1.0 mm²

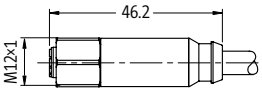
M12-Steel round plug connector

Open ended wires

Male straight

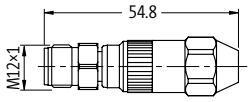


Female straight

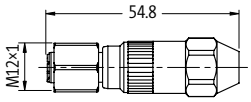


Field-wireable (IDC terminals)

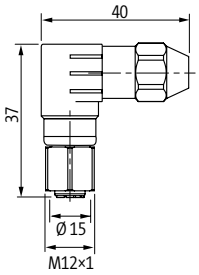
Male straight



Female straight



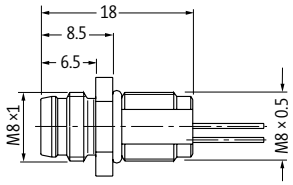
Female 90°



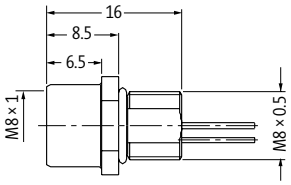
Flange connector M8, M12, 7/8"

Open ended wires

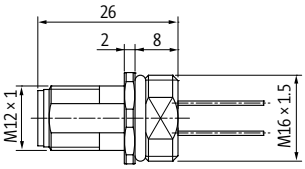
Male M8



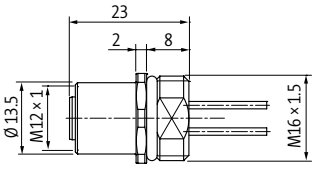
Female M8



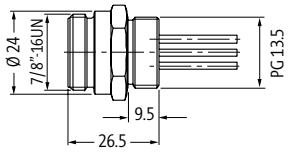
Male M12



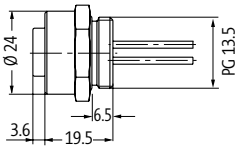
Female M12



Male 7/8"

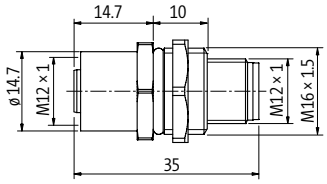


Female 7/8"



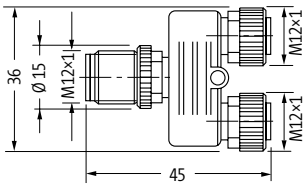
Control cabinet entry system M12

Male/Female

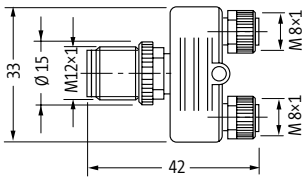


T-couplers M8, M12, 7/8"

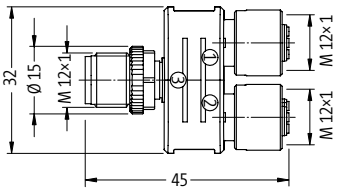
M12 - M12



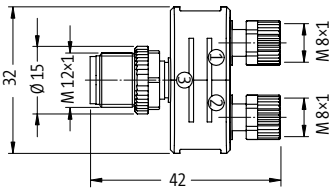
M12 - M8



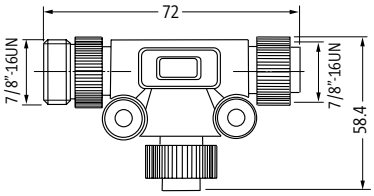
M12 - M12 Slimline



M12 - M8 Slimline



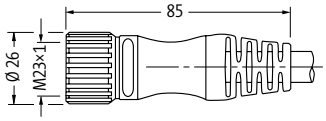
7/8"- 7/8"



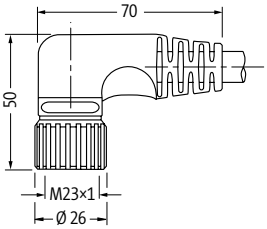
M23 Round Plug Connectors

Open ended wires

Female straight

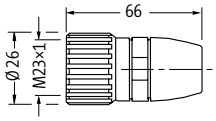


Female 90°

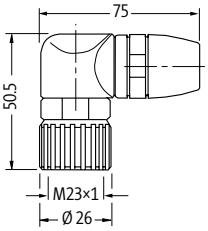


Field wireable (screw terminals)

Female straight, shielded



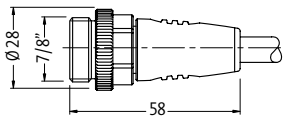
Female 90°, shielded



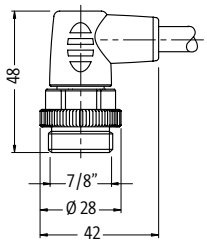
7/8" Round Plug Connectors

Open ended wires

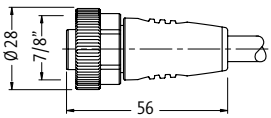
Male straight



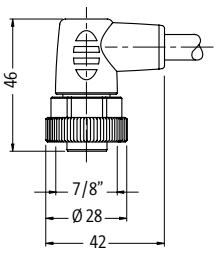
Male 90°



Female straight



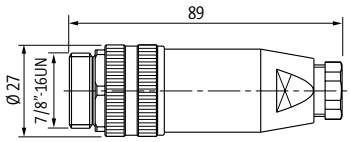
Female 90°



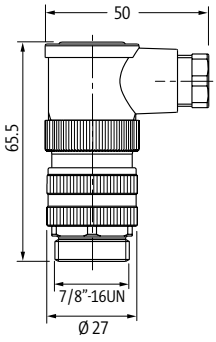
TECHNICAL APPENDIX

7/8" Round Plug Connectors

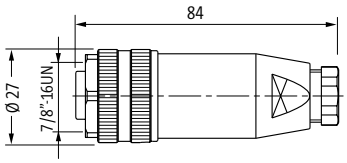
Male straight



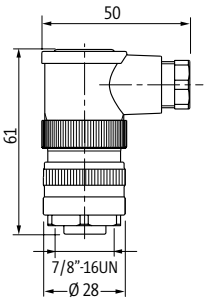
Male 90°



Female straight

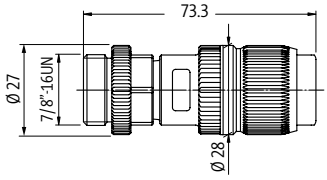


Female 90°

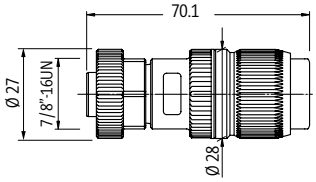


Field-wireable (IDC terminals)

Male straight



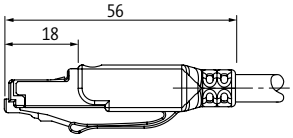
Female straight



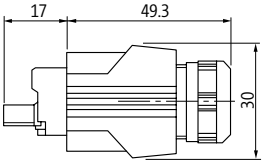
Plug connector RJ45

Open ended wires

Male straight, RJ45

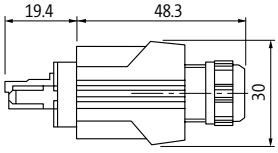


Male straight, Push Pull Power



Height: 36 mm

Male straight, Push Pull RJ45

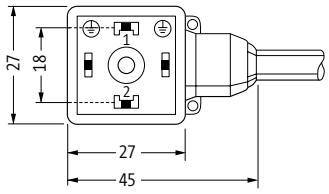


Height: 22 mm

Valve plugs MSUD

Open ended wires

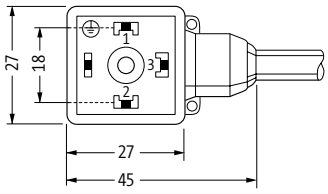
Form A (18 mm)



Height: 30 mm

Bridged PE

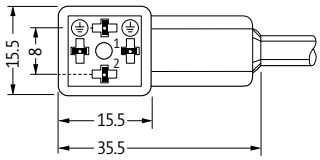
Form A (18 mm) for pressure switch



Height: 30 mm

PE opposite cable entry (0°)

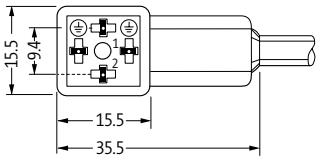
Form C (8 mm)



Height: 25 mm

Bridged PE

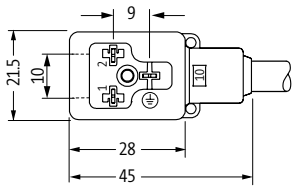
Form CI (9.4 mm)



Height: 25 mm

Bridged PE

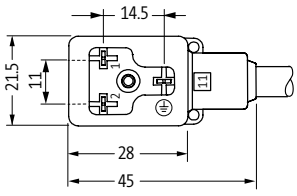
Form B (10 mm)



Height: 30 mm

PE at cable entry (0°)

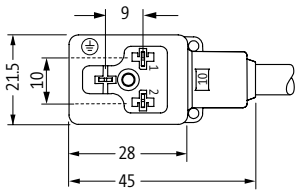
Form BI (11 mm)



Height: 30 mm

PE at cable entry (0°)

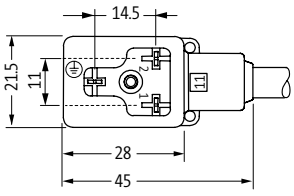
Form B (10 mm)



Height: 30 mm

PE opposite cable entry (180°)

Form BI (11 mm)

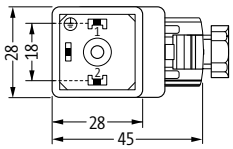


Height: 30 mm

PE opposite cable entry (180°)

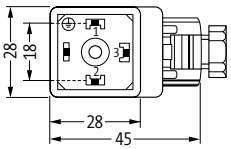
Valve plugs SVS

Form A (18 mm)



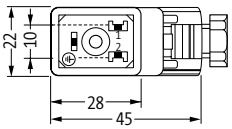
Height: 41 mm

Form A (18 mm) for pressure switch



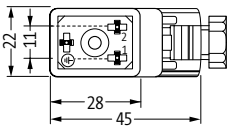
Height: 41 mm

Form B (10 mm)



Height: 41 mm

Form BI (11 mm)

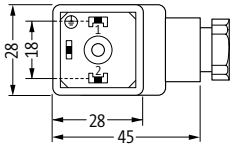


Height: 41 mm

Valve plugs SVS Eco

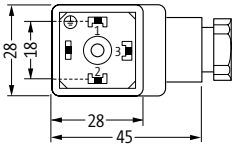
Field wireable (screw terminals)

Form A (18 mm)



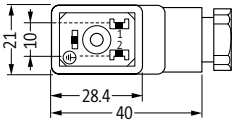
Height: 31 mm

Form A (18 mm) for pressure switch



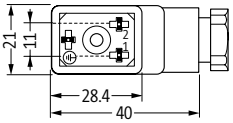
Height: 31 mm

Form B (10 mm)



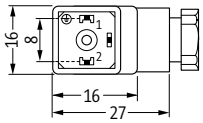
Height: 31 mm

Form BI (11 mm)



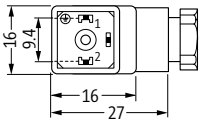
Height: 31 mm

Form C (8 mm)



Height: 26 mm

Form CI (9.4 mm)

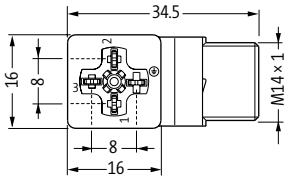


Height: 26 mm

Valve plugs MOSA

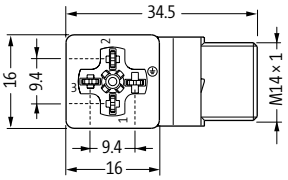
Field-wireable (IDC terminals)

Form C (8 mm)



Height: 28 mm

Form CI (9.4 mm)



Height: 28 mm

4 I/O SYSTEMS



MURR ELEKTRONIK
stay connected

1 ELECTRONICS IN THE CONTROL CABINET

2 INTERFACES

3 CONNECTION TECHNOLOGY

4 I/O SYSTEMS

Cube67	4.1
Cube20	4.2
Cube20S	4.3
MVK Metal	4.4
Impact67	4.5
Impact20	4.6
MASI00/20	4.7
MASI67	4.8
MASI68	4.9
M8 Distribution Systems	4.10
M12 Distribution Systems (Metal)	4.11
M12 Distribution Systems (Plastic)	4.12



CUBE67
MODULAR I/O STATION IP67

- **Open System**
- **Modular**
- **Flexible**

CHANGE THE BUS WITHOUT CHANGING THE SYSTEM

Cube67 brings you balanced and cost-effective solutions. Murrelektronik's innovative fieldbus system has simplified and modernized decentralized installations from the ground up. The machine installation is independent from the control and the fieldbus, which makes it possible to customize the control without having to modify the I/O peripherals.

PROFIBUS® EtherCAT®
PROFINET® CANopen
EtherNet/IP™ DeviceNet™

Cube67 I/O Modules



Bus Nodes
• IP67 protection

Page 4.1.1



Digital Inputs
• IP67 protection

Page 4.1.5



Digital Inputs/Outputs
• IP67 protection

Page 4.1.7



Function Modules
• IP67 protection

Page 4.1.11



Analog Inputs
• IP67 protection

Page 4.1.14



Analog Outputs
• IP67 protection

Page 4.1.17



Safe outputs
• IP67 protection

Page 4.1.18



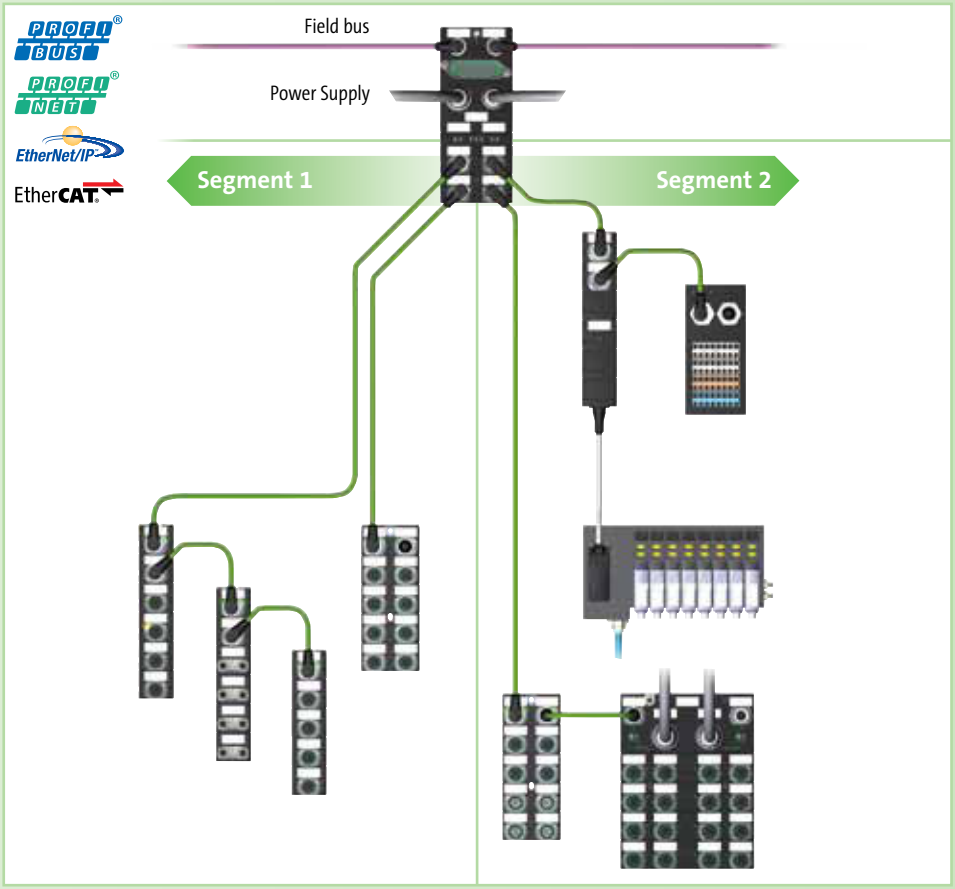
Digital Inputs and Outputs with Cable
• IP67 protection

Page 4.1.19



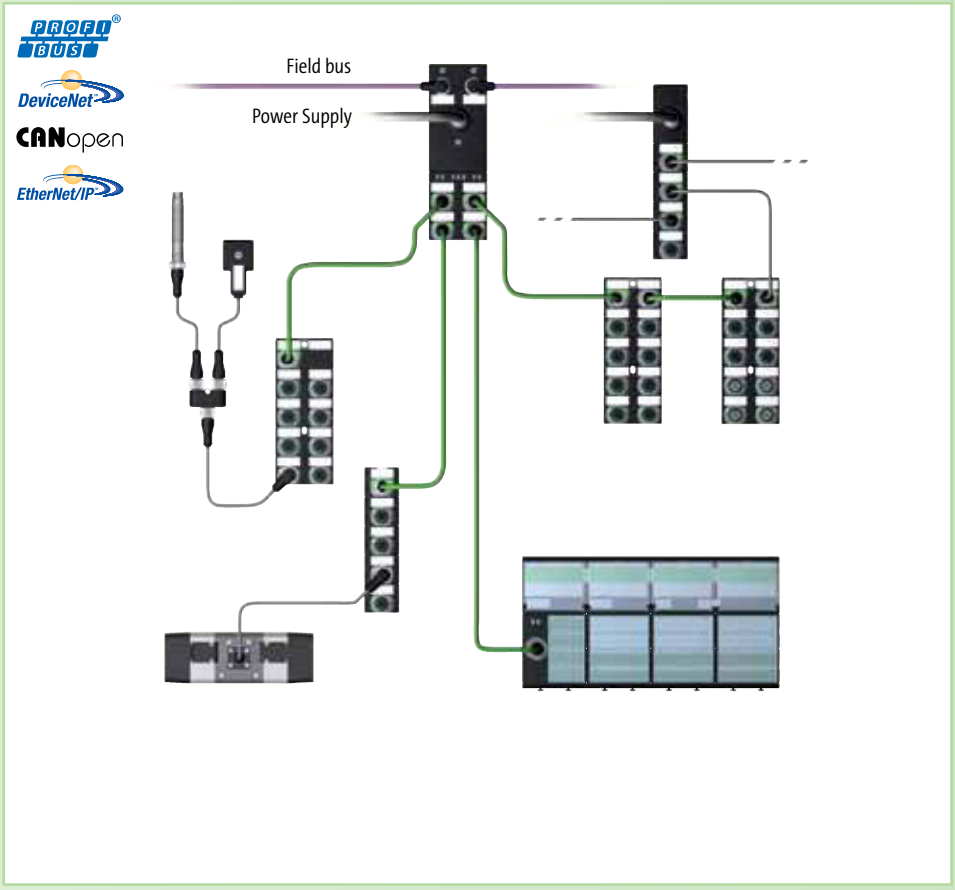
Accessories

Page 4.1.25



cube67+

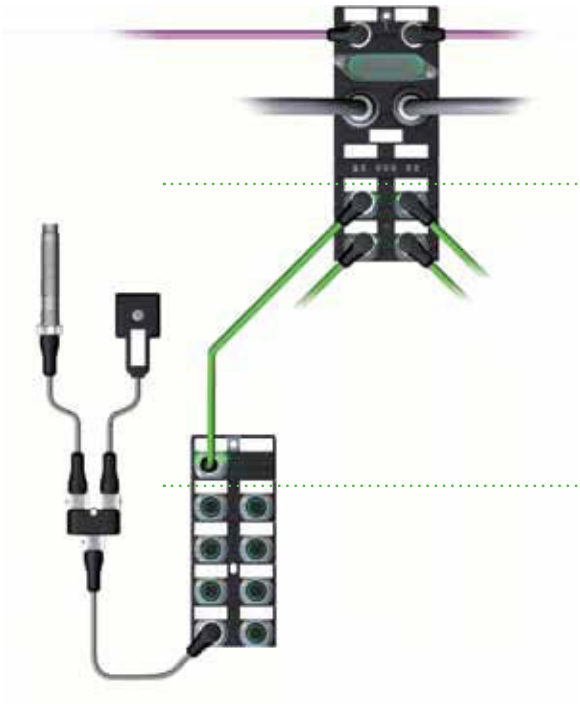
- 2 segments
- Per segment:
  - 16 modules
  - 30 meters cable length
- Pin Level Diagnostics
- LED Indicator per I/O
- Topology
  - Star/line
- Transfer type
  - Change of State
- System connection
  - Hybrid cable M12
- Addressing
  - Automatically



cube67

- 4 lines
- Per line:
  - 4 modules
  - 10 meters cable length
- Pin Level Diagnostics
- LED Indicator per I/O
- Topology
  - Star/line
- Transfer type
  - Change of State
- System connection
  - Hybrid cable M12
- Addressing
  - Automatically

CONSISTENT DIAGNOSTICS WITH cube67+



BUS NODES

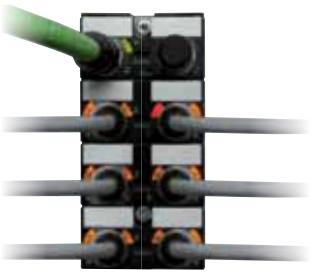
- Communication
- Module status
- Under voltage
- Overload

I/O MODULE

- Communication
- Under voltage
- Overload

PORT

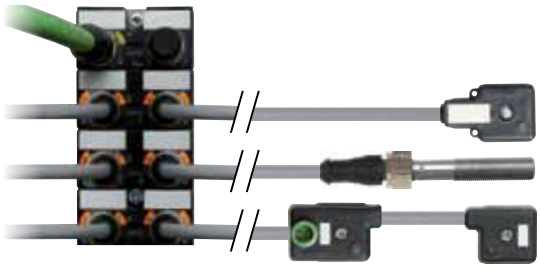
- Signal status
- Overflow and underflow (measured value)
- Short circuit
- Overload
- Cable break
- Actuator warning



DON'T LOOK FOR ERRORS, FIND THEM: COMPREHENSIVE DIAGNOSTICS

- Only the affected channel switches off
- Minimizes downtime
- Enables remote maintenance

HIGHLY FLEXIBILE WITH MULTIFUNCTIONAL I/Os



- Two signals per port, either input, diagnostics input or output, can all be independently configured
- Avoid unused reserves
- Double valves require only one port

Cube67 and Cube67+ are the new benchmark in automation. Small, multifunctional I/O modules and a variety of different interfaces are the keys to simplified installations. They can be installed close to sensors and loads. This saves installation time and offers benefits during service with easy trouble-shooting.

Bus Nodes, Cube67+

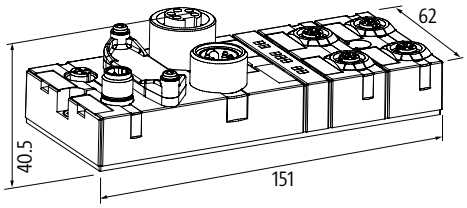
– up to 32 modules

– max. 2 × 30 m system expansion

PROFIBUS PROFINET EtherNet/IP conformance tested

Approvals: cULus Listed, PCT

	Cube67+ BN-P	Cube67+ BN-PNIO	Cube67+ BN-E
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
PROFIBUS DP	**56521**		
PROFINET IO		**56526**	
EtherNet-IP			**56525**
Fieldbus			
Operating modes	Sync- and freeze mode are supported	Autonegotiation/Auto MDI/MDI-X	
Transfer rate	to 12 Mbit/s	to 100 MBit/s Full Duplex	
Addressing	Rotary switch 0...99	DHCP, BOOTP or IP address by rotary switch	
Supply voltage			
Operating voltage	24 V DC (EN 61131-2)		
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 8 A		
Current consumption	max. 120 mA	max. 200 mA	
Internal system connection	via M12, 6 pole; max. 4 A		
Diagnostic			
Communication status	per LED and BUS		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
General data			
Protection	IP67		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Mounting method	2-hole screw mounting		
Dimension drawing			



Notes	
	Cube67+ modules can only be operated on Cube67+, Profibus + ProfiNet bus nodes.

Bus Nodes, Cube67+

– up to 32 modules

– max. 2 × 30 m system expansion

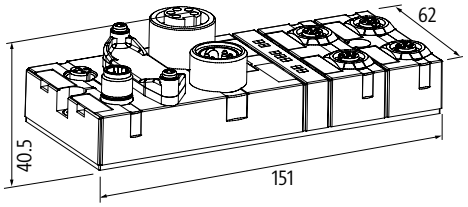
EtherCAT

Approvals:

Cube67+ BN-EC



Order Data		Art-No.
EtherCAT		56527
Fieldbus		
Transfer rate	to 100 Mbit/s	
Addressing	automatic	
Supply voltage		
Operating voltage	24 V DC (EN 61131-2)	
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 8 A	
Current consumption	max. 200 mA	
Internal system connection	via M12, 6 pole; max. 4 A	
Diagnostic		
Communication status	per LED and BUS	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short circuit and overload	yes	
General data		
Protection	IP67	
Temperature range	0...+55 °C (storage temperature -20...+75 °C)	
Mounting method	2-hole screw mounting	
Dimension drawing		



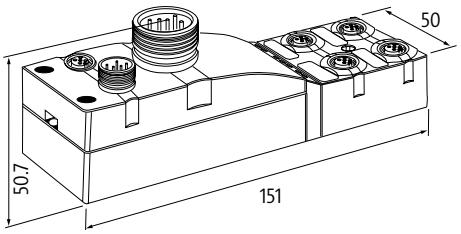
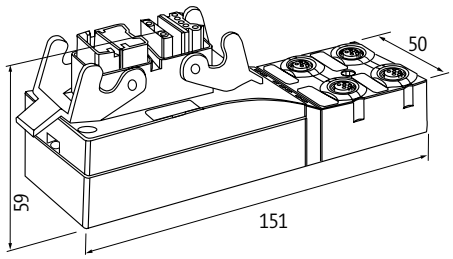
Notes	
	Cube67+ modules can only be operated on Cube67+, Profibus + ProfiNet bus nodes.

Bus Nodes, Cube67

– up to 16 modules

– max. 4×10 m system expansion

Approvals:

	Cube67 BN-P		Cube67 BN-P ECOFAST®	
				
Order Data		**Art-No.**		**Art-No.**
PROFIBUS DP	cULus	**56501**	cULus	**56531**
PROFIBUS DP (expanded diagnostic)		**566011**		
Fieldbus				
Operating modes	Sync- and freeze mode are supported			
Transfer rate	to 12 Mbit/s			
Addressing	Rotary switch 0...99			
Supply voltage				
Operating voltage	24 V DC (EN 61131-2)			
Sensor-system/actuator supply	via 7/8" power; max. 9 A		via hybrid connector; max. 9 A	
Current consumption	max. 120 mA			
Internal system connection	via M12, 6 pole; max. 4 A			
Diagnostic				
Communication status	per LED and BUS			
Diagnostic via LED	per module and channel			
Diagnostic via BUS	per module and channel			
Monitoring - under voltage	yes			
Monitoring - no voltage	yes			
Short circuit and overload	yes			
General data				
Protection	IP67		IP65	
Temperature range	0...+55 °C (storage temperature -20...+75 °C)			
Mounting method	2-hole screw mounting			
Dimension drawing				
				
Notes				

Bus Nodes, Cube67

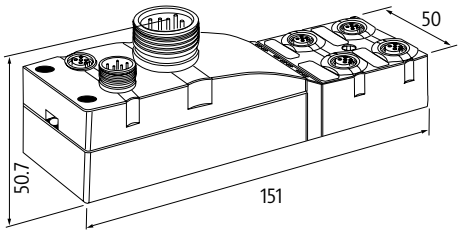
– up to 16 modules

– max. 4×10 m system expansion

EtherNet/IP conformance tested DeviceNet

CANopen Approvals: cULus Listed

	Cube67 BN-E	Cube67 BN-DN	Cube67 BN-C
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
EtherNet-IP	**56505**		
DeviceNet		**56507**	
CANopen			**56504**
Fieldbus			
Operating modes	Autonegotiation/Auto MDI/MDI-X	Polling; change of state; Cyclic	
Transfer rate	to 100 Mbit/s	125, 250 and 500 Kbit/s	10, 20, 50, 125, 250, 500, 800, 1000 kBit/s
Addressing	DHCP, BOOTP or IP address by rotary switch	Rotary switch 0...63	Rotary switch 1...99
Supply voltage			
Operating voltage	24 V DC (EN 61131-2)		
Sensor-system/actuator supply	via 7/8" power; max. 9 A		
Current consumption	max. 70 mA	approx. 70 mA	
Internal system connection	via M12, 6 pole; max. 4 A		
Diagnostic			
Communication status	per LED and BUS		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
General data			
Protection	IP67		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Mounting method	2-hole screw mounting		
Dimension drawing			



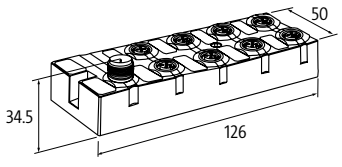
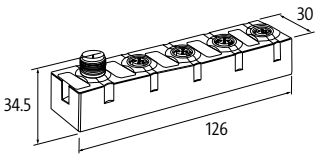
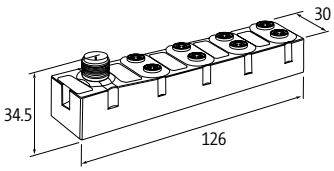
Notes

MURR ELEKTRONIK
stay connected

Compact module

– Digital inputs

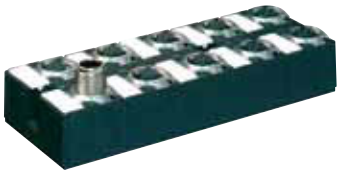
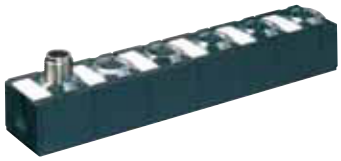
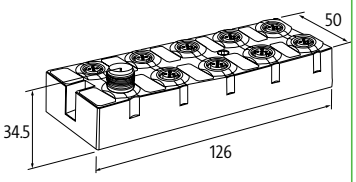
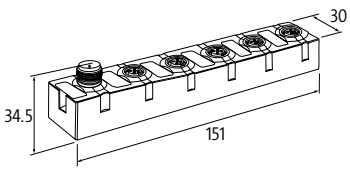
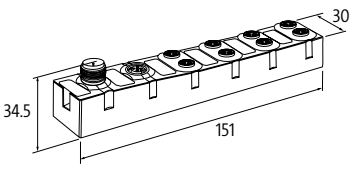
Approvals: c UL us Listed

	Cube67 DI16 C - 8×M12	Cube67 DI8 C - 4×M12	Cube67 DI8 C - 8×M8
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
DI16 - (C) 8×M12	**56602**		
DI8 - (C) 4×M12		**56612**	
DI8 - (C) 8×M8			**56622**
Internal communication			
Module supply	via internal system connection (max. 2×4 A)		
Current consumption	max. 50 mA		max. 30 mA
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		
Terminating resistor	integrated into the module		
Input			
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)		24 V DC, (EN 61131-2), max. 200 mA per M8 female, (short-circuit and overload protected)
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		
Input filter	1 ms		
Parameterization			
PIN 2	Input/diagnostic		–
PIN 4	Input		
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
General data			
Protection	IP67		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Mounting method	2-hole screw mounting		
Dimension drawing			
			
Notes			

Expansion module

– Digital inputs

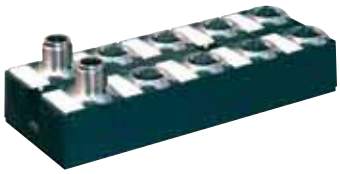
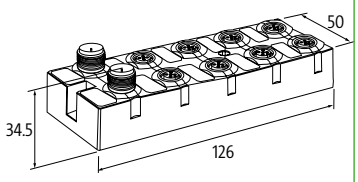
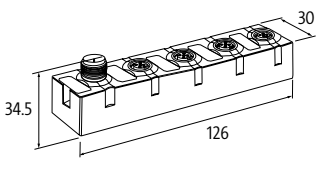
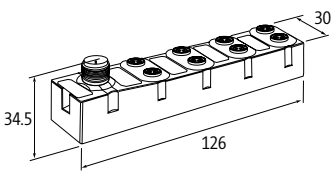
Approvals:

Order Data	Cube67 DI16 E - 8×M12	Cube67 DI8 E - 4×M12	Cube67 DI8 E - 8×M8
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
DI16 - (E) p-switching (8×M12)	**56603**		
DI16 - (E) n-switching (8×M12)	**56606**		
DI8 - (E) p-switching (4×M12)		**56613**	
DI8 - (E) n-switching (4×M12)		**56616**	
DI8 - (E) p-switching (8×M8)			**56623**
DI8 - (E) n-switching (8×M8)			**56626**
Internal communication			
Module supply	via internal system connection (max. 2×4 A)		
Current consumption	max. 50 mA		max. 30 mA
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		
Input			
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)		24 V DC, (EN 61131-2), max. 200 mA per M8 female, (short-circuit and overload protected)
Type	for 3-wire sensors or mechanical switches (EN 61131-2)		
Input filter	1 ms		
Parameterization			
PIN 2	Input/diagnostic		–
PIN 4	Input		
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
General data			
Protection	IP67		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Mounting method	2-hole screw mounting		
Dimension drawing			
			
Notes			

Compact module

– Multifunctional I/Os

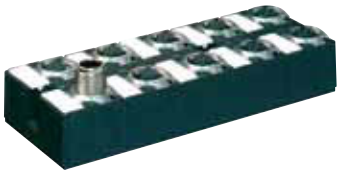
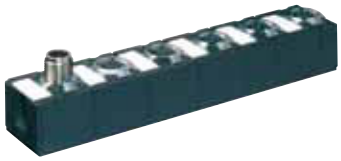
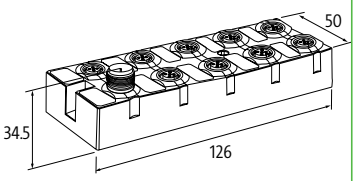
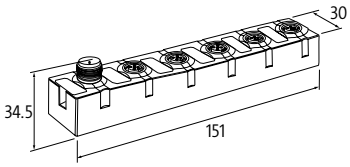
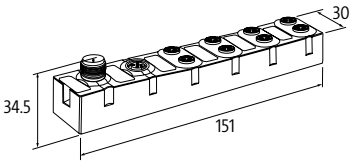
Approvals: c UL us Listed, PCT

	Cube67 DIO16 C - 8×M12	Cube67 DIO8 C - 4×M12	Cube67 DIO8 C - 8×M12
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
DIO16 - 0.5 A (C) 8×M12	**56600**		
DIO16 - 1.6 A (C) 8×M12	**56640**		
DIO8 - 0.5 A (C) 4×M12		**56610**	
DIO8 - 0.5 A (C) 8×M8			**56620**
Internal communication			
Module supply	via internal system connection (max. 2×4 A)		
Current consumption	max. 50 mA		max. 30 mA
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		
Terminating resistor	integrated into the module		
Input			
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)		24 V DC, (EN 61131-2), max. 200 mA per M8 female, (short-circuit and overload protected)
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		
Input filter	1 ms		
Parameterization			
PIN 2	Input/output/diagnostic		–
PIN 4	Input/output		
Output			
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A) + right actuators via supply right (max. 4 A)	24 V DC (EN 61131-2), via system connection (max. 4 A)	
Lamp load	10 W		
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
Actuator warning	per channel via LED and BUS		
General data			
Protection	IP67		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Mounting method	2-hole screw mounting		
Dimension drawing			
			
Notes			

Expansion module

– Multifunctional I/Os

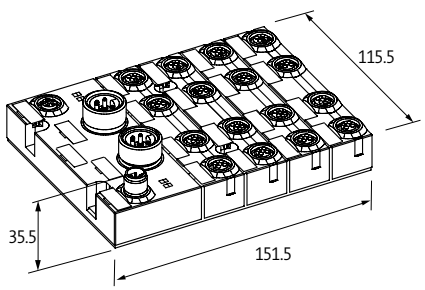
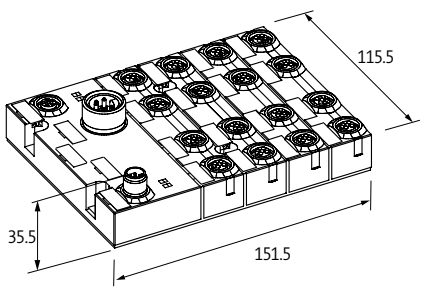
Approvals: cULus Listed, PCT

	Cube67 DIO16 E - 8×M12	Cube67 DIO8 E - 4×M12	Cube67 DIO8 E - 8×M8
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
DIO16 - 0.5 A (E) 8×M12	10 W **56601**		
DIO8 - 0.5 A (E) 4×M12		10 W **56611**	
DIO8 - 1.0 A (E) 4×M12		20 W **56631**	
DIO8 - 0.5 A (E) 8×M8			10 W **56621**
Internal communication			
Module supply	via internal system connection (max. 2×4 A)		
Current consumption	max. 50 mA		max. 30 mA
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		
Input			
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)		24 V DC, (EN 61131-2), max. 200 mA per M8 female, (short-circuit and overload protected)
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		
Input filter	1 ms		
Parameterization			
PIN 2	Input/output/diagnostic		–
PIN 4	Input/output		
Output			
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)		
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
Actuator warning	per channel via LED and BUS		
General data			
Protection	IP67		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Mounting method	2-hole screw mounting		
Dimension drawing			
			
Notes			

Expansion module

– Multifunctional I/Os

– Multifunctional I/Os and digital outputs

	Cube67 DIO16 DO16 E - 1.6/2 A 16×M12	**Cube67 DIO32 E - 16×M12**
		
Order Data	**Art-No.**	**Art-No.**
DIO16 - 1.6 A DO16 - 2 A (E) 16×M12	**56641**	
DIO32 - 0.5 A (E) 16×M12		**56642**
Internal communication		
Module supply	via internal system connection (max. 2×4 A)	
Current consumption	max. 50 mA	max. 60 mA
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)	
Input		
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
Input filter	1 ms	
Parameterization		
PIN 2 (8 × M12 left side)	Input/output/diagnostic	
PIN 4 (8 × M12 left side)	Input/output	
PIN 2 (8 × M12 right side)	Output	Input/output/diagnostic
PIN 4 (8 × M12 right side)	Output	Input/output
Output		
Actuator supply (8 × M12 left side)	24 V DC, (EN 61131-2), via 7/8" male (max. 2 × 9 A)	24 V DC, (EN 61131-2), via 7/8" male (max. 1 × 9 A)
Actuator supply (8 × M12 right side)	24 V DC, (EN 61131-2), via 7/8" male (max. 2 × 9 A)	24 V DC, (EN 61131-2), via 7/8" male (max. 1 × 9 A)
Switching current per output (8×M12 left)	max. 1.6 A, (short-circuit and overload protected), coincidence factor 50 % per port	max. 0.5 A (short-circuit and overload protected)
Switching current per output (8×M12 right)	max. 2 A, (short-circuit and overload protected), coincidence factor 50 % per port	max. 0.5 A (short-circuit and overload protected)
Lamp load (8 × M12 left side)	30 W	10 W
Lamp load (8 × M12 right side)	40 W	10 W
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
General data		
Protection	IP67	
Temperature range	0...+55 °C (storage temperature -20...+75 °C)	
Mounting method	4 hole screw mounting	
Dimension drawing		
		
Notes		

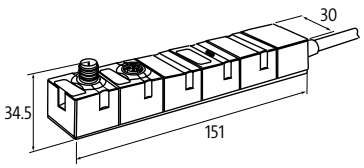
Expansion module

– Multifunctional I/Os

– Digital inputs and outputs



Order Data	Cube67 DIO8 E - Cable Art-No.	Cube67 DIO8 E - Cable M12 Art-No.	Cube67 DIO16 E - Cable Art-No.	Cube67 DI16 DO16 E - Cable Art-No.
DIO8 - 1.6 A (E) 0.5 m (open cable)	cULus, GOST **56661**			
DIO8 - 1.6 A (E) 2 m (open cable)	**5666100**			
DIO8 - 0.5 A (E) 0.5 m (M12)		cULus, GOST **5666201**		
DIO16 - 0.5 A (E) 0.5 m (open cable)			cULus, GOST **56662**	
DIO16 - 0.5 A (E) 1.5 m (open cable)			**5666200**	
DI16/DO16 - 0.2 A (E) 0.5 m (open cable)				**56671**
Internal communication				
Module supply	via internal system connection (max. 2×4 A)			
Current consumption	max. 30 mA	max. 50 mA	max. 30 mA	max. 50 mA
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)			
Input				
Sensor supply US	24 V DC (EN 61131-2), max. 1.6 A	24 V DC (EN 61131-2), max. 0.5 A		24 V DC (EN 61131-2), max. 0.2 A
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)			
Input filter	1 ms			
Cable				
No./diameter of wires	10 × 0.34 mm²	8 × 0.25 mm²	20 × 0.14 mm²	36 × 0.14 mm²
Jacket	PVC	PUR	PVC	
Parameterization				
I/O channels	Input/output			–
Output				
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)			
Switching current per output	max. 60 mA, (short-circuit and overload protected)		max. 0.5 A (short-circuit and overload protected)	
Diagnostic				
Communication status	via LED			
Diagnostic via LED	per module			
Diagnostic via BUS	per module and channel			
Monitoring - under voltage	yes			
Monitoring - no voltage	yes			
Short circuit and overload	yes			
Actuator warning	per channel via BUS			
General data				
Protection	IP67			
Temperature range	0...+55 °C (storage temperature -20...+75 °C)			
Mounting method	2-hole screw mounting			
Dimension drawing				



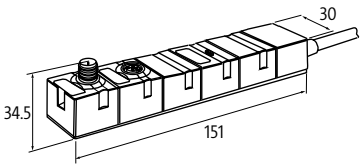
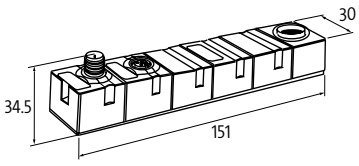
Notes	

Expansion module

– Multifunctional I/Os

– Digital outputs

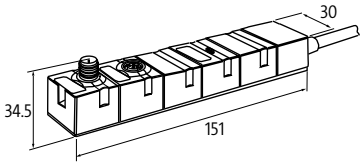
Approvals:

	Cube67 DO7 - E Cable M12 (0.5 m) for Modlight70 basic	**Cube67 DIO8 - E Cable M12 ID(0.2m)** for EUCHNER ID Sensor	**Cube67 DIO8 - M16 female (0.5 A)**
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
DO7 - (E) 0.5 m (M12)	**5665503**		
DIO8 - (E) 0.2 m (M12)		**5666500**	
DIO8 - 0.5 A (E) 1×M16			cULus **56663**
Internal communication			
Module supply	via internal system connection (max. 2×4 A)		
Current consumption	max. 50 mA	max. 30 mA	
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		
Input			
Sensor supply US	–	24 V DC, (EN 61131-2), max. 200 mA	
Type	–	EUCHNER Type CIT 3PL1M30-STR	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)
Input filter	–	1 ms	
Cable			
No./diameter of wires	8 × 0.25 mm²		–
Jacket	PUR		–
Parameterization			
I/O channels	7 outputs	Input/output	
Output			
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)		
Switching current per output	max. 0.5 A (short-circuit and overload protected)	EUCHNER Type CIT 3PL1M30-STR	max. 0.5 A (short-circuit and overload protected)
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
Actuator warning	per channel via BUS		
General data			
Protection	IP67		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Mounting method	2-hole screw mounting		
Dimension drawing			
			
Notes			

Expansion module

– Digital outputs

	Cube67 DO8 - Valve	Cube67 DO16 - Valve	Cube67 DO32 - Valve
			
Approvals:	c UL us Listed, PCT		
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
with open ended wires (0.5 A)	**56655**		**56656**
with open ended wires (70 mA)		**56651**	
Internal communication			
Module supply	via internal system connection (max. 2×4 A)		
Current consumption	max. 50 mA		
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		
Cable			
No./diameter of wires	10 × 0.34 mm²	18 × 0.25 mm²	36 × 0.14 mm²
Jacket	PUR	PVC	
Output			
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)		
Switching current per output	short-circuit and overload protected		
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
Actuator warning	per channel via BUS		
General data			
Protection	IP67		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Mounting method	2-hole screw mounting		
Dimension drawing			



Notes

Compact module

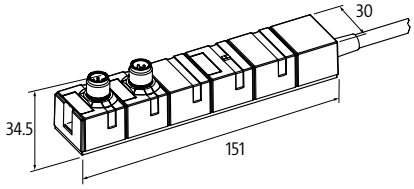
– Digital outputs

Cube67 DO16 - Valve

(4 × actuator supply UA)



Order Data		Art-No.
Multipole plug (0.5 A)	SMC (SUB-D25)	**5665000**
	SMC - Series SV/VQ	**5665002**
	FESTO - MPA (SUB-D25)	**5665001**
	FESTO - CPV (SUB-D25) – GOST	**5665004**
Internal communication		
Module supply	via internal system connection (max. 2×4 A)	
Current consumption	max. 50 mA	
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)	
Cable		
No./diameter of wires	4 × 4 × 0.14 mm²	
Jacket	PVC, cross-link safe	
Output		
Actuator supply UA	24 V DC, (EN 61131-2), max. 4 × 2 A	
Switching current per output	max. 0.5 A (short-circuit and overload protected)	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short circuit and overload	yes	
Actuator warning	per channel via BUS	
General data		
Protection	IP67	
Temperature range	0...+55 °C (storage temperature -20...+70 °C)	
Mounting method	2-hole screw mounting	
Dimension drawing		



Notes

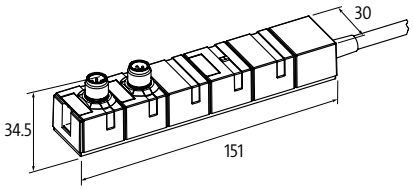
Compact module - Safety

– Passive

– output groups up to PLd (EN ISO 13849-1) can be switched off via safety relays

Approvals:

	Cube67 DO16 - C Valve (K3)		Cube67 DO8 - C Valve (K3)	
Order Data		**Art-No.**		**Art-No.**
Multipole plug (0.5 A)	FESTO - CPV (SUB-D25) – cULus, Tuev Süd	**56650**	FESTO - CPV (SUB-D9)	**5665003**
Internal communication				
Module supply	via internal system connection (max. 2×4 A)			
Current consumption	max. 50 mA			
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)			
Cable				
No./diameter of wires	4 × 4 × 0.14 mm²			
Jacket	PVC, cross-link safe			
Output				
Actuator supply UA	24 V DC, (EN 61131-2), max. 4 × 2 A			
Switching current per output	max. 0.5 A (short-circuit and overload protected)			
Diagnostic				
Communication status	via LED			
Diagnostic via LED	per module			
Diagnostic via BUS	per module and channel			
Monitoring - under voltage	yes			
Monitoring - no voltage	yes			
Short circuit and overload	yes			
Actuator warning	per channel via BUS			
General data				
Protection	IP67			
Temperature range	0...+55 °C (storage temperature -20...+70 °C)			
Mounting method	2-hole screw mounting			
Dimension drawing				



Notes	

Expansion module - Safety

– Passive

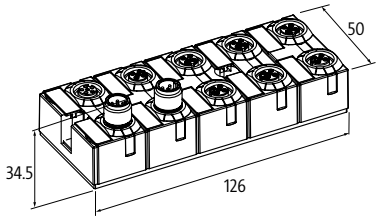
– output groups up to PLd (EN ISO 13849-1) can be switched off via safety relays

Approvals:

Cube67 DO6/DO6 - E 6×M12 (K3)



Order Data		Art-No.
DO6/DO6 - (E) 6×M12 (K3)		56605
Internal communication		
Module supply	via internal system connection (max. 2×4 A)	
Current consumption	max. 50 mA	
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)	
Output		
Actuator supply UA	24 V DC (EN 61131-2), 2 circuits, (max. 2 × 4 A)	
Switching current per output	max. 1.6 A (short-circuit and overload protected)	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
General data		
Protection	IP67	
Temperature range	0...+55 °C (storage temperature -20...+70 °C)	
Mounting method	2-hole screw mounting	
Dimension drawing		



Notes

Expansion module

– IO-Link Master, function module and multifunctional I/Os

– IO-Link V1.0

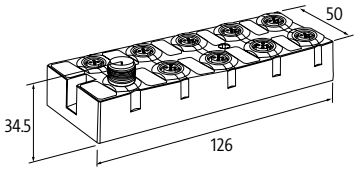
IO-Link

Approvals:

Cube67+ DIO12 IOL4 - E 8×M12



Order Data		Art-No.
DIO12/IOL4 - (E) 8×M12		56765
Internal communication		
Module supply	via internal system connection (max. 2×4 A)	
Current consumption	max. 100 mA	
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)	
Input		
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA (female 0...3); max. 700 mA (female 4...7)	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
Input filter	1 ms	
Parameterization		
PIN 2	Input/output/diagnostic	
PIN 4	Input/output (female 0...3); input/IO-Link master (female 4...7)	
Output		
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)	
Switching current per output	max. 1.6 A (short-circuit and overload protected)	
Lamp load	30 W	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
General data		
Protection	IP67	
Temperature range	0...+55 °C (storage temperature -20...+75 °C)	
Mounting method	2-hole screw mounting	
Dimension drawing		



Notes	
	Cube67+ modules can only be operated on Cube67+, Profibus + ProfiNet bus nodes.

Function modules

Approvals: c UL us Listed, PCT

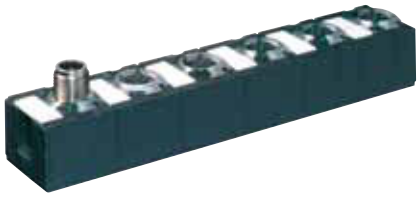
Cube67 CNT2 - C 4×M12

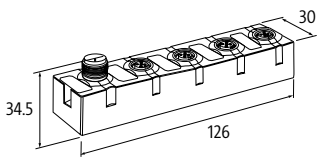
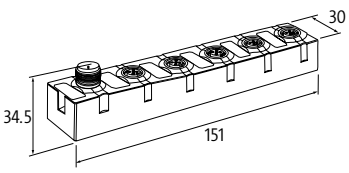
Counter module with preprocessing



Cube67 Logic - DI6 DO2 E 4×M12

Logic module

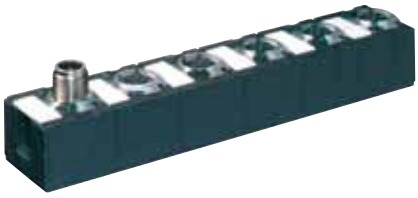
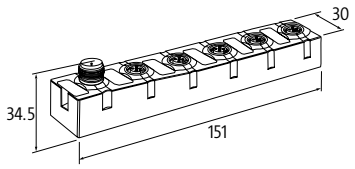
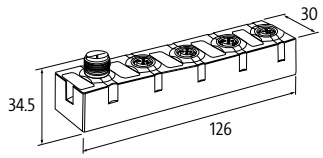


Order Data	Art-No.	Art-No.
Compact module	**56750**	
Expansion module		**56771**
Internal communication		
Module supply	via internal system connection (max. 2×4 A)	
Current consumption	max. 50 mA	
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)	
Input		
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
Input filter	1 ms	
Logic module		
Inputs	–	6
Outputs	–	2
Logic function	–	AND, NOR; AND; XOR parameters definable
Counter		
Counter frequency	max. 300 kHz	–
Counter input	(EN 61131-2)	–
Counter depth	32 Bit (31 Bit + sign)	–
Output		
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)	
Switching current per output	max. 1.6 A (short-circuit and overload protected)	max. 0.5 A (short-circuit and overload protected)
Lamp load	30 W	10 W
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
General data		
Protection	IP67	
Temperature range	0...+55 °C (storage temperature -20...+75 °C)	
Mounting method	2-hole screw mounting	
Dimension drawing		
		
Notes		

Function modules

– Multifunctional I/Os

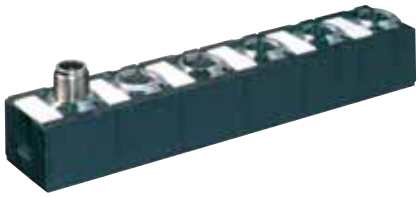
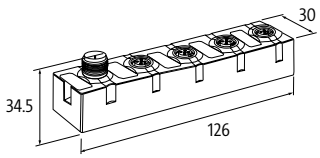
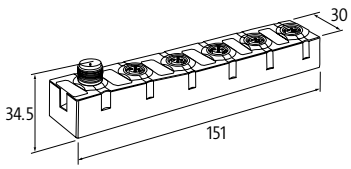
Approvals:

	Cube67+ DIO4 RS232/485 - E 4×M12 Serial interface	Cube67 DIO4 RS485 - E 3×M12 Serial interface
		
Order Data	**Art-No.**	**Art-No.**
DIO4 - RS232/485 (E) 4×M12	**56761**	
DIO4 - RS485 (E) 3×M12		cULus **56760**
Internal communication		
Module supply	via internal system connection (max. 2×4 A)	
Current consumption	max. 80 mA	max. 50 mA
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)	
Technical Data		
Transfer parameters	RS232: 230.4 kBaud, full duplex; RS485: 230.4 kBaud, half duplex	9600 Baud, half duplex
RS232-Type	galvanically separated, M12 female 5-pole, B-coded	–
RS485-Type	galvanically separated, M12 female 5-pole, B-coded	
Input		
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
Input filter	1 ms	
Parameterization		
PIN 2	Input/output/diagnostic	
PIN 4	Input/output	
Output		
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)	
Switching current per output	max. 0.5 A (short-circuit and overload protected)	
Lamp load	10 W	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
General data		
Protection	IP67	
Temperature range	0...+55 °C (storage temperature -20...+75 °C)	
Mounting method	2-hole screw mounting	
Dimension drawing		
		
Notes		
	Cube67+ modules can only be operated on Cube67+, Profibus + ProfiNet bus nodes.	

Analog inputs

– Voltage/current

Approvals:

	Cube67 AI4 C - 4×M12	Cube67 AI4 C - 4×M12	Cube67 AI4 E - 4×M12	Cube67 AI4 E - 4×M12
	Compact module Voltage	Compact module Current	Expansion module Voltage	Expansion module Current
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
AI4 - (C) 4×M12 (U)	cULus **56700**			
AI4 - (C) 4×M12 (I)		cULus **56730**		
AI4 - (E) 4×M12 (U)			cULus **56701**	
AI4 - (E) 4×M12 (I)				**56731**
Internal communication				
Module supply	via internal system connection (max. 2×4 A)			
Current consumption	max. 50 mA			
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)			
Input				
Conversion time (analog)	approx. 2 ms (per channel)			
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)			
Resolution (analog)	15 Bit + sign	15 Bit	15 Bit + sign	15 Bit
Accuracy	max. ±0.5 % (of range limit)			
Voltage inputs				
Input resistor	approx. 1 MOhm, differential input	–	approx. 1 MOhm, differential input	–
Input range	±10 V DC, 0...10 V DC	–	±10 V DC, 0...10 V DC	–
Current input signals				
Load	–	approx. 300 Ohm, differential input	–	approx. 300 Ohm, differential input
Input range	–	0...20 mA, 4...20 mA	–	0...20 mA, 4...20 mA
Diagnostic				
Communication status	via LED			
Diagnostic via LED	per module and channel			
Diagnostic via BUS	per module and channel			
Monitoring - under voltage	yes			
Monitoring - no voltage	yes			
Short circuit and overload	yes			
Actuator warning	per channel via LED and BUS			
Wire break upper/lower limit overload	per channel via LED and BUS			
General data				
Protection	IP67			
Temperature range	0...+55 °C (storage temperature -20...+75 °C)			
Mounting method	2-hole screw mounting			
Dimension drawing				
				
Notes				

Analog inputs

– for resistors and temperature

– for thermo elements

Approvals:

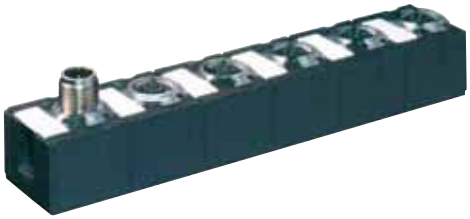
Cube67 AI4 C (RTD) - 4×M12

Compact module
for resistors and temperature

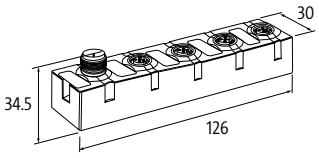


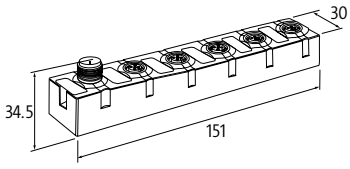
Cube67 AI4 E (RTD) - 4×M12

Expansion module
for resistors and temperature



Order Data		Art-No.	Art-No.
AI4 - (C) 4×M12 (RTD)	cULus	**56740**	
AI4 - (E) 4×M12 (RTD)			**56741**
Internal communication			
Module supply	via internal system connection (max. 2×4 A)		
Current consumption	max. 50 mA		
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		
Input			
Sensor type	Pt 100, 200, 500, 1000; Ni 100, 120, 200, 500, 1000; R 0...3000 Ohm		
Conversion time (analog)	approx. 58 ms per channel		
Resolution (analog)	15 Bit + sign		
Accuracy	max. ±0.5 % (of range limit)		
Accuracy (Ni)	max. ±1 % (of range limit)		
Connection	2-, 3-, 4-wire technology		
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
Actuator warning	per channel via LED and BUS		
Wire break upper/lower limit overload	per channel via LED and BUS		
General data			
Protection	IP67		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Mounting method	2-hole screw mounting		
Dimension drawing			





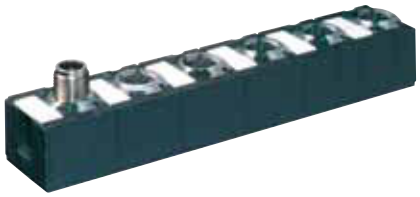
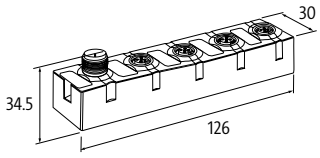
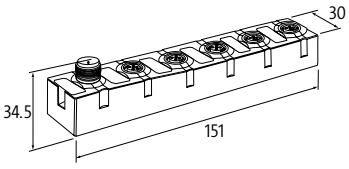
Notes			

Analog inputs

– for resistors and temperature

– for thermo elements

Approvals:

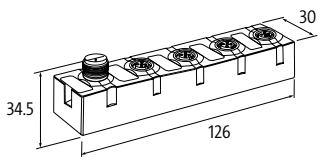
	Cube67 AI4 C (TH) - 4×M12 Compact module for thermo elements	**Cube67 AI4 E (TH) - 4×M12** Expansion module for thermo elements
		
Order Data	**Art-No.**	**Art-No.**
AI4 - (C) 4×M12 (TH)	cULus **56748**	
AI4 - (E) 4×M12 (TH)		**56749**
Internal communication		
Module supply	via internal system connection (max. 2×4 A)	
Current consumption	max. 50 mA	
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)	
Input		
Sensor type	K, N, J, E, R	
Conversion time (analog)	approx. 65 ms per channel	
Resolution (analog)	15 Bit + sign	
Accuracy	max. ±0.5 % (of range limit)	
Connection	2-wire technology	
Cold junction compensation	inside M12 connector	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short circuit and overload	yes	–
Actuator warning	per channel via LED and BUS	
Wire break upper/lower limit overload	per channel via LED and BUS	
General data		
Protection	IP67	
Temperature range	0...+55 °C (storage temperature -20...+75 °C)	
Mounting method	2-hole screw mounting	
Dimension drawing		
		
Notes		

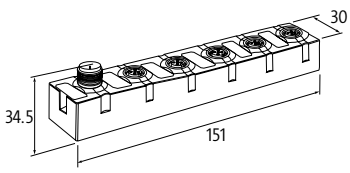
Analog outputs

– Voltage/current

Approvals:

	Cube67 AO4 C 4×M12	Cube67 AO4 C 4×M12	Cube67 AO4 E 4×M12	Cube67 AO4 E - 4×M12
	Compact module Voltage	Compact module Current	Expansion module Voltage	Expansion module Current
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
AO4 - (C) 4×M12 (U)	cULus **56710**			
AO4 - (C) 4×M12 (I)		cULus **56720**		
AO4 - (E) 4×M12 (U)			**56711**	
AO4 - (E) 4×M12 (I)				**56721**
Internal communication				
Module supply	via internal system connection (max. 2×4 A)			
Current consumption	max. 50 mA			
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)			
Output				
Supply voltage	24 V DC (EN 61131-2), via system connection (max. 4 A)			
Conversion time (analog)	approx. 1 ms (per channel)			
Actuator supply UA	24 V DC (EN 61131-2), max. 1.6 A per M12 female, (short-circuit and overload protected)			
Resolution (analog)	11 Bit + sign	11 Bit	11 Bit + sign	11 Bit
Accuracy	max. ±0.5 % (of range limit)			
Voltage output signals				
Load	min. 500 Ohm	–	min. 500 Ohm	–
Input range	±10 V DC, 0...10 V DC	–	±10 V DC, 0...10 V DC	–
Current outputs				
Load	–	max. 500 Ohm	–	max. 500 Ohm
Input range	–	0...20 mA, 4...20 mA	–	0...20 mA, 4...20 mA
Diagnostic				
Communication status	via LED			
Diagnostic via LED	per module and channel			
Diagnostic via BUS	per module and channel			
Monitoring - under voltage	yes			
Monitoring - no voltage	yes			
Short circuit and overload	yes			
Actuator warning	per channel via LED and BUS			
Wire break upper/lower limit overload	per channel via LED and BUS			
General data				
Protection	IP67			
Temperature range	0...+55 °C (storage temperature -20...+75 °C)			
Mounting method	2-hole screw mounting			
Dimension drawing				
Notes				

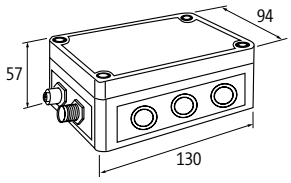
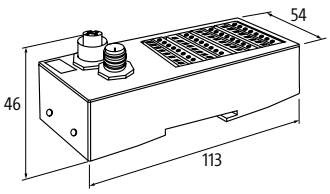




Terminal modules

– Multifunctional I/Os

– Digital inputs

	Cube67 DIO8/DI8 E (TB-Box)	**Cube67 DIO8/DI8 E (TB-Box)** with additional potential terminals	**Cube67 DIO8/DI8 E (TB-Rail)**
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
DIO8/DI8 - (E) TB-Box	GOST **56681**	**5668100**	
DIO8/DI8 - (E) TB-Rail			cULus, GOST **56691**
Internal communication			
Module supply	via internal system connection (max. 2×4 A)		
Current consumption	max. 50 mA		
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		
Input			
Sensor supply US	24 V DC, (EN 61131-2), max. 8 × 200 mA		
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		
Input filter	1 ms		
Parameterization			
Terminal row X 0 (8 channels)	Input		
Terminal row X 1 (8 channels)	Input/output		
Output			
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)		
Switching current per output	max. 0.5 A (short-circuit and overload protected)		
Lamp load	10 W		
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
Actuator warning	per channel via LED and BUS		
General data			
Protection	IP66		IP20
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Mounting method	screw fixing		DIN-rail mountable (EN 60715)
Dimension drawing			
			
Notes			

CUBE67

Versions			Art-No.
	**based of: Art.-No. 56655**		
	Multipole plug (70 mA)	FESTO - CPV	**5665500**
	Multipole plug (70 mA)	FESTO - CPV (SUB-D9)	**5665501**
	Multipole plug (70 mA)	FESTO - MPA	**5665502**
	**based of: Art.-No. 56651**		
	Multipole plug (70 mA)	FESTO - CPV (cULus-Listed)	**5665100**
	Multipole plug (70 mA)	PARKER - Series V	**5665101**
	Multipole plug (70 mA)	NORGREN - V20/22	**5665110**
	Multipole plug (70 mA)	NORGREN - VM10	**5665111**
	Multipole plug (70 mA)	NORGREN - V20/22	**5665112**
	Multipole plug (70 mA)	SMC - Series SV/VQ	**5665113**
	Multipole plug (70 mA)	SMC - Series VQC	**5665114**
	Multipole plug (70 mA)	NORGREN - V20/220	**5665115**
	Multipole plug (0.5 A)	MAC Valves	**5665116**
	Multipole plug (70 mA)	FESTO - MPA	**5665118**
	Multipole plug (70 mA)	FESTO - VTSA	**5665105**
	Multipole plug (70 mA)	FESTO - CPV-SC (SUB-D15)	**5665102**
	Multipole plug (70 mA)	FESTO - CPV-SC (SUB-D26)	**5665103**
	**based of: Art.-No. 56656**		
	Multipole plug (0.5 A)	NORGREN - VM10	**5665600**
	Multipole plug (0.5 A)	FESTO - MPA	**5665601**
	Multipole plug (0.5 A)	BOSCH - HF03	**5665602**
	Multipole plug (0.5 A)	NORGREN - VM10	**5665603**
	Multipole plug (0.5 A)	SMC - Series SV	**5665604**
	Multipole plug (0.5 A)	FESTO - CPA	**5665605**
	Multipole plug (0.5 A)	BOSCH - HF02/03-LG	**5665606**
	Multipole plug (0.5 A)	SMC - Series VQC	**5665607**
	Multipole plug (0.5 A)	MAC Valves (UL-Listed)	**5665609**
	Multipole plug (0.5 A)	VESTA (SUB-D37)	**5665610**
	Multipole plug (0.5 A)	VESTA (SUB-D25)	**5665611**
	Multipole plug (0.5 A)	FESTO - VTSA	**5665613**
	Multipole plug (0.5 A)	SMC - Series VQC	**5665614**
	Multipole plug (0.5 A)	FESTO - CPA-SC	**5665615**
	Multipole plug (0.5 A)	FESTO - MPA-L	**5665616**
	Multipole plug (0.5 A)	BOSCH - HF02/03-LG	**5665617**
	Multipole plug (0.5 A)	Numatics Generation 2000 (UL-Listed)	**5665618**
	**based of: Art.-No. 56671**		
	DI16/DO16 - 0.5 A (E) AMP (0.5 m)	With AMP connector 32-pole (female)	**5667100**
	DI16/DO16 - 0.5 A (E) SUB-D37 (0.5 m)	with SUB-D37 (female)	**5667101**

Labeling accessories			Art-No.
	**Label plates 20 × 8 mm**		
	(20 pieces per plate)		**55318**

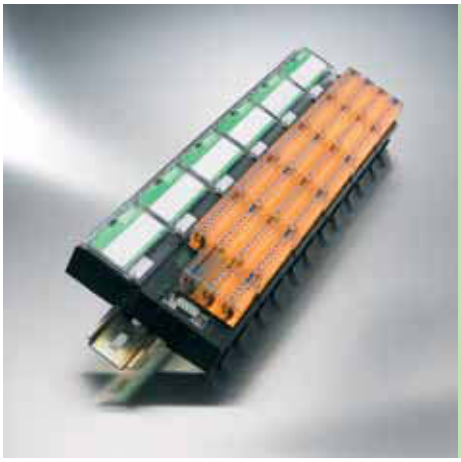
Blind Plug/caps			Art-No.
	**Screw plug M8 × 1 mm (for female)**		
	Plastic, hex	Quantity: 10 pcs.	**3858627**
	**Screw plug M12 × 1 mm (for female)**		
	Plastic, hex	Quantity: 10 pcs.	**58627**
	**Screw plug M12 × 1 mm (for male)**		
	Plastic	Quantity: 4 pcs.	**56951**
	**Screw plug 7/8" (for male)**		
	Plastic		**55385**
	**Blind plug diagnostic M12 × 1 mm**		
	Bridge PIN 1 and PIN 2		**7000-13481-0000000**

Connection accessories			Art-No.
	Ground strap 4 mm²	100 mm for screw (M4)	**4000-71001-0410004**
	**T-coupler M12/M12, female/male**		
	straight, A-coded, 6-pole, shielded	Cube67 additional actuator power supply	**7000-46101-0000000**
	**Terminator M12**		
	straight, A-coded, 6-pole	Cube67	**7000-15041-0000000**
	**Control cabinet entry system M12**		
	straight, A-coded, 6-pole, shielded	Cube67	**7000-46111-0000000**

CUBE67

Connection accessories			Art-No.
	**DIN-rail adapter**		
		for bus nodes	**56961**
	**DIN-rail adapter**		
	50 mm	for extension modules	**56962**
	**DIN-rail adapter**		
	30 mm	for extension modules	**56963**
	**Power distributor 4 × M12**		
	for additional actuator supply		**56955**
	**Repeater PROFIBUS DP + PROFIsafe**		
	2 segments		**56960**
	3 segments		**56965**
	**Male M12, straight**		
	Internal system connection		**56947**
	**Female M12, straight**		
	Internal system connection with mounting socket		**56948**
	**Female M12, straight**		
	Internal system connection		**56949**

Connection accessories			Art-No.
	**T-coupler 7/8"-7/8", female/male**		
	5-pole		**7000-50061-0000000**



CUBE20
MODULAR I/O STATION IP20

- **High channel density due to compact design**
- **Modular structure**
- **I/O connections with maintenance-free terminals**

INNOVATIVE INSTALLATION TECHNOLOGY

Cube20 is a modular fieldbus I/O station that's expandable and can be integrated into the Cube67 I/O system. The modules are designed for modern wiring requirements in control cabinets. Using Cube20 reduces unnecessary costs from dealing with many individual components. This is because of its compact design which includes a high channel density of 32 channels per I/O module.

PROFIBUS
PROFINET
EtherNet/IP

Cube20 I/O Modules



Bus Nodes
- PROFIBUS
- PROFINET
- Ethernet/IP
- IP20 protection

Page 4.2.1



System Connection to Cube67
- IP20 protection

Page 4.2.2



Digital Inputs
- IP20 protection

Page 4.2.3



Digital Inputs/Outputs
- IP20 protection

Page 4.2.3



Digital Outputs
- IP20 protection

Page 4.2.3



Analog Inputs
- IP20 protection

Page 4.2.4



Analog Outputs
- IP20 protection

Page 4.2.6



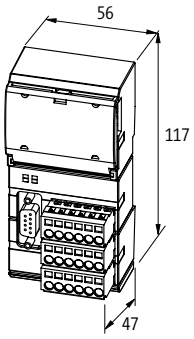
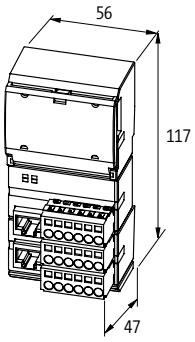
Accessories

Page 4.2.7

Bus Nodes

– Digital inputs

Approvals:

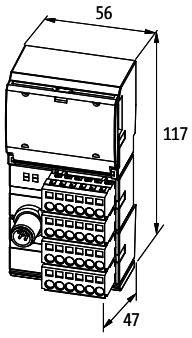
	Cube20 BN-P DI8	Cube20 BN-E DI8	Cube20 BN-PNIO DI8
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
PROFIBUS DP	**56001**		
EtherNet-IP		**56005**	
PROFINET IO			**56006**
Fieldbus			
Operating modes	Sync- and freeze mode are supported	Autonegotiation/Auto MDI/MDI-X	
Transfer rate	to 12 Mbit/s	10/100 MBit/s full duplex	to 100 MBit/s Full Duplex
Addressing	Rotary switch 1...99	DHCP, BOOTP or IP address by rotary switch	Name assignment via PROFINET
Connector	SUB-D9	2 × RJ45	
I/O capacity	with modular expandability by up to 15 Cube20/67 I/O modules		
Input			
Galvanic isolation	500 V DC between I/O and system electronics		
Supply voltage			
Operating voltage	24 V DC (EN 61131-2)		
Sensor-system/actuator supply	via terminal UB		
Current consumption	max. 150 mA		
Diagnostic			
Communication status	per LED and BUS		
Diagnostic via LED	per module		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	no		
Short circuit and overload	yes		
General data			
Protection	IP20		
Temperature range	0...+55 °C (storage temperature -20...+85 °C)		
Connection	Spring clamp plug-in terminals: max. 2.5 mm² (max. 12 A)		
Mounting method	DIN-rail mountable (EN 60715)		
Dimension drawing			
			
Notes			

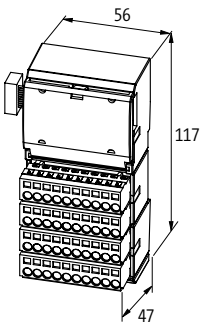
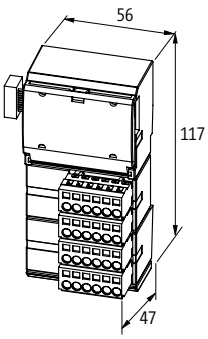
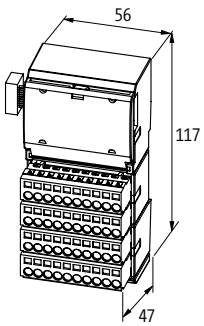
Bus Nodes

– Multifunctional I/Os

– Cube67

Approvals: c UL us Listed, PCT

	Cube20 BN-67 DIO8 Power external	**Cube20 BN-67 DIO8** Power via M12
		
Order Data	**Art-No.**	**Art-No.**
Cube67 system connection	**56450**	**564501**
Internal communication		
Module supply	via system connection	
Current consumption	max. 100 mA	
Cube67 System supply		
I/O capacity	with modular expandability by up to 3 Cube20 I/O modules	
Inputs/outputs (multifunctional)		
Operating voltage	24 V DC (EN 61131-2)	
Galvanic isolation	500 V DC between I/O and system electronics	
Multifunctional I/Os	8 channels alternatively inputs/outputs (EN 61131-2), load of outputs up to 0.5 A/channel, short-circuit and overload protected	
Sensor supply US	24 V DC, (EN 61131-2), max. 700 mA per module, (short-circuit and overload protected)	
Actuator supply UA	24 V DC, (EN 61131-2), max. 12 A	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel (only outputs)	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	no	
Short circuit and overload	yes	
General data		
Protection	IP20	
Temperature range	0...+55 °C (storage temperature -20...+85 °C)	
Connection	Spring clamp plug-in terminals: max. 2.5 mm² (AWG 14)	
Mounting method	DIN-rail mountable (EN 60715)	
Dimension drawing		
		
Notes		

Expansion module	Cube20 DI32 E	Cube20 DI16 DO16 E	Cube20 DO16 E	Cube20 DO32 E
– Digital inputs				
– Digital outputs				
– Digital inputs and outputs				
Approvals:				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
DI32 - (E)	cULus **56112**			
DI16/DO16 - (E)		**56168**		
DO16 - (E)			cULus **56117**	
DO32 - (E)				cULus **56118**
Internal communication				
Module supply	via system connection			
Current consumption	max. 25 mA			
Input				
Sensor supply US	24 V DC (EN 61131-2), max. 700 mA per module		–	
Type	p-switching (EN 61131-2)		–	
Input filter	1 ms		–	
Galvanic isolation	500 V DC between inputs and internal communication		–	
Output				
Actuator supply UA	–	24 V DC, (EN 61131-2), max. 12 A		
Galvanic isolation	–	500 V DC between outputs and internal communication		
Switching current per output	–	max. 0.5 A (short-circuit and overload protected)	max. 2 A	max. 0.5 A (short-circuit and overload protected)
Lamp load	–	10 W	40 W	10 W
Diagnostic				
Communication status	via LED			
Diagnostic via LED	per module	per module and channel (only outputs)	per module and channel	
Diagnostic via BUS	per module and channel			
Monitoring - under voltage	yes			
Monitoring - no voltage	no			
Short circuit and overload	yes			
General data				
Protection	IP20			
Temperature range	0...+55 °C (storage temperature -20...+85 °C)			
Connection	Spring clamp plug-in terminals: max. 2.5 mm² (AWG 14)			
Mounting method	DIN-rail mountable (EN 60715)			
Dimension drawing				
				
Notes				

Analog inputs

– Voltage/current

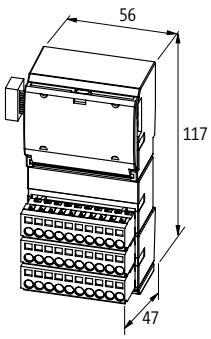
Approvals:

Cube20 AI4 E

Voltage/current



Order Data		Art-No.
AI4 - (E)		56200
Internal communication		
Module supply	via system connection	
Current consumption	max. 25 mA from system, max. 60 mA externally (UI)	
Technical Data		
Operating voltage	24 V DC (EN 61131-2)	
Input		
Conversion time (analog)	max. 2 ms (per channel)	
Resolution (analog)	15 Bit + sign	
Accuracy	max. 0.3 %	
Connection	Differential voltage/current input	
Voltage inputs		
Input resistor	min. 1 MOhm, (EN 61131-2)	
Input range	±10 V DC, 0...10 V DC	
Current input signals		
Load	max. 300 Ohm (20 mA), (EN 61131-2)	
Input range	0...20 mA, 4...20 mA	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	no	
Short circuit and overload	yes	
Wire break upper/lower limit overload	per channel via LED and BUS	
General data		
Protection	IP20	
Temperature range	0...+55 °C (storage temperature -40...+85 °C)	
Connection	Spring clamp plug-in terminals: max. 2.5 mm² (AWG 14)	
Mounting method	DIN-rail mountable (EN 60715)	
Dimension drawing		



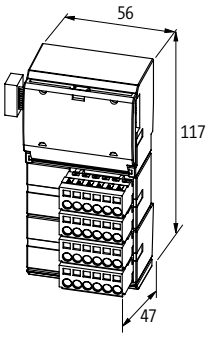
Notes	

Analog inputs

– Temperature converter

Approvals: cULus Listed, PCT

	Cube20 AI4 E RTD for resistors and temperature	Cube20 AI4 E TH for thermo elements
		
Order Data	**Art-No.**	**Art-No.**
AI4 - (E) RTD	**56230**	
AI4 - (E) TH		**56240**
Internal communication		
Module supply	via system connection	
Current consumption	max. 25 mA from system, max. 70 mA externally (UI)	max. 25 mA from system, max. 45 mA externally (UI)
Technical Data		
Operating voltage	24 V DC (EN 61131-2)	
Input		
Conversion time (analog)	max. 600 ms (per channel)	max. 300 ms (per channel)
Type	Pt100, 200, 500; Ni100, 120, 200, 500, 1000, R 0...3000 Ohm	K, N, E, J, R
Resolution (analog)	15 Bit + sign	
Accuracy	0.7...1.4 %	max. ±2 %, cold junction compensation
Connection	2-wire input: +Rx, -Rx / 3-wire input: +Rx, RLx, -Rx	2-wire input; TH+x, TH-x
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	no	
Short circuit and overload	yes	
Wire break upper/lower limit overload	per channel via LED and BUS	
General data		
Protection	IP20	
Temperature range	0...+55 °C (storage temperature -20...+85 °C)	
Connection	Spring clamp plug-in terminals: max. 2.5 mm² (AWG 14)	
Mounting method	DIN-rail mountable (EN 60715)	
Dimension drawing		



Notes

Analog outputs

– Voltage/current

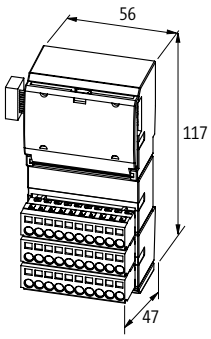
Approvals:

Cube20 AO4 E

Expansion module
Voltage/current



Order Data		Art-No.
AO4 - (E) U/I		56220
Internal communication		
Module supply	via system connection	
Current consumption	max. 25 mA from system, max. 90 mA externally (UI), idle load max. 20 mA externally (UA)	
Technical Data		
Operating voltage	24 V DC (EN 61131-2)	
Output		
Conversion time (analog)	max. 1 ms (per channel)	
Resolution (analog)	15 Bit + sign	
Accuracy	max. 0.5 %	
Galvanic isolation	500 V DC between inputs and internal communication	
Voltage output signals		
Load	min. 1 kOhm, (EN 61131-2)	
Input range	±10 V DC, 0...10 V DC	
Current outputs		
Load	max. 600 Ohm, (EN 61131-2)	
Input range	0...20 mA, 4...20 mA	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	no	
Short circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
Wire break upper/lower limit overload	per channel via LED and BUS	
General data		
Protection	IP20	
Temperature range	0...+55 °C (storage temperature -20...+85 °C)	
Connection	Spring clamp plug-in terminals: max. 2.5 mm² (AWG 14)	
Mounting method	DIN-rail mountable (EN 60715)	
Dimension drawing		



Notes	

Connection accessories			Art-No.
	**Bus Connection Plug 90°**		
	SUB-D9 (male), screw terminals	PROFIBUS	**55762**
	SUB-D9 (female), screw terminals	CANopen	**55760**
	**Bus Connection Plug 180°**		
	SUB-D9 (male), cut clamps, rigid cable	PROFIBUS	**55584**
	SUB-D9 (male), cut clamps, flexible cable	PROFIBUS	**55583**
	**Bus Connection Plug 90°**		
	SUB-D9 (male), cut clamps, rigid cable	PROFIBUS	**55585**
	SUB-D9 (male), cut clamps, flexible cable	PROFIBUS	**55587**
	**Bus Connection Plug 90°**		
	SUB-D9 (male), cut clamps, rigid cable, programming device conn.	PROFIBUS	**55586**
	SUB-D9 (male), cut clamps, flexible cable, programming device conn.	PROFIBUS	**55588**
	**Bus Connection Plug 90°**		
	SUB-D9 (male); M12 × 1, B-coded	PROFIBUS	**7000-99441-0000000**
	Label-sheet		
	Quantity: 40 pcs.		**56113**
	**Potential terminal block**		
	gray/gray/brown/blue		**56078**
	gray/gray/yellow/blue		**56079**
	yellow/blue/yellow/blue		**56080**
	brown/blue/brown/blue		**56081**
	brown/brown/blue/blue		**56109**
	blue/yellow		**56110**
	blue/yellow/brown/blue		**56111**

Connection accessories			Art-No.
	**Potential terminal block**		
	SlimLine		**56082**



CUBE20S
SMALL, SPEEDY, SAFE

- **Extremely modular**
- **Up to 64 modules per bus node**
- **Quick reaction time: up to 20 µs**

A NEW MEMBER OF THE CUBE FAMILY

Murrelektronik's modular Cube20S I/O system expands the field-tested Cube family with another product line that is extremely useful. Designed in the same compact shape, it's highly flexible like all our Cube modules.

The small modules are only 12.9 millimeters wide and modularly designed, which saves space. Connections are also quick and easy to make thanks to the integrated backplane with power supply.

Bus nodes for Cube20S are available for all standard fieldbus protocols.

PROFIBUS® · PROFINET® · DeviceNet · EtherNet/IP · EtherCAT · CANopen · Modbus

Cube20S I/O Modules



Bus Nodes / Power Modules
- IP20 protection

Page 4.3.1



Function Modules
- IP20 protection

Page 4.3.3



Digital Inputs
- IP20 protection

Page 4.3.4



Digital Outputs
- IP20 protection

Page 4.3.5



Analog Inputs
- IP20 protection

Page 4.3.7



Analog Outputs
- IP20 protection

Page 4.3.9

Accessories



Page 4.3.10

MURR ELEKTRONIK
stay connected

Bus Nodes

– Power module included

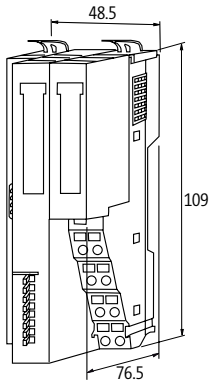
PROFIBUS DeviceNet CANopen

Approvals: cULus Listed

Cube20S



Order Data	Art-No.	Art-No.	Art-No.
PROFIBUS DP	**57101**		
DeviceNet		**57107**	
CANopen			**57104**
Fieldbus			
Operating modes	Sync- and freeze mode are supported		
Transfer rate	max. 12 Mbit/s	max. 500 kBit/s	max. 1 Mbit/s
Addressing	DIP switch		
Connector	SUB-D9	5 pin Open-Style Connector	SUB-D9
I/O capacity	with modular expandability by up to 64 Cube20S I/O modules and function modules		
Output			
Output voltage (I/Os /Backplane)	24 V DC/5 V DC		
Output current (I/Os /Backplane)	10 A/3 A		
Supply voltage			
Operating voltage	24 V DC (EN 61131-2)		
Sensor-system/actuator supply	via terminal		
Current consumption	max. 95 mA		
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module		
Monitoring - under voltage	no		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
Actuator warning	no		
General data			
Protection	IP20		
Temperature range	0...+60 °C (storage temperature -25...+70 °C)		
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (max. 10 A)		
Mounting method	DIN-rail mountable (EN 60715)		
Dimension drawing			



Notes

CUBE20S

Bus Nodes

– Power module included

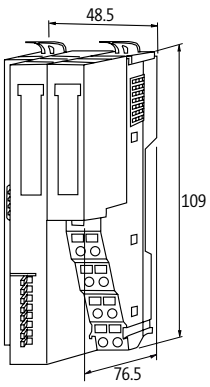
PROFINET · EtherNet/IP conformance tested · EtherCAT · Modbus

Approvals: cULus Listed

Cube20S



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
PROFINET IO	**57106**			
EtherNet-IP		**57105**		
EtherCAT			**57103**	
Modbus TCP				**57108**
Fieldbus				
Operating modes	Sync- and freeze mode are supported			
Transfer rate	max. 100 Mbit/s			
Addressing	DIP/DCP	DIP/DHCP	automatic	
Connector	2 × RJ45			1 × RJ45
I/O capacity	with modular expandability by up to 64 Cube20S I/O modules and function modules			
Output				
Output voltage (I/Os /Backplane)	24 V DC/5 V DC			
Output current (I/Os /Backplane)	10 A/3 A			
Supply voltage				
Operating voltage	24 V DC (EN 61131-2)			
Sensor-system/actuator supply	via terminal			
Current consumption	max. 95 mA			
Diagnostic				
Communication status	via LED			
Diagnostic via LED	per module and channel			
Diagnostic via BUS	per module			
Monitoring - under voltage	no			
Monitoring - no voltage	yes			
Short circuit and overload	yes			
Actuator warning	no			
General data				
Protection	IP20			
Temperature range	0...+60 °C (storage temperature -25...+70 °C)			
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (max. 10 A)			
Mounting method	DIN-rail mountable (EN 60715)			
Dimension drawing				



Notes

Power supplies

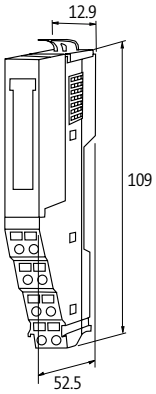
Cube20S

Potential distributor



Approvals: cULus Listed

Order Data	Art-No.	Art-No.	Art-No.
8 × 24 V DC	**57120**		
8 × 0 V DC		**57121**	
4×24 + 4×0 V DC			**57122**
Supply voltage			
Operating voltage	max. 30 V DC	max. 0 V DC	max. 30 V DC
Total current	max. 10 A		
General data			
Protection	IP20		
Temperature range	0...+60 °C (storage temperature -25...+70 °C)		
Connection	Spring clamp terminals: 0.08...2.5 mm² (AWG 28...12)		
Mounting method	DIN-rail mountable (EN 60715)		
Dimension drawing			



Notes

Power supplies

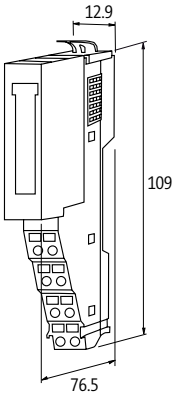
Approvals: c UL us Listed

Cube20S
for external voltage supply



Cube20S
for external voltage supply and internal backplane

Order Data	Art-No.	Art-No.
Power module	**57130**	**57131**
Technical Data		
Operating voltage	–	max. 28.8 V DC
Total current	–	max. 10 A
Output		
Output current (I/Os /Backplane)	10/0 A	4 A/2 A
Output voltage (I/Os /Backplane)	24 V AC	24 V DC/5 V DC
Supply voltage		
Operating voltage	max. 28.8 V DC	
Total current	max. 10 A	max. 6 A
General data		
Protection	IP20	
Temperature range	0...+60 °C (storage temperature -25...+70 °C)	
Connection	Spring clamp terminals: 0.08...2.5 mm² (AWG 28...12)	
Mounting method	DIN-rail mountable (EN 60715)	
Dimension drawing		



Notes

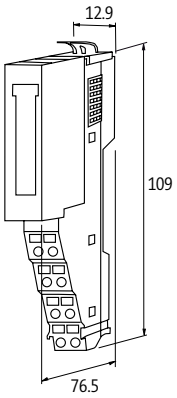
Digital inputs

Cube20S



Approvals: c UL us Listed

Order Data		Art-No.
DI2 (E)		57220
DI4 - (E)		57240
DI8 - (E)		57280
Internal communication		
Module supply	via system connection	
Current consumption	max. 55 mA	
Input		
Sensor supply US	24 V DC, (EN 61131-2), max. 500 mA per module	
Type	n-switching (EN 61131-2)	
Input filter	3 ms	
Galvanic isolation	500 V DC between inputs and internal communication	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module	
Monitoring - under voltage	no	
Monitoring - no voltage	yes	
Short circuit and overload	yes	
General data		
Protection	IP20	
Temperature range	0...+60 °C (storage temperature -20...+70 °C)	
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)	
Mounting method	DIN-rail mountable (EN 60715)	
Dimension drawing		



Notes	

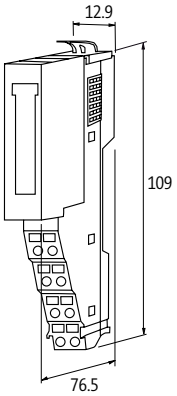
Digital outputs

Cube20S



Approvals: cULus Listed

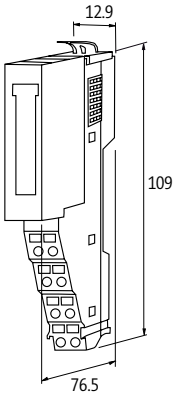
Order Data		Art-No.
DO2 - (E)		**57320**
DO4 - (E)		**57340**
DO8 - (E)		**57380**
Internal communication		
Module supply	via system connection	
Current consumption	max. 55 mA	
Output		
Actuator supply UA	24 V DC, (EN 61131-2), max. 1 A	
Switching current per output	max. 0.5 A (short-circuit and overload protected)	
Galvanic isolation	500 V DC between outputs and internal communication	
Lamp load	5 W	
Output delay time	175 ns	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module	
Monitoring - under voltage	yes	
Monitoring - no voltage	no	
Short circuit and overload	yes	
General data		
Protection	IP20	
Temperature range	0...+60 °C (storage temperature -25...+70 °C)	
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)	
Mounting method	DIN-rail mountable (EN 60715)	
Dimension drawing		



Notes	

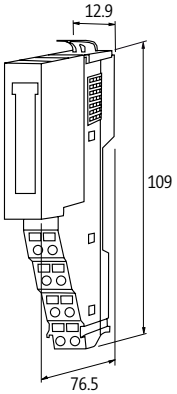
Digital outputs

	Cube20S - 2A	Cube20S - 230VAC (Relays)
Approvals: cULus Listed		
Order Data	**Art-No.**	**Art-No.**
DO2 - (E)	**57325**	**57327**
DO4 - (E)	**57345**	
Internal communication		
Module supply	via system connection	
Current consumption	max. 60 mA	max. 130 mA
Output		
Actuator supply UA	24 V DC, (EN 61131-2), max. 4 A	max. 30 V DC/230 V AC
Switching current per output	max. 2 A (short-circuit and overload protected)	max. 3 A (short-circuit and overload protected)
Galvanic isolation	500 V DC between outputs and internal communication	
Lamp load	10 W	–
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module	
Monitoring - under voltage	yes	
Monitoring - no voltage	no	
Short circuit and overload	yes	
General data		
Protection	IP20	
Temperature range	0...+60 °C (storage temperature -25...+70 °C)	
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)	
Mounting method	DIN-rail mountable (EN 60715)	
Dimension drawing		



Notes

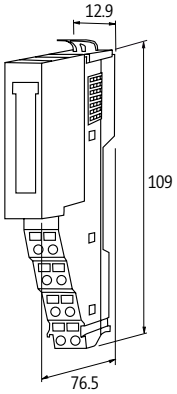
Analog inputs

	Cube20S Voltage	Cube20S Current	Cube20S Voltage
			
Approvals: cULus Listed			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
AI2 - (E)	**57231**	**57232**	**57233**
AI4 - (E)	**57261**		**57263**
Internal communication			
Module supply	via system connection		
Current consumption	max. 60 mA from system, max. 25 mA externally (UI)	max. 60 mA from system, max. 15 mA externally (UI)	max. 60 mA from system, max. 25 mA externally (UI)
Technical Data			
Operating voltage	24 V DC (20.4...28.8 V DC) EN 61131-2		
Input			
Conversion time (analog)	480 ms (all channels)		
Resolution (analog)	15 Bit + sign		
Accuracy	max. ±0.2 %	max. 0.3 %	max. ±0.2 %
Connection	Differential voltage input	Differential current input	Differential voltage input
Voltage inputs			
Input resistor	200 kOhm	–	200 kOhm
Input range	0...10 V DC	–	-10 V DC...+10 V DC
Current input signals			
Load	–	max. 60 Ohm, (EN 61131-2)	–
Input range	–	0...20 mA, 4...20 mA	–
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module		
Monitoring - under voltage	yes		
Monitoring - no voltage	no		
Short circuit and overload	yes		
Wire break upper/lower limit overload	per module via LED and BUS		
General data			
Protection	IP20		
Temperature range	0...+60 °C (storage temperature -25...+70 °C)		
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)		
Mounting method	DIN-rail mountable (EN 60715)		
Dimension drawing			
			
Notes			

Analog inputs

Approvals: c UL us Listed

	Cube20S (TH) for thermo elements	Cube20S (RTD) for resistors and temperature
		
Order Data	**Art-No.**	**Art-No.**
AI2 - (E)	**57230**	
AI4 - (E)		**57265**
Internal communication		
Module supply	via system connection	
Current consumption	max. 75 mA from the system, max. 30 mA externally (UI)	max. 75 mA
Technical Data		
Operating voltage	24 V DC (20.4...28.8 V DC) EN 61131-2	24 V DC (EN 61131-2)
Input		
Conversion time (analog)	max. 4.2...324.1 ms (per channel)	max. 330 ms (per channel)
Type	B, C, E, J, K, L, N, R, S, T	Pt100, Pt1000, Ni100, Ni1000, R 0...3000 Ohm
Resolution (analog)	15 Bit + sign	
Accuracy	max. ±0.3 %, cold junction compensation	0.7...1.4 %
Connection	2-wire input; TH+x, TH-x	2-wire (4 input); 3-, 4-wire (2 input)
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module	
Monitoring - under voltage	yes	
Monitoring - no voltage	no	
Short circuit and overload	yes	
Wire break upper/lower limit overload	per channel via LED and BUS	
General data		
Protection	IP20	
Temperature range	0...+55 °C (storage temperature -20...+85 °C)	0...+60 °C (storage temperature -25...+70 °C)
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)	
Mounting method	DIN-rail mountable (EN 60715)	
Dimension drawing		



Notes	

Analog outputs

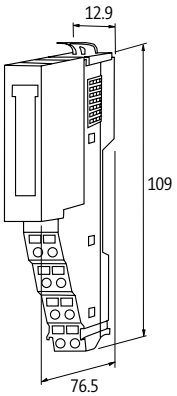
Cube20S

Voltage



Approvals: cULus Listed

Order Data	Art-No.	Art-No.	Art-No.	Art-No.
AO2 - (E)	**57331**		**57333**	
AO4 - (E)		**57361**		**57363**
Internal communication				
Module supply	via system connection			
Current consumption	max. 60 mA from system, max. 25 mA externally (UI), idle load			
Technical Data				
Operating voltage	24 V DC (20.4...28.8 V DC) EN 61131-2			
Output				
Conversion time (analog)	200 ms (all channels)			
Resolution (analog)	15 Bit + sign			
Accuracy	max. 0.5 %		max. 0.2 %	
Galvanic isolation	500 V DC between inputs and internal communication			
Voltage output signals				
Load	5 kOhm			
Input range	0...10 V DC		-10 V DC...+10 V DC	
Diagnostic				
Communication status	via LED			
Diagnostic via LED	per module and channel			
Diagnostic via BUS	per module			
Monitoring - under voltage	yes			
Monitoring - no voltage	no			
Short circuit and overload	yes			
Actuator warning	per module via LED and BUS			
Wire break upper/lower limit overload	per module via LED and BUS			
General data				
Protection	IP20			
Temperature range	0...+60 °C (storage temperature -25...+70 °C)			
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)			
Mounting method	DIN-rail mountable (EN 60715)			
Dimension drawing				



Notes	

Connection accessories			Art-No.
	**Bus cover**		
	Black plastic		**57190**
	**Shield bus carrier**		
	Black plastic	Quantity: 10 pcs.	**57191**
	**Bus Connection Plug 90°**		
	SUB-D9 (male), screw terminals	PROFIBUS	**55762**
	SUB-D9 (female), screw terminals	CANopen	**55760**
	**Bus Connection Plug 180°**		
	SUB-D9 (male), cut clamps, rigid cable	PROFIBUS	**55584**
	SUB-D9 (male), cut clamps, flexible cable	PROFIBUS	**55583**
	**Bus Connection Plug 90°**		
	SUB-D9 (male), cut clamps, rigid cable	PROFIBUS	**55585**
	SUB-D9 (male), cut clamps, flexible cable	PROFIBUS	**55587**
	**Bus Connection Plug 90°**		
	SUB-D9 (male), cut clamps, rigid cable, programming device conn.	PROFIBUS	**55586**
	SUB-D9 (male), cut clamps, flexible cable, programming device conn.	PROFIBUS	**55588**
	**Bus Connection Plug 90°**		
	SUB-D9 (male); M12 × 1, B-coded	PROFIBUS	**7000-99441-0000000**



MVK METAL
COMPACT I/O MODULES FOR DEMANDING REQUIREMENTS

- **Tough and reliable**
- **Safe (safety circuits according to EN 13849-1 up to PL e)**
- **PROFINET – versions compliant with AIDA**

MAXIMUM FLEXIBILITY

MVK Metal features a robust metal housing and is extremely resistant to vibration, media, and weld splatter.

- Double valves occupy only one M12 port.
- PROFINET versions with Fast Start Up (< 500 ms)
- Models with multi-functional I/Os
- Fewer variations required, minimizes inventory costs
- Maximum flexibility for expansions

DON'T LOOK FOR ERRORS, FIND THEM

MVK Metal's diagnostic options offer detailed information about the type and location of the failure or the error.

- Only the affected port shuts down, not the whole module
- Detailed message sent to controls and device LED
- Minimizes downtime – failures are fixed faster

PROFIBUS
PROFINET
CANopen

MVK Metal I/O Modules



MVK-MP
- Multi-functional I/Os
- I/O link
- Safety outputs
- Analog I/Os

PROFIBUS

Page 4.4.1



MVK-MPNIO
- Multi-functional I/Os
- Digital I/Os
- AIDA Push Pull
- Safety inputs/outputs
- Fast Start Up

PROFINET

Page 4.4.8



MVK-MC
- Multi-functional I/Os

CANopen

Page 4.4.13

MURR ELEKTRONIK
stay connected

Expanded diagnostic

– 7/8"

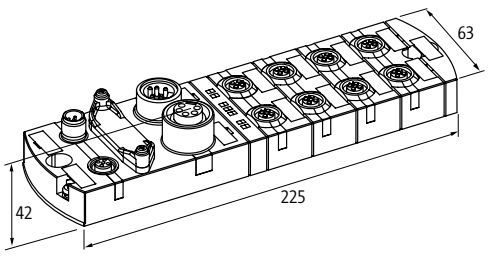
PROFIBUS

Approvals: cULus Listed

MVK-MP



Order Data	Art-No.	Art-No.	Art-No.
DI8 (DI8)	**55307**		
DIO8 (DI8)		**55308**	
DIO8 (DIO8)			**55309**
Connections			
Fieldbus	M12, B-coded		
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A		
I/O ports	M12, A-coded, 5-pole		
Fieldbus			
Operating voltage	24 V DC (EN 61131-2)		
Operating modes	Sync- and freeze mode are supported		
Transfer rate	to 12 Mbit/s		
Addressing	Rotary switch 1...99		
Input			
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)		
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		
Parameterization			
PIN 4	Input	Input/output	
PIN 2	Input/diagnostic		Input/output/diagnostic
Output			
Actuator supply UA	–	24 V DC, (EN 61131-2), max. 9 A	
Switching current per output	–	max. 1.6 A (short-circuit and overload protected)	
Lamp load	–	10 W	
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
Actuator warning	per channel via LED and BUS		
Cable break	per port		
General data			
Protection	IP67		
Temperature range	-25...+55 °C (storage temperature -25...+70 °C)		
Mounting method	2-hole screw mounting		
Dimension drawing			



Notes	

MVK METAL

Expanded diagnostic

– 7/8"

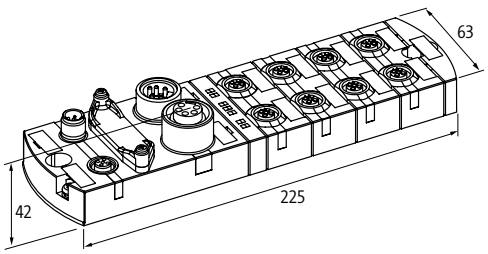
PROFIBUS

Approvals:

MVK-MP



Order Data	Art-No.	Art-No.
DO8 (DO8)	**55290**	
DO4 (DO4) DI4 (DI4)		**55274**
Connections		
Fieldbus	M12, B-coded	
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A	
I/O ports	M12, A-coded, 5-pole	
Fieldbus		
Operating voltage	24 V DC (EN 61131-2)	
Operating modes	Sync- and freeze mode are supported	
Transfer rate	to 12 Mbit/s	
Addressing	Rotary switch 1...99	
Input		
Sensor supply US	–	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)
Type	–	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)
Output		
Actuator supply UA	24 V DC, (EN 61131-2), max. 9 A	
Switching current per output	max. 1.6 A (short-circuit and overload protected)	
Lamp load	10 W	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
Cable break	per port	
General data		
Protection	IP67	
Temperature range	-25...+55 °C (storage temperature -25...+70 °C)	
Mounting method	2-hole screw mounting	
Dimension drawing		



Notes	

Expanded diagnostic

– IO-Link

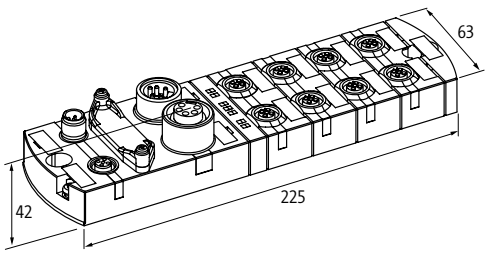
PROFIBUS IO-Link

Approvals:

MVK-MP IO-Link



Order Data		Art-No.
DIO4 IOL4 (DIO8)		55315
Connections		
Fieldbus	M12, B-coded	
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A	
I/O ports	M12, A-coded, 5-pole	
Fieldbus		
Operating voltage	24 V DC (EN 61131-2)	
Operating modes	Sync- and freeze mode are supported	
Transfer rate	to 12 Mbit/s	
Addressing	Rotary switch 1...99	
Input		
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
Parameterization		
PIN 4	Input/output	
PIN 2	Input/output/diagnostic (port 4...7); input/IO-Link master (port 0...3)	
Output		
Actuator supply UA	24 V DC, (EN 61131-2), max. 9 A	
Switching current per output	max. 1.6 A (short-circuit and overload protected)	
Lamp load	10 W	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
Cable break	per port	
General data		
Protection	IP67	
Temperature range	0...+55 °C (storage temperature -20...+70 °C)	
Mounting method	2-hole screw mounting	
Dimension drawing		



Notes	

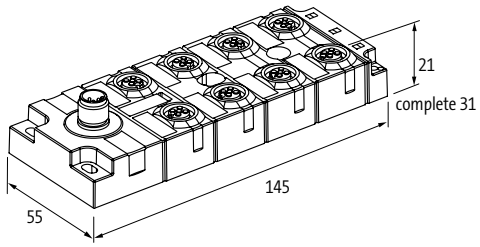
Expanded diagnostic

– IO-Link

IO-Link



Order Data		Art-No.	Art-No.
DI16 IOL	GOST	**59407**	
DI8 DO8 IOL			**59408**
Internal communication			
LED display	US: sensor supply and internal supply voltage (green: OK); IOL: (green: OK); UA: actuator supply (green: OK)		
Current consumption	max. 35 mA		
Input			
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)		
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		
Input filter	1 ms		
IO-Link			
Type	A		
Operating modes	COM2 (38.4 kBaud)		
Parameterization			
PIN 2	Input/diagnostic		
PIN 4	Input		
Output			
Switching current per output	–		max. 1.6 A (short-circuit and overload protected)
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
Actuator warning	per channel via LED and BUS		
General data			
Protection	IP67		
Temperature range	0...+55 °C (storage temperature -25...+70 °C)		
Mounting method	4 hole screw mounting		
Dimension drawing			



Notes	

Expanded diagnostic

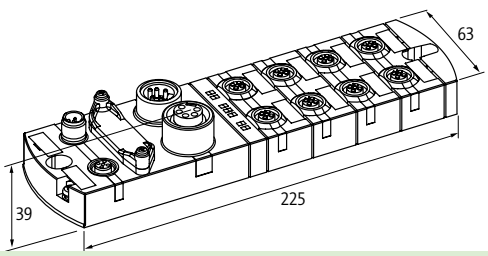
– Passive

– output groups up to PLd (EN ISO 13849-1) can be switched off via safety relays

Approvals:

MVK-MP Safety



Order Data		Art-No.
K3 DO4 (DO4) DIO4 (DIO4)		55291
Connections		
Fieldbus	M12, B-coded	
I/O ports	M12, A-coded, 5-pole	
Sensor-system/actuator supply	7/8", 5-pole, max. 9 A, safe circuits (1 + 2) via separate 7/8" supply (yellow), 2-pole disconnectable	
Fieldbus		
Operating voltage	24 V DC (EN 61131-2)	
Operating modes	Sync- and freeze mode are supported	
Transfer rate	to 12 Mbit/s	
Addressing	Rotary switch 1...99	
Input		
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
Parameterization		
PIN 4	4 × input/output	
PIN 2	4 × input/output/diagnostic	
Output		
Actuator supply UA	24 V DC, (EN 61131-2), 3 circuits, (max. 9 A)	
Switching current per output	max. 1.6 A (short-circuit and overload protected)	
Lamp load	10 W	
Safe output		
Switching current by safe output	max. 2 A, short-circuit and overload protected, (EN13849-1) PLd	
M12-(yellow) PIN 4	2 safety circuits (UA1/UA2) with 2 digital outputs each (EN13849-1) PLd	
M12-(yellow) PIN 2	2 safety circuits (UA1/UA2) with 2 digital outputs each (EN13849-1) PLd	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
Cable break	per port	
General data		
Protection	IP67	
Temperature range	0...+55 °C (storage temperature -20...+70 °C)	
Mounting method	2-hole screw mounting	
Dimension drawing		
		
Notes		

MVK METAL

Expanded diagnostic

– Analog outputs

– Current

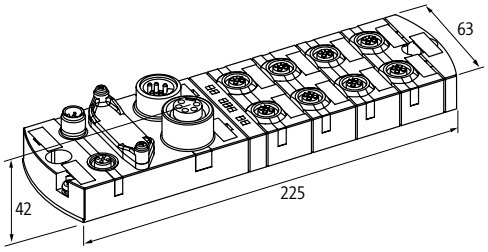
PROFIBUS

Approvals: cULus Listed, PCT

MVK-MP



Order Data		Art-No.
AO4 (I) DIO4 (DIO4)		55292
Connections		
Fieldbus	M12, B-coded	
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A	
I/O ports	M12, A-coded, 5-pole	
Fieldbus		
Operating voltage	24 V DC (EN 61131-2)	
Operating modes	Sync- and freeze mode are supported	
Transfer rate	to 12 Mbit/s	
Addressing	Rotary switch 1...99	
Input		
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
Output		
Actuator supply UA	24 V DC, (EN 61131-2), max. 9 A	
Switching current per output	max. 1.6 A (short-circuit and overload protected)	
Lamp load	10 W	
Input range (analog)	analog 0...20 mA, 4...20 mA (0...10 V via adapter Art.-No. 7000-42252-0000000)	
Conversion time (analog)	1 ms	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
Cable break	per port	
General data		
Protection	IP67	
Temperature range	0...+55 °C (storage temperature -20...+70 °C)	
Mounting method	2-hole screw mounting	
Dimension drawing		



Notes	

Expanded diagnostic

– Analog inputs

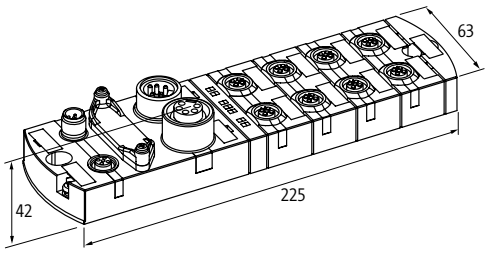
– Voltage

Approvals:

MVK-MP



Order Data	Art-No.
AI4 (U) DIO4 (DIO4)	**55293**
Connections	
Fieldbus	M12, B-coded
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A
I/O ports	M12, A-coded, 5-pole
Fieldbus	
Operating voltage	24 V DC (EN 61131-2)
Operating modes	Sync- and freeze mode are supported
Transfer rate	to 12 Mbit/s
Addressing	Rotary switch 1...99
Input	
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)
Resolution (analog)	16 Bit
Input range (analog)	0...10 V, 0...20 mA and 4...20 mA via adapter Art.-No. 7000-42251-0000000
Input resistor (analog)	approx. 1 MOhm, differential input
Conversion time (analog)	1 ms
Output	
Actuator supply UA	24 V DC, (EN 61131-2), max. 9 A
Lamp load (8 × M12 left side)	max. 1.6 A (short-circuit and overload protected)
Lamp load	10 W
Diagnostic	
Communication status	via LED
Diagnostic via LED	per module and channel
Diagnostic via BUS	per module and channel
Monitoring - under voltage	yes
Monitoring - no voltage	yes
Short circuit and overload	yes
Actuator warning	per channel via LED and BUS
Wire break upper/lower limit overload	per channel via LED and BUS
General data	
Protection	IP67
Temperature range	0...+55 °C (storage temperature -20...+70 °C)
Mounting method	2-hole screw mounting
Dimension drawing	



Notes	

MVK METAL

Expanded diagnostic

– 7/8"

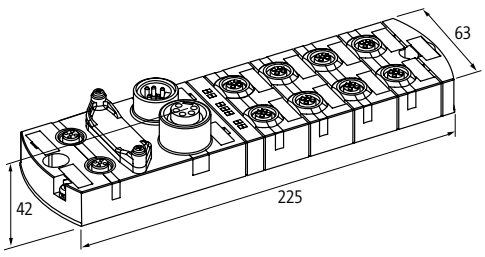
PROFINET

Approvals: cULus

MVK-MPNIO



Order Data	Art-No.	Art-No.	Art-No.
DI8 (DI8)	**55287**		
DIO8 (DI8)		**55288**	
DIO8 (DIO8)			**55289**
Connections			
Fieldbus	M12, D-coded		
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A		
I/O ports	M12, A-coded, 5-pole		
Fieldbus			
Operating voltage	24 V DC (EN 61131-2)		
Operating modes	Autonegotiation/Auto MDI/MDI-X		
Transfer rate	to 100 MBit/s Full Duplex		
Addressing	DCP		
Input			
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)		
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		
Parameterization			
PIN 4	Input	Input/output	
PIN 2	Input/diagnostic		Input/output/diagnostic
Output			
Actuator supply UA	–	24 V DC, (EN 61131-2), max. 9 A	
Switching current per output	–	max. 1.6 A (short-circuit and overload protected)	
Lamp load	–	10 W	
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
Actuator warning	per channel via LED and BUS		
Cable break	per port		
General data			
Protection	IP67		
Temperature range	-25...+55 °C (storage temperature -25...+70 °C)		
Mounting method	2-hole screw mounting		
Dimension drawing			



Notes	

MURR ELEKTRONIK
stay connected

Expanded diagnostic

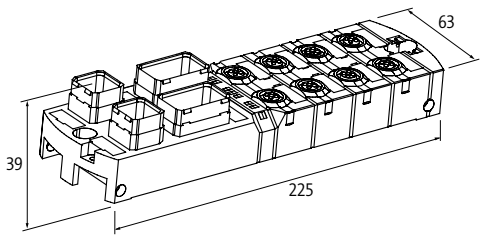
Approvals:

MVK+ MPNIO

Push Pull



Order Data		Art-No.
DIO8 (DIO8)		55283
Connections		
Fieldbus	Push Pull RJ45 Data connector	
Sensor-system/actuator supply	Power plug, Push Pull, max. 12 A	
I/O ports	M12, A-coded, 5-pole	
Fieldbus		
Operating voltage	24 V DC (EN 61131-2)	
Operating modes	Autonegotiation/Auto MDI/MDI-X	
Transfer rate	to 100 MBit/s Full Duplex	
Addressing	DCP	
Input		
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
Parameterization		
PIN 4	Input/output	
PIN 2	Input/output/diagnostic	
Output		
Actuator supply UA	24 V DC, (EN 61131-2), max. 12 A	
Switching current per output	max. 1.6 A (short-circuit and overload protected)	
Lamp load	10 W	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
Cable break	per port	
General data		
Protection	IP67	
Temperature range	0...+55 °C (storage temperature -20...+70 °C)	
Mounting method	2-hole screw mounting	
Dimension drawing		



Notes	

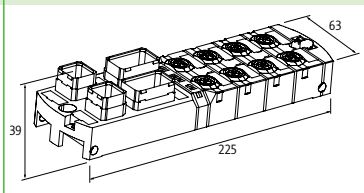
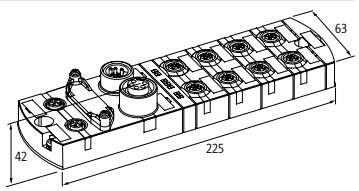
MVK METAL

Expanded diagnostic

– FSU (Fast-Start-Up)

– galvanically separated input and output potentials

PROFINET

	MVK+ MPNIO Push Pull		**MVK+ MPNIO**
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
DI8 (DI8)	cULus, GOST **55268**		
DI8 (DO8)		cULus, GOST **55269**	
DO8 (DI4 DI4)			**55339**
Connections			
Fieldbus	Push Pull RJ45 Data connector		M12, D-coded
Sensor-system/actuator supply	Power plug, Push Pull, max. 12 A		7/8", 5-pole, max. 9 A Protection against reverse polarization
I/O ports	M12, A-coded, 5-pole		
Fieldbus			
Operating voltage	24 V DC (EN 61131-2)		
Operating modes	Autonegotiation/Auto MDI/MDI-X		Autonegotiation/Auto MDI/MDI-X/MRP
Transfer rate	to 100 MBit/s Full Duplex		
FSU (Fast-Start-Up)	max. 500 ms		
Addressing	DCP		
Input			
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)		
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		
PIN 2	–	Female 4...7	–
PIN 4	–	Female 4...7	–
Parameterization			
PIN 4	Input	Input (female 4...7); output (female 0...3)	
PIN 2	Input	Input (female 4...7); output (female 0...3)	
Output			
Actuator supply UA	–	24 V DC, (EN 61131-2), max. 12 A	24 V DC, (EN 61131-2), max. 9 A
Switching current per output	–	max. 2 A (short-circuit and overload protected)	
Lamp load	–	10 W	
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
Actuator warning	per channel via LED and BUS		
Cable break	per port		
General data			
Protection	IP67		
Temperature range	0...+55 °C (storage temperature -20...+70 °C)		
Mounting method	2-hole screw mounting		
Dimension drawing			
			
Notes			

MURR ELEKTRONIK
stay connected

LWL-Push Pull

– FSU (Fast-Start-Up)

– galvanically separated input and output potentials

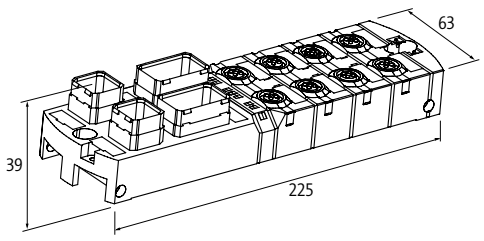
PROFINET

MVK+ MPNIO POF

POF Push Pull



Order Data	Art-No.	Art-No.
DI8 (DI8)	**55256**	
DI8 (DO8)		**55257**
Connections		
Fieldbus	2 × SCRJ45 POF-Push Pull	
Sensor-system/actuator supply	Power plug, Push Pull, max. 12 A	
I/O ports	M12, A-coded, 5-pole	
Fieldbus		
Operating voltage	24 V DC (EN 61131-2)	
Operating modes	Autonegotiation/Auto MDI/MDI-X/MRP	
Transfer rate	to 100 MBit/s Full Duplex	
FSU (Fast-Start-Up)	max. 500 ms	
Input		
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
Parameterization		
PIN 4	Input	Input (female 4...7); output (female 0...3)
PIN 2	Input	Input (female 4...7); output (female 0...3)
Output		
Actuator supply UA	–	24 V DC, (EN 61131-2), max. 12 A
Switching current per output	–	max. 2 A (short-circuit and overload protected)
Lamp load	–	10 W
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
Cable break	per port	
Further	POF- dumping/length measurement	
General data		
Protection	IP67	
Temperature range	0...+55 °C (storage temperature -20...+70 °C)	
Mounting method	2-hole screw mounting	
Dimension drawing		



Notes	

Active

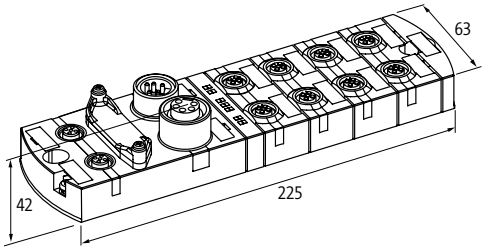
– safe inputs/outputs up to cat. 4/PLe (EN ISO 13849-1), up to SIL 3 (IEC 61508), up to SILCL 3 (IEC 62061)

Approvals:

MVK-MPNIO Safety



Order Data	Art-No.	Art-No.
DI16/8 F	**55560**	
DI8/4 F DO4		**55561**
Connections		
Fieldbus	M12, D-coded	
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A	
I/O ports	M12, A-coded, 5-pole	
Fieldbus		
Operating voltage	24 V DC (EN 61131-2)	
Operating modes	Autonegotiation/Auto MDI/MDI-X	
Transfer rate	to 100 MBit/s Full Duplex	
Addressing	DCP	
Safety input		
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA (per PIN 1+5), short-circuit and overload protected, or max. 700 mA for only one PIN	
Type	for electronical sensors or mechanical switches	
Safe output		
Actuator supply UA	–	24 V DC, (EN 61131-2), max. 9 A
Switching current by safe output	–	max. 2 A (short-circuit and overload protected)
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
Cross-link detection	Sensor-/Actuator	
Wire break detection	yes	
General data		
Protection	IP67	
Temperature range	-20...+55 °C (storage temperature -40...+70 °C)	
Mounting method	2-hole screw mounting	
Dimension drawing		



Notes	

MURR ELEKTRONIK
stay connected

Expanded diagnostic

– 7/8"

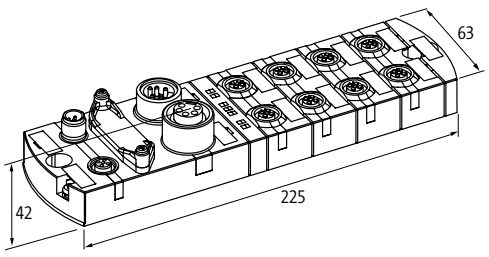
CANopen

Approvals: cULus Listed, PCT

MVK-MC



Order Data	Art-No.	Art-No.	Art-No.
DI8 (DI8)	**55304**		
DIO8 (DI8)		**55305**	
DIO8 (DIO8)			**55306**
Connections			
Fieldbus	M12, A-coded, 5-pole		
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A		
I/O ports	M12, A-coded, 5-pole		
Fieldbus			
Operating voltage	24 V DC (EN 61131-2)		
Operating modes	Polling; change of state; Cyclic		
Transfer rate	max. 1 Mbit/s with switchable terminal resistors		
Addressing	Rotary switch 1...99		
Input			
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)		
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		
Parameterization			
PIN 4	Input	Input/output	
PIN 2	Input/diagnostic		Input/output/diagnostic
Output			
Actuator supply UA	–	24 V DC, (EN 61131-2), max. 9 A	
Switching current per output	–	max. 1.6 A (short-circuit and overload protected)	
Lamp load	–	10 W	
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
Actuator warning	per channel via LED and BUS		
Cable break	per port		
General data			
Protection	IP67		
Temperature range	0...+55 °C (storage temperature -20...+70 °C)		
Mounting method	2-hole screw mounting		
Dimension drawing			



Notes	

MVK METAL

Blind Plug/caps			Art-No.
	**Screw plug M12 × 1 mm**		
	Metal, hex, 1 piece		**996049**
	**Blind cap 7/8"**		
	Metal		**55390**
	**Blind plug diagnostic M12 × 1 mm**		
	Bridge PIN 1 and PIN 2		**7000-13481-0000000**
	**Addressing cap**		
	Metal		**55317**
Labeling accessories			**Art-No.**
	**Label plates 20 × 8 mm**		
	(20 pieces per plate)		**55318**
Connection accessories			**Art-No.**
	**Adapter plug M12/M12 for inputs**		
	Current /voltage converter Quantity: 4 pcs.		**7000-42251-0000000**
	Voltage/current converter Quantity: 4 pcs.		**7000-42252-0000000**
	**MVK PushPull**		
	Dust Protection Set		**553260**
	**Ground strap 4 mm²**		
	100 mm for screw (M4)		**4000-71001-0410004**
	**Screw plug M23**		
	Metal		**55352**



IMPACT67
COMPACT I/O MODULES FOR THE FIELD

- **Application oriented**
- **Easy to Install**
- **Cost-effective**

ECONOMIC DECENTRALIZATION

Impact67 is the perfect fieldbus solution for basic applications that need to be cost-effective. The modules in this series are available with different bus protocols, they feature pluggable connections, diagnostics and IP67 tested seals.

This makes Impact67 the perfect choice for an electrical engineer whose objective is to minimize costs while maintaining digital inputs and outputs under ordinary conditions.

FOCUSED ON ESSENTIALS

- **Predefined inputs and outputs** – helps facilitate configuration
- **Single channel diagnostic via LED** – don't look for errors, find them
- **Group diagnostics via the bus** – easy remote diagnostics
- **Port-related shut off** – only the affected port is shut off

PROFIBUS® · PROFINET® · EtherNet/IP™ · EtherCAT® · CANopen · DeviceNet™

Impact67 I/O Modules



Impact67-P
• Digital I/Os

Page 4.5.1



Impact67-PNIO
• Digital I/Os

Page 4.5.2



Impact67-E
• Digital I/Os

Page 4.5.3



Impact67-EC
• Digital I/Os

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Impact67-C
• Digital I/Os

Page 4.5.5



Impact67-DN
• Digital I/Os

Page 4.5.6

MURR ELEKTRONIK
stay connected

Basic diagnostic

PROFIBUS®

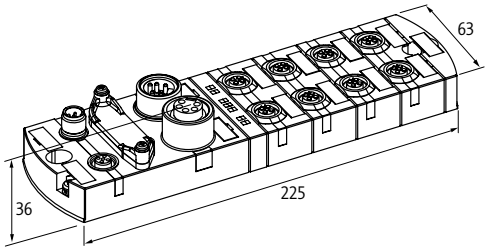
Approvals: c UL us Listed, c SP us, PCT



Impact67-P	Impact67-P	Impact67-P	Impact67-P
DI16	DI8/DO8 - 2 A	DO8 - 2 A	DO16 - 0.5 A

Order Data	Art-No.	Art-No.	Art-No.	Art-No.
DI16	**55345**			
DI8/DO8 - 2 A		**55346**		
DO8 - 2 A			**55347**	
DO16 - 0.5 A				**55348**

Connections				
Fieldbus	M12, B-coded			
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A			
I/O ports	M12, A-coded, 5-pole			
Fieldbus				
Operating voltage	24 V DC (EN 61131-2)			
Operating modes	Sync- and freeze mode are supported			
Transfer rate	to 12 Mbit/s			
Addressing	Rotary switch 3...99			
Input				
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)		–	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		–	
Output				
Switching current per output	–	max. 2 A (short-circuit and overload protected)		max. 0.5 A (short-circuit and overload protected)
Diagnostic				
Communication status	via LED			
Diagnostic via LED	per module and channel			
Diagnostic via BUS	per module	per module and channel		
Monitoring - under voltage	yes			
Monitoring - no voltage	yes			
Short circuit and overload	yes			
General data				
Protection	IP67			
Temperature range	0...+55 °C (storage temperature -25...+70 °C)			
Mounting method	2 hole screw mounting, compatible with I/O modules of MVK model range			
Dimension drawing				



Notes	

IMPACT67

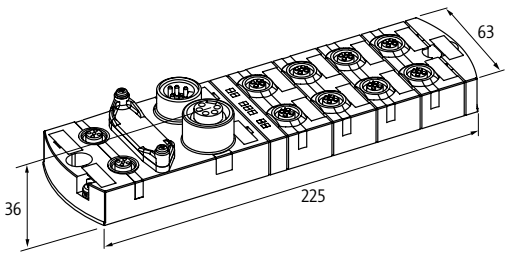
Basic diagnostic

Impact67-PN	Impact67-PN	Impact67-PN	Impact67-PN
DI16	DI8/DO8 - 2 A	DO8 - 2 A	DO16 - 0.5 A



Approvals:

Order Data	Art-No.	Art-No.	Art-No.	Art-No.
DI16	**55091**			
DI8/DO8 - 2 A		**55092**		
DO8 - 2 A			**55093**	
DO16 - 0.5 A				**55094**
Connections				
Fieldbus	M12, D-coded			
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A			
I/O ports	M12, A-coded, 5-pole			
Fieldbus				
Operating voltage	24 V DC (EN 61131-2)			
Operating modes	Autonegotiation/Auto MDI/MDI-X			
Transfer rate	to 100 MBit/s Full Duplex			
Addressing	DCP			
Input				
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)		–	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		–	
Output				
Switching current per output	–	max. 2 A (short-circuit and overload protected)		max. 0.5 A (short-circuit and overload protected)
Diagnostic				
Communication status	via LED			
Diagnostic via LED	per module and channel			
Diagnostic via BUS	per module	per module and channel		
Monitoring - under voltage	yes			
Monitoring - no voltage	yes			
Short circuit and overload	yes			–
General data				
Protection	IP67			
Temperature range	-25...+55 °C (storage temperature -25...+70 °C)			
Mounting method	2 hole screw mounting, compatible with I/O modules of MVK model range			
Dimension drawing				



Notes

Basic diagnostic

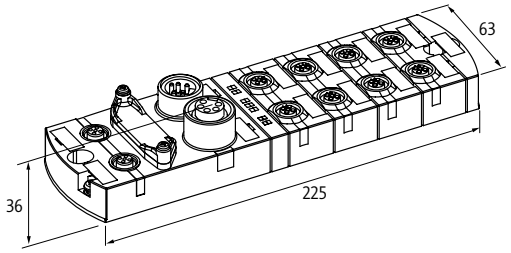
EtherNet/IP conformance tested

Approvals: cULus Listed, CSA, PCT

	Impact67-E	Impact67-E	Impact67-E	Impact67-E
	DI16	DI8/DO8 - 2 A	DO8 - 2 A	DO16 - 0.5 A



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
DI16	**55085**			
DI8/DO8 - 2 A		**55086**		
DO8 - 2 A			**55087**	
DO16 - 0.5 A				**55088**
Connections				
Fieldbus	M12, D-coded			
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A			
I/O ports	M12, A-coded, 5-pole			
Fieldbus				
Operating voltage	24 V DC (EN 61131-2)			
Operating modes	Autonegotiation/Auto MDI/MDI-X			
Transfer rate	to 100 MBit/s Full Duplex			
Addressing	DHCP, BOOTP or IP address by rotary switch			
Input				
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)		–	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		–	
Output				
Switching current per output	–	max. 2 A (short-circuit and overload protected)		max. 0.5 A (short-circuit and overload protected)
Diagnostic				
Communication status	via LED			
Diagnostic via LED	per module and channel			
Diagnostic via BUS	per module	per module and channel		
Monitoring - under voltage	yes			
Monitoring - no voltage	yes			
Short circuit and overload	yes			
General data				
Protection	IP67			
Temperature range	-25...+55 °C (storage temperature -25...+70 °C)			
Mounting method	2 hole screw mounting, compatible with I/O modules of MVK model range			
Dimension drawing				



Notes

Basic diagnostic

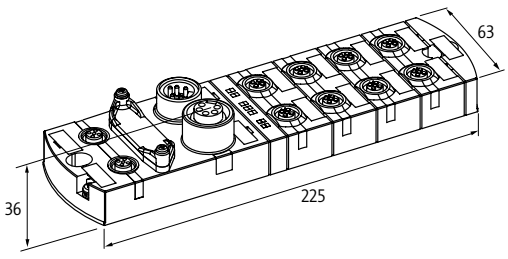
EtherCAT

Approvals:

	Impact67-EC	Impact67-EC	Impact67-EC	Impact67-EC
	DI16	DI8/DO8 - 2 A	DO8 - 2 A	DO16 - 0.5 A



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
DI16	**55081**			
DI8/DO8 - 2 A		**55082**		
DO8 - 2 A			**55083**	
DO16 - 0.5 A				**55084**
Connections				
Fieldbus	M12, D-coded			
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A			
I/O ports	M12, A-coded, 5-pole			
Fieldbus				
Operating voltage	24 V DC (EN 61131-2)			
Operating modes	Autocrossing Autonegotiation			
Transfer rate	to 100 Mbit/s			
Addressing	automatic or Device ID by rotary switch			
Input				
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)		–	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		–	
Output				
Switching current per output	–	max. 2 A (short-circuit and overload protected)		max. 0.5 A (short-circuit and overload protected)
Diagnostic				
Communication status	via LED			
Diagnostic via LED	per module and channel			
Diagnostic via BUS	per module	per module and channel		
Monitoring - under voltage	yes			
Monitoring - no voltage	yes			
Short circuit and overload	yes			
General data				
Protection	IP67			
Temperature range	-25...+55 °C (storage temperature -25...+70 °C)			
Mounting method	2 hole screw mounting, compatible with I/O modules of MVK model range			
Dimension drawing				



Notes

Basic diagnostic

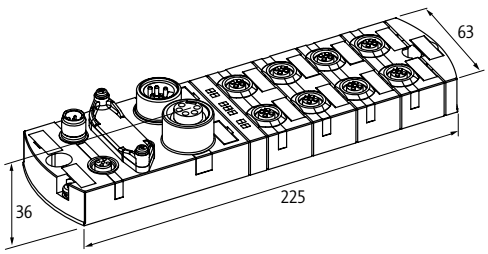
CANopen

Approvals:

	Impact67-C	Impact67-C	Impact67-C	Impact67-C
	DI16	DI8/DO8 - 2 A	DO8 - 2 A	DO16 - 0.5 A



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
DI16	**55075**			
DI8/DO8 - 2 A		**55076**		
DO8 - 2 A			**55077**	
DO16 - 0.5 A				**55078**
Connections				
Fieldbus	M12, A-coded			
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A			
I/O ports	M12, A-coded, 5-pole			
Fieldbus				
Operating voltage	24 V DC (EN 61131-2)			
Operating modes	Polling; change of state; Cyclic			
Transfer rate	max. 1 Mbit/s			
Addressing	Rotary switch 1...99			
Input				
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)		–	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	–		
Output				
Switching current per output	–	max. 2 A (short-circuit and overload protected)		max. 0.5 A (short-circuit and overload protected)
Diagnostic				
Communication status	via LED			
Diagnostic via LED	per module and channel			
Diagnostic via BUS	per module	per module and channel		
Monitoring - under voltage	yes			
Monitoring - no voltage	yes			
Short circuit and overload	yes			
General data				
Protection	IP67			
Temperature range	-25...+75 °C (storage temperature -25...+70 °C)			
Mounting method	2 hole screw mounting, compatible with I/O modules of MVK model range			
Dimension drawing				



Notes

IMPACT67

Basic diagnostic

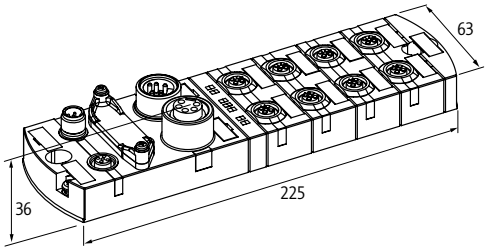
DeviceNet

Approvals: c UL us Listed, c SA us, PCT



Impact67-DN	Impact67-DN	Impact67-DN	Impact67-DN
DI16	DI8/DO8 - 2 A	DO8 - 2 A	DO16 - 0.5 A

Order Data	Art-No.	Art-No.	Art-No.	Art-No.
DI16	**55071**			
DI8/DO8 - 2 A		**55072**		
DO8 - 2 A			**55073**	
DO16 - 0.5 A				**55074**
Connections				
Fieldbus	M12, A-coded			
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A			
I/O ports	M12, A-coded, 5-pole			
Fieldbus				
Operating voltage	24 V DC (EN 61131-2)			
Operating modes	Polling; change of state; Cyclic			
Transfer rate	125 kBit/s; 250 kBit/s; 500 kBit/s			
Addressing	Rotary switch 0...63			
Input				
Sensor supply US	24 V DC, (EN 61131-2), max. 200 mA per M12 female, (short-circuit and overload protected)		–	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		–	
Output				
Switching current per output	–	max. 2 A (short-circuit and overload protected)		max. 0.5 A (short-circuit and overload protected)
Diagnostic				
Communication status	via LED			
Diagnostic via LED	per module and channel			
Diagnostic via BUS	per module	per module and channel		
Monitoring - under voltage	yes			
Monitoring - no voltage	yes			
Short circuit and overload	yes			
General data				
Protection	IP67			
Temperature range	-25...+75 °C (storage temperature -25...+70 °C)			
Mounting method	2 hole screw mounting, compatible with I/O modules of MVK model range			
Dimension drawing				



Notes

Accessories			Art-No.
	**Label plates 20 × 8 mm**		
	(20 pieces per plate)		**55318**
	**Screw plug M12 × 1 mm (for female)**		
	Plastic, hex	Quantity: 10 pcs.	**58627**



IMPACT20
COMPACT I/O MODULES

- **IP20 protection**
- **Efficient**
- **Cost-effective**

FOCUSED ON THE ESSENTIALS

Murrelektronik's Impact20 is the perfect solution when you need a cost-effective application of fieldbus I/O modules in terminal boxes and control panels.

- **Predefined Inputs and Outputs**
  - Helps facilitate configuration
- **Single Channel Diagnostic via LED**
  - Indicates failures on the spot
- **Group Diagnostic via the Bus**
  - Facilitates failure analysis
- **Channel-Related Shut Down**
  - Only the affected channel is shutdown

PROFIBUS
PROFINET
EtherNet/IP
EtherCAT
CANopen
DeviceNet

Impact20 I/O Modules



Impact20-P
• Digital I/Os

PROFIBUS

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Impact20-PNIO
• Digital I/Os

PROFINET

Page 4.6.2



Impact20-E
• Digital I/Os

EtherNet/IP

Page 4.6.3



Impact20-EC
• Digital I/Os

EtherCAT

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Impact20-C
• Digital I/Os

CANopen

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Impact20-DN
• Digital I/Os

DeviceNet

Page 4.6.6

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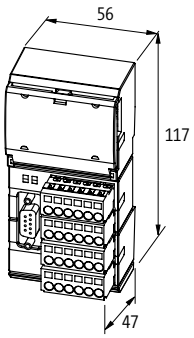
PROFIBUS

Approvals: c UL us Listed



	Impact20-P DI16	Impact20-P DI8/DO8 - 2 A	Impact20-P DO16 - 0.5 A
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
DI16	**56900**		
DI8/DO8 - 2 A		**56901**	
DO16 - 0.5 A			**56902**
Connections			
Fieldbus	SUB-D9		
Sensor-system/actuator supply	6 × spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)		
I/O ports	18 × spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)		
Fieldbus			
Operating voltage	24 V DC (EN 61131-2)		
Operating modes	Sync- and freeze mode are supported		
Transfer rate	to 12 Mbit/s		
Addressing	Rotary switch 3...99		
Input			
Sensor supply US	24 V DC, (EN 61131-2), max. 700 mA per module, (short-circuit and overload protected)		–
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		–
Output			
Switching current per output	–	max. 2 A (short-circuit and overload protected)	max. 0.5 A (short-circuit and overload protected)
Total current	–	max. 8 A	
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module	per module and channel	
Diagnostic via BUS	per module	per module and channel	
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
General data			
Protection	IP20		
Temperature range	0...+55 °C (storage temperature -20...+70 °C)		
Mounting method	DIN-rail mountable (EN 60715)		
Dimension drawing			

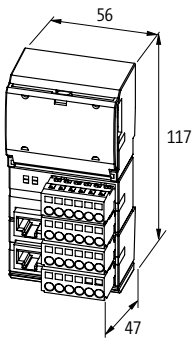


Notes	

Impact20

PROFINET®

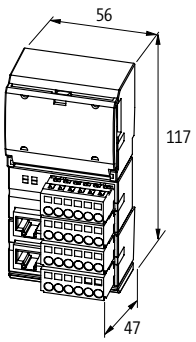
Approvals:

	Impact20-PN DI16	Impact20-PN DI8/DO8 - 2 A	Impact20-PN DO16 - 0.5 A
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
DI16	**56920**		
DI8/DO8 - 2 A		**56921**	
DO16 - 0.5 A			**56922**
Connections			
Fieldbus	2 × RJ45		
Sensor-system/actuator supply	6 × spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)		
I/O ports	18 × spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)		
Fieldbus			
Operating voltage	24 V DC (EN 61131-2)		
Operating modes	Autonegotiation/Auto MDI/MDI-X		
Transfer rate	to 100 MBit/s Full Duplex		
Input			
Sensor supply US	24 V DC, (EN 61131-2), max. 700 mA per module, (short-circuit and overload protected)		–
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		–
Output			
Switching current per output	–	max. 2 A (short-circuit and overload protected)	max. 0.5 A (short-circuit and overload protected)
Total current	–	max. 8 A	
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module	per module and channel	
Diagnostic via BUS	per module	per module and channel	
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
General data			
Protection	IP20		
Temperature range	0...+55 °C (storage temperature -20...+70 °C)		
Mounting method	DIN-rail mountable (EN 60715)		
Dimension drawing			
			
Notes			

EtherNet/IP conformance tested

Approvals: cULus Listed, PCT

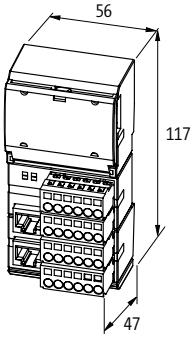
	Impact20-E DI16	Impact20-E DI8/DO8 - 2 A	Impact20-E DO16 - 0.5 A
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
DI16	**56916**		
DI8/DO8 - 2 A		**56917**	
DO16 - 0.5 A			**56918**
Connections			
Fieldbus	2 × RJ45		
Sensor-system/actuator supply	6 × spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)		
I/O ports	18 × spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)		
Fieldbus			
Operating voltage	24 V DC (EN 61131-2)		
Transfer rate	to 100 MBit/s Full Duplex		
Addressing	DHCP, BOOTP or IP address by rotary switch		
Input			
Sensor supply US	24 V DC, (EN 61131-2), max. 700 mA per module, (short-circuit and overload protected)		–
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		–
Output			
Switching current per output	–	max. 2 A (short-circuit and overload protected)	max. 0.5 A (short-circuit and overload protected)
Total current	–	max. 8 A	
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module	per module and channel	
Diagnostic via BUS	per module	per module and channel	
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
General data			
Protection	IP20		
Temperature range	0...+55 °C (storage temperature -20...+70 °C)		
Mounting method	DIN-rail mountable (EN 60715)		
Dimension drawing			



Notes

EtherCAT

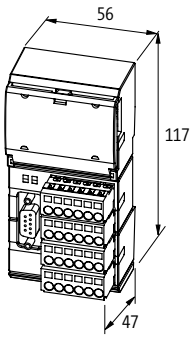
Approvals:

	Impact20-EC DI16	Impact20-EC DI8/DO8 - 2 A	Impact20-EC DO16 - 0.5 A
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
DI16	**56912**		
DI8/DO8 - 2 A		**56913**	
DO16 - 0.5 A			**56914**
Connections			
Fieldbus	2 × RJ45		
Sensor-system/actuator supply	6 × spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)		
I/O ports	18 × spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)		
Fieldbus			
Operating voltage	24 V DC (EN 61131-2)		
Operating modes	Autocrossing Autonegotiation		
Transfer rate	to 100 Mbit/s		
Addressing	automatic		
Input			
Sensor supply US	24 V DC, (EN 61131-2), max. 700 mA per module, (short-circuit and overload protected)		–
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		–
Output			
Switching current per output	–	max. 2 A (short-circuit and overload protected)	max. 0.5 A (short-circuit and overload protected)
Total current	–	max. 8 A	
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module	per module and channel	
Diagnostic via BUS	per module	per module and channel	
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
General data			
Protection	IP20		
Temperature range	0...+55 °C (storage temperature -20...+70 °C)		
Mounting method	DIN-rail mountable (EN 60715)		
Dimension drawing			
			
Notes			

CANopen

Approvals:

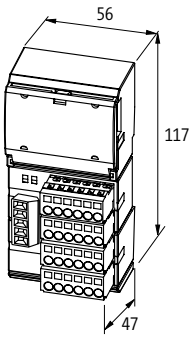
	Impact20-C DI16	Impact20-C DI8/DO8 - 2 A	Impact20-C DO16 - 0.5 A
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
DI16	**56904**		
DI8/DO8 - 2 A		**56905**	
DO16 - 0.5 A			cCSAus **56906**
Connections			
Fieldbus	SUB-D9		
Sensor-system/actuator supply	6 × spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)		
I/O ports	18 × spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)		
Fieldbus			
Operating voltage	24 V DC (EN 61131-2)		
Operating modes	Polling; change of state; Cyclic		
Transfer rate	max. 1 Mbit/s		
Addressing	Rotary switch 1...99		
Input			
Sensor supply US	24 V DC, (EN 61131-2), max. 700 mA per module, (short-circuit and overload protected)		–
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		–
Output			
Switching current per output	–	max. 2 A (short-circuit and overload protected)	max. 0.5 A (short-circuit and overload protected)
Total current	–	max. 8 A	
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module	per module and channel	
Diagnostic via BUS	per module	per module and channel	
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
General data			
Protection	IP20		
Temperature range	0...+55 °C (storage temperature -20...+70 °C)		
Mounting method	DIN-rail mountable (EN 60715)		
Dimension drawing			



Notes	

DeviceNet

Approvals:

	Impact20-DN	Impact20-DN	Impact67-DN
	DI16	DI8/DO8 - 2 A	DO16 - 0.5 A
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
DI16	**56908**		
DI8/DO8 - 2 A		**56909**	
DO16 - 0.5 A			**56910**
Connections			
Fieldbus	5 × pluggable spring clamp terminals		
Sensor-system/actuator supply	6 × spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)		
I/O ports	18 × spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)		
Fieldbus			
Operating voltage	24 V DC (EN 61131-2)		
Operating modes	Polling; change of state; Cyclic		
Transfer rate	125 kBit/s; 250 kBit/s; 500 kBit/s		
Addressing	Rotary switch 0...63		
Input			
Sensor supply US	24 V DC, (EN 61131-2), max. 700 mA per module, (short-circuit and overload protected)		–
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		–
Output			
Switching current per output	–	max. 2 A (short-circuit and overload protected)	max. 0.5 A (short-circuit and overload protected)
Total current	–	max. 8 A	
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module	per module and channel	
Diagnostic via BUS	per module	per module and channel	
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short circuit and overload	yes		
General data			
Protection	IP20		
Temperature range	0...+55 °C (storage temperature -20...+70 °C)		
Mounting method	DIN-rail mountable (EN 60715)		
Dimension drawing			
			
Notes			

Labeling accessories			Art-No.
	Label-sheet		
	Quantity: 40 pcs.		**56113**
	**Label plates 20 × 8 mm**		
	(20 pieces per plate)		**55318**

Connection accessories			Art-No.
	**Potential terminal block**		
	brown/brown/blue/blue		**56109**
	blue/yellow		**56110**
	blue/yellow/brown/blue		**56111**



MASI00/20
FOR THE CONTROL CABINET

- **High signal density in a very small space**
- **Pluggable cutting clamp or spring clamp connections**
- **Sensor supply from AS Interface or 24 V DC**

AS-INTERFACE SYSTEM – MASI00/20

MASI00 and MASI20 modules are designed to correctly support the single strand wiring used in control cabinets and terminal boxes. This gives the user the advantage during installation, setup and maintenance. The modules have a slim design which makes them the perfect choice for applications in terminal boxes and cabinets. The coded, pluggable connections reduce time and errors during installation.

They are designed according to the latest 3.0 AS Interface specification and have the globally recognized AS Interface certification, which guarantees that they are interoperable and a secure investment. Furthermore, with the special K3 module you can create safety shutdowns according to EN 13849-1 up to PL d.

I/O Modules



MASI00 bus components

Page 4.7.1



MASI20 bus components

Page 4.7.1

Installation Technology



Bus and power distributors

Page 4.7.5

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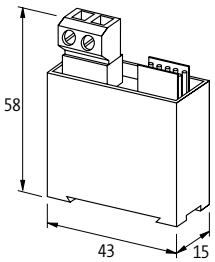
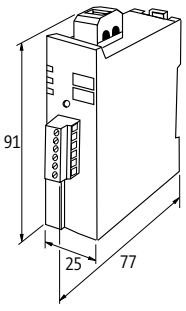
Digital inputs/outputs

Approvals:

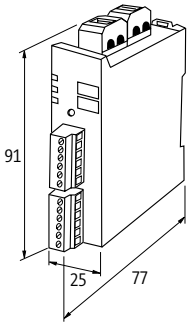
	MASI00 DI4/DO4 - 0.2 A	**MASI00** DI4/DO4 - 0.2 A (AB)	**MASI20** DI4 - 0.17 A (AB)
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
DI4/DO4 - 0.2 A	**55700**		
DI4/DO4 - 0.2 A (AB)		ASI **55701**	
DI4 - 0.17 A (AB)			ASI, UL-Listed, CSA **55688**
Technical Data			
Bus voltage (AS-Interface)	26.5...31.6 V DC		
Total current (AS-Interface)	max. 250 mA		
Addressing	1...31 via plug terminals	1...62 (1...31 A or B) via plug-in terminal	via built-in address port or master
Address range	1...31	1...62 (1...31 A or B)	
Current consumption	–	max. 200 mA	–
Profile (IO/ID/ID2 code)	S-7.F.F	S-7.A.7	S-0.A.0
Input			
Sensor supply US	max. 200 mA from AS-Interface (short-circuit and overload protected)		max. 170 mA from AS-Inerface (short-circuit and overload protected)
Type	for standard switches		for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)
Input current	–		max. 10 mA
Output			
Switching current per output	max. 0.2 A (short-circuit and overload protected)		–
Total current	max. 200 mA		–
Switch off time in case of short circuit	approx. 50 ms		–
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module		
Monitoring - no voltage	yes		
General data			
Protection	IP00		IP20
Temperature range	0...+55 °C (storage temperature -20...+70 °C)		-20...+60 °C
Mounting method	DIN-rail mountable (EN 60715)		
Connection AS-Interface	Screw plug-in terminal: 0.2...2.5 mm²		IDC terminals, 0.5...0.75 mm²
Connection sensor/actuator	–		Spring clamp plug-in terminals: 0.14...1.5 mm²
Dimension drawing			
			
Notes			
	For DIN-rail mounting use 1 x Art.-No. 20900 adapter feet		

MASI00/20

Digital inputs

– Semiconductor outputs

Approvals:

	MASI20	MASI20
	DI4 - 0.2 A DO3 - 0.5 A (AB)	DI4 - 0.2 A DO4 - 0.5 A
		
Order Data	**Art-No.**	**Art-No.**
DI4 - 0.2 A DO3 - 0.5 A (AB)	**55687**	
DI4 - 0.2 A DO4 - 0.5 A		**55686**
Technical Data		
Bus voltage (AS-Interface)	26.5...31.6 V DC	
Total current (AS-Interface)	max. 50 mA	
Addressing	via built-in address port or master	
Address range	1...62 (1...31 A or B)	1...31
Profile (IO/ID/ID2 code)	S-7.A.0	S-7.0.E
Input		
Sensor supply US	max. 200 mA from AS-Interface (short-circuit and overload protected)	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
Input current	max. 10 mA	
Output		
Switching current per output	max. 0.5 A (short-circuit and overload protected)	
Total current	max. 2 A	
Switch off time in case of short circuit	approx. 20 ms	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Monitoring - no voltage	yes	
General data		
Protection	IP20	
Connection AS-Interface/Power	IDC terminals, 0.5...0.75 mm²	
Connection sensor/actuator	Spring clamp plug-in terminals: 0.14...1.5 mm²	
Temperature range	-20...+60 °C	
Mounting method	DIN-rail mountable (EN 60715)	
Dimension drawing		
		
Notes		

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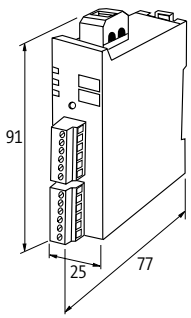
Digital inputs

– Relay outputs

Approvals:

	MASI20	**MASI20**
	DI4 - 0.17 A DO3 - 2 A (AB)	DI4 - 0.2 A DO4 - 2 A
Order Data	**Art-No.**	**Art-No.**
DI4 - 0.17 A DO3 - 2 A (AB)	**55768**	
DI4 - 0.2 A DO4 - 2 A		**55685**
Technical Data		
Bus voltage (AS-Interface)	26.5...31.6 V DC	
Total current (AS-Interface)	max. 300 mA	
Addressing	via built-in address port or master	
Address range	1...62 (1...31 A or B)	1...31
Profile (IO/ID/ID2 code)	S-7.A.0	S-7.0.E
Input		
Sensor supply US	max. 170 mA from AS-Inerface (short-circuit and overload protected)	max. 200 mA from AS-Interface (short-circuit and overload protected)
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
Input current	max. 10 mA	
Output		
Switching current per output	max. 2 A	
Total current	max. 4.5 A	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Monitoring - no voltage	yes	
General data		
Protection	IP20	
Connection AS-Interface/Power	IDC terminals, 0.5...0.75 mm²	
Connection sensor/actuator	Spring clamp plug-in terminals: 0.14...1.5 mm²	
Temperature range	-20...+60 °C	
Mounting method	DIN-rail mountable (EN 60715)	
Dimension drawing		



Notes	

MASI00/20

Digital inputs

– output groups up to PLd (EN ISO 13849-1) can be switched off via safety relays

– Opto decoupled inputs (only with additional supply voltage)

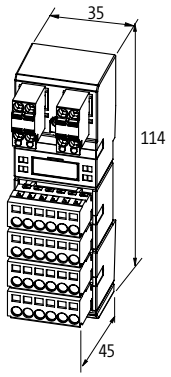
Approvals:

MASI20

DI4 - 0.2 A DO4 - 0.5 A (AB) K3



Order Data		Art-No.
DI4 - 0.2 A DO4 - 0.5 A (AB) K3		56440
Technical Data		
Bus voltage (AS-Interface)	26.5...31.6 V DC	
Total current (AS-Interface)	max. 300 mA	
Addressing	via built-in address port or master	
Address range	1...62 (1...31 A or B)	
Profile (IO/ID/ID2 code)	S-7.A.7	
Input		
Supply voltage	alternatively (switchable) from AS-Interface or from 24 V DC (EN 61131-2) by additional supply	
Sensor supply US	max. 200 mA external or from AS-Interface, (short-circuit and overload protected)	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
Input current	max. 10 mA	
Output		
Supply voltage	24 V DC (18...30.2 V DC) EN 61131-2 by additional supply, safely separated from input supply	
Switching current per output	max. 0.5 A (short-circuit and overload protected)	
Total current	max. 2 A	
Switch off time in case of short circuit	approx. 20 ms	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Monitoring - no voltage	yes	
General data		
Protection	IP20	
Temperature range	0...+60 °C (storage temperature -20...+70 °C)	
Connection	Spring clamp plug-in terminal: 0.2...2.5 mm²	
Mounting method	DIN-rail mountable (EN 60715)	
Dimension drawing		



Notes	

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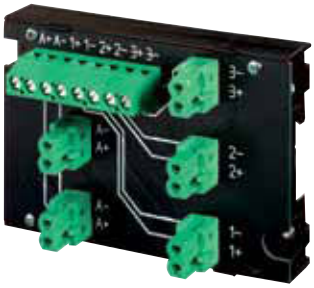
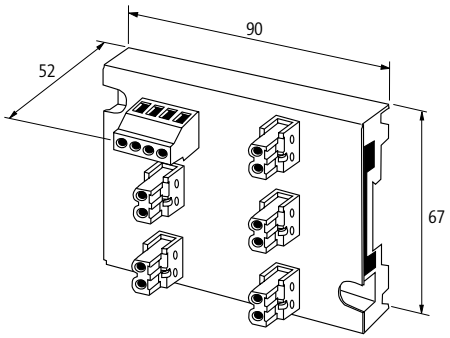
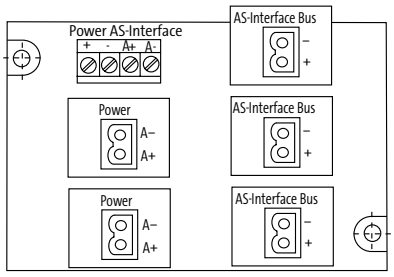
stay connected

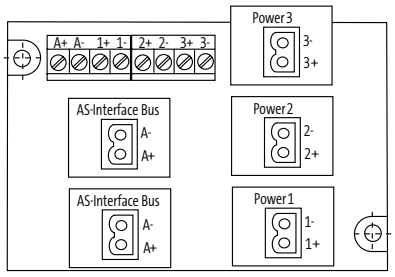
Installation technology	Bus or Power distributor	Bus or Power distributor potentially separated
Approvals: cULus, PCT		

Order Data		Art-No.		Art-No.
3 AS-Interface + 2 power ports	5 plug terminals included	**55606**		
2 AS-Interface + 3 power ports			5 plug terminals included	**55575**
Technical Data				
Operating voltage	max. 36 V DC			
Current per connection	max. 8 A			
Total current	max. 24 A			
Isolation voltage	AS-Interface/Power 200 V, (EN 60664-1)			
General data				
Protection	IP20			
Temperature range	-20...+70 °C		-20...+70 °C (storage temperature -40...+80 °C)	
Connection	Screw terminal: single wire (0.25...4 mm²), stranded wire (0.5...2.5 mm²)			
Mounting method	DIN-rail mountable (EN 60715)			
Dimension drawing				



Connection diagram





Notes

MASI00/20

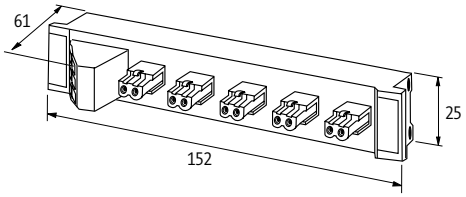
Installation technology

Bus or Power distributor

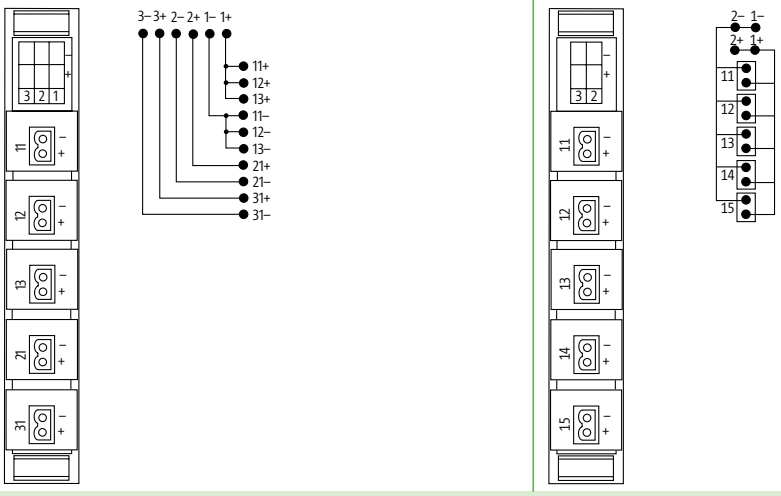


Approvals:

Order Data		**Art-No.**		**Art-No.**
3 potentials	5 ports, universal	**55605**		
	without plug terminals	**55607**		
1 potential			5 plug terminals included	**55611**
Technical Data				
Operating voltage	max. 36 V DC			
Current per connection	max. 8 A			
Total current	max. 12 A			
Isolation voltage	AS-Interface/Power 200 V, Power/Power 50 V (EN 60664-1)			
General data				
Protection	IP20			
Temperature range	-20...+70 °C			
Connection	Screw terminal: single wire (0.2...2.5 mm²), stranded wire (0.2...1.5 mm²)			
Mounting method	DIN-rail mountable (EN 60715)			
Dimension drawing				



Connection diagram



Notes

Accessories			Art-No.
	**I/O cable for MASI00**		
	1.0 m		**556510**
	**I/O cable for MASI00**		
	with cable fork 150 mm		**556511**
	**MASI Z-Plug**		
	Passive bus terminator	AS-Interface	**55779**
	**Programming device**		
		AS-Interface	**55696**
	Spare cable		
		AS-Interface programming device	**55727**
Labeling accessories			**Art-No.**
	Label plate		
	Quantity: 22 pieces		**55218**
	Quantity: 20 pieces	Bus and external voltage supply	**55219**
Connection accessories			**Art-No.**
	**Plug terminal (AS-Interface profile cable)**		
		for bus or power distributor	**55604**
	**AS-Interface Distributor**		
	from profile to profile cable	AS-Interface	**55749**
	**Mounting bracket**		
	Quantity: 50 pcs.	AS-Interface profile cable	**55742**

MASI00/20

Connection accessories			Art-No.
	**Adapter**		
	from profile cable to M12 2-pole	AS-Interface	**55741**
	Profie cable yellow, 2 × 1.5 mm²		
	By the meter	AS-Interface	**55743**
	Profile cable black, 2 × 1.5 mm²		
	By the meter	AS-Interface	**55744**
	Spring clamp plug-in terminal		
	Quantity: 5 pcs.	MASI20 I/O-level	**55213**
	Screw plug-in terminal		
	Quantity: 5 pcs.	MASI20 I/O-level	**55210**
	Screw plug-in terminal		
	Quantity: 5 pcs.	MASI20 Bus connection (AS-Interface)	**55211**
	Screw plug-in terminal		
	Quantity: 5 pcs.	MASI20 external voltage supply	**55212**
	IDC terminal		
	Quantity: 5 pcs.	MASI20 Bus connection (AS-Interface)	**55214**
	IDC terminal		
	Quantity: 5 pcs.	MASI20 external voltage supply	**55215**



MASI67
FLAT CABLES TAKE SYSTEMS INTO THE FIELD

- **One module switches off two circuits**
- **Active and passive components**
- **Flat cable can be inserted multiple times**

AS INTERFACE SYSTEM – MASI67

With MASI67, Murrelektronik provides an optimized installation system for mechanical engineering. The potted I/O modules are extremely resistant to mechanical influences such as vibration and shocks, and are sealed to meet industrial requirements. Having two outputs in one M12 port reduces valve installation by as much as 50 %.

The product range is supplemented with passive installation technology modules with practical interfaces for round cables, which are typically used in C-track applications.

They are designed according to the latest 3.0 AS Interface specification and have the globally recognized AS Interface certification, which guarantees that they are interoperable and a secure investment. With the special K3 module you can create safety shut downs according to EN 13849-1 up to PL d.

MASI65

For I/O modules, accessories and more information about MASI65 see our **online-Shop**:

onlineshop.murrelektronik.com

I/O-Modules



With M8 connections
• IP67 protection

Page 4.8.1



With M12 connections
• IP67 protection

Page 4.8.3



With M12 connections and safe outputs
• IP67 protection
• Two release circuits
• Safety

Page 4.8.4

Installation Technology



• Converter
• Accessories

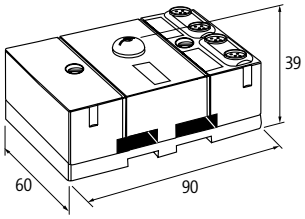
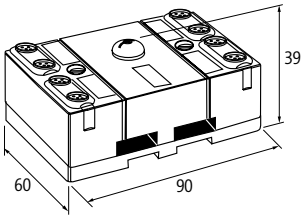
Page 4.8.6

MURR ELEKTRONIK
stay connected

Digital inputs

– M8 Round Plug Connectors

Approvals:

	MASI67 DI4 - 0.2 A (AB) 4×M8	MASI67 DI8 - 0.24 A (AB) 8×M8
		
Order Data	**Art-No.**	**Art-No.**
DI4 - 0.2 A (AB) 4×M8	**56405**	
DI8 - 0.24 A (AB) 8×M8		**56406**
Technical Data		
Bus voltage (AS-Interface)	26.5...31.6 V DC	
Total current (AS-Interface)	max. 250 mA	max. 290 mA
Addressing	via built-in address port or master	
Address range	1...62 (1...31 A or B)	2 × 1...62 (2 × 1...31 A or B)
Profile (IO/ID/ID2 code)	S-0.A.0	2 × S-0.A.0
Input		
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
Sensor supply US	max. 200 mA from AS-Interface (short-circuit and overload protected)	max. 240 mA from AS-Interface (short-circuit and overload protected)
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Monitoring - no voltage	yes	
General data		
Protection	IP67	
Temperature range	-20...+60 °C (storage temperature -20...+70 °C)	
Mounting method	DIN-rail mountable (EN 60715) or screw fixing	
Dimension drawing		
		
Notes		

MASI67

Digital inputs and outputs

– M8 Round Plug Connectors

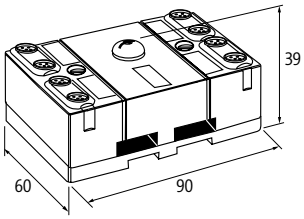
Approvals:

MASI67

DI4 - 0.2 A DO4 - 0.5 A 8×M8



Order Data		Art-No.
DI4 - 0.2 A DO4 - 0.5 A 8×M8		56408
Technical Data		
Bus voltage (AS-Interface)	26.5...31.6 V DC	
Total current (AS-Interface)	max. 250 mA	
Addressing	via built-in address port or master	
Address range	1...31	
Profile (IO/ID/ID2 code)	S-7.0.E	
Input		
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
Sensor supply US	max. 200 mA from AS-Interface (short-circuit and overload protected)	
Output		
Supply voltage	24 V DC external (18...30.2 V DC) EN 61131-2, connection via black AS-Interface profile cable	
Switching current per output	max. 0.5 A (short-circuit and overload protected)	
Total current	max. 2 A	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Monitoring - no voltage	yes	
General data		
Protection	IP67	
Temperature range	-20...+60 °C (storage temperature -20...+70 °C)	
Mounting method	DIN-rail mountable (EN 60715) or screw fixing	
Dimension drawing		



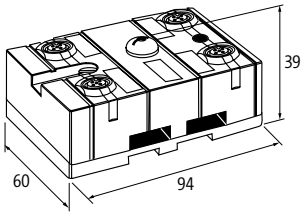
Notes	

MURR ELEKTRONIK
stay connected

Digital inputs and outputs

– M12 Round Plug Connectors

Approvals:

	MASI67 DI4 - 0.2 A (AB) 4×M12	MASI67 DI8 - 0.24 A (AB) 4×M12	MASI67 DI4 - 16 A DO4 - 2 A 4×M12
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
DI4 - 0.2 A (AB) 4×M12	**56400**		
DI8 - 0.24 A (AB) 4×M12		**56401**	
DI4 - 16 A DO4 - 2 A 4×M12			**56404**
Technical Data			
Bus voltage (AS-Interface)	26.5...31.6 V DC		
Total current	max. 250 mA	max. 290 mA	max. 50 mA
Addressing	via built-in address port or master		
Address range	1...62 (1...31 A or B)	2 × 1...62 (2 × 1...31 A or B)	1...31
Profile (IO/ID/ID2 code)	S-0.A.0	S-0.A.2	S-7.F.E
Double assignment of M12 female	no	yes	
PIN 2 and PIN 4 of M12 female bridged	yes	no	–
Input			
Sensor supply US	max. 200 mA from AS-Interface (short-circuit and overload protected)	max. 240 mA from AS-Interface (short-circuit and overload protected)	max. 1.6 A from AS-Inerface (short-circuit and overload protected)
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)		
Output			
Actuator supply UA	–		24 V DC external (18...30.2 V DC) EN 61131-2
Switching current per output	–		max. 2 A (short-circuit and overload protected)
Total current	–		max. 8 A
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module		
Diagnostic via BUS	yes	–	
Monitoring - no voltage	–	yes	
General data			
Protection	IP67		
Temperature range	-20...+60 °C (storage temperature -20...+70 °C)		
Mounting method	DIN-rail mountable (EN 60715) or screw fixing		
Connection	–		AS-Interface profile cable (black)
Dimension drawing			
Notes			

MASI67

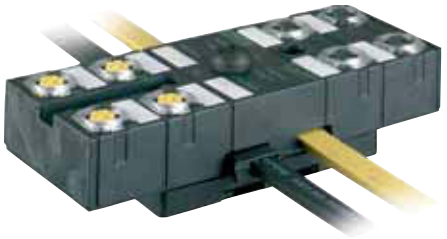
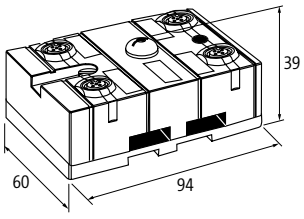
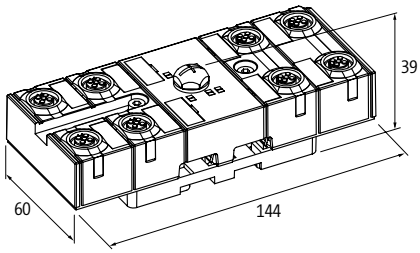
Digital inputs

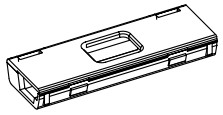
– Passive

– output groups up to PLd (EN ISO 13849-1) can be switched off via safety relays

– M12 Round Plug Connectors

Approvals:

	MASI67 DI4 - 0.2 A DO4 - 1.6 A (AB) 4×M12 (K3)	**MASI67** DI8 - 0.34 A DO8 - 1.6 A (AB) 8×M12 (K3)
		
Order Data	**Art-No.**	**Art-No.**
DI4 - 0.2 A DO4 - 1.6 A (AB) 4×M12 (K3)	**56414**	
DI8 - 0.34 A DO8 - 1.6 A (AB) 8×M12 (K3)		**56415**
Technical Data		
Bus voltage (AS-Interface)	26.5...31.6 V DC	
Total current	max. 250 mA	max. 440 mA
Addressing	via built-in address port or master	
Address range	1...62 (1...31 A or B)	2 × 1...62 (2 × 1...31 A or B)
Profile (IO/ID/ID2 code)	S-7.A.7	2 × S-7.A.7
Double assignment of M12 female	yes	
Input		
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
Sensor supply US	max. 200 mA from AS-Interface (short-circuit and overload protected)	max. 340 mA from AS-Interface, (short-circuit and overload protected)
Output		
Supply voltage	24 V DC external (18...30.2 V DC) EN 61131-2, connection via black AS-Interface profile cable	24 V DC external (18...30.2 V DC) EN 61131-2, connection via black AS-Interface profile cable, 2 safely separated supplies possible
Switching current per output	max. 1.6 A (short-circuit and overload protected)	
Total current	2 × 3.2 A	2 × 4 A
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Monitoring - no voltage	yes	
General data		
Protection	IP67	
Temperature range	-20...+60 °C (storage temperature -20...+70 °C)	
Mounting method	DIN-rail mountable (EN 60715) or screw fixing	
Dimension drawing		
		
Notes		

Accessories			Art-No.
	**End gasket**		
		Quantity: 2 pieces right + 2 pieces left	**55061**
	**Middle gasket**		
		Quantity: 2 pcs.	**55062**
	**Coding element - short**		
	for MASI67	Quantity: 2 pcs.	**55059**
	**Coding element - long**		
	for MASI67	Quantity: 2 pcs.	**55060**
	**MASI Z-Plug**		
	Passive bus terminator	AS-Interface	**55779**
	**Programming device**		
		AS-Interface	**55696**
	Spare cable		
		AS-Interface programming device	**55727**

Blind Plug/caps			Art-No.
	**Screw plug M8 × 1 mm (for female)**		
	Plastic, hex	Quantity: 10 pcs.	**3858627**
	**Screw plug M12 × 1 mm**		
	Plastic, hex	Quantity: 4 pcs.	**55468**

MASI67

Connection accessories			Art-No.
	**AS-Interface Distributor**		
	from profile to profile cable	AS-Interface	**55749**
	**Mounting bracket**		
	Quantity: 50 pcs.	AS-Interface profile cable	**55742**
	from profile cable to M12 2-pole	AS-Interface	**55741**

Installation technology			Art-No.
	**MASI67 converter**		
	2 × profile cable to 7/8" (female)	AS-Interface	**55035**
	**MASI67 converter**		
	2 × profile cable to 7/8" (male)	AS-Interface	**55036**
	**MASI67 converter**		
	2 × profile cable to M12 (female)	AS-Interface	**55037**
	**MASI67 converter**		
	2 × profile cable to M12 (male)	AS-Interface	**55038**
	**MASI67 distribution boxes**		
	1 × on 3 × profile cable	AS-Interface	**55034**
	**MASI67 connection**		
	2 × on 2 × profile cable	AS-Interface	**55033**
	**MASI67 passive distribution box**		
	2 × profile cable to 4 × M12 (female)	AS-Interface	**56412**

Installation technology			Art-No.
	**MASI67 passive distribution box**		
	2 × profile cable to 4 × M12 (female) 2 separate circuits	AS-Interface	**56416**



MASI68
ROUND CABLES TAKE SYSTEMS INTO THE FIELD

- **Small and compact with high signal density**
- **Sealed to meet industrial requirements**
- **Easy to install with integrated bus distributor**

AS INTERFACE SYSTEM – MASI68

The I/O modules of the MASI68 series, with bus connections and M12 standard cables, are designed for applications in exposed areas that require sealed components. They offer a complete solution with IP68/69K protection.

Accessories and special round cables complete the MASI68 range offering the user a total installation concept for decentralized installations. Pluggable round cables make installation and service much easier.

With MASI68 K3 modules, you can shutdown safely according to EN 13849-1 up to PL d. They are designed according to the latest 3.0 AS Interface specifications and have AS Interface certification, which guarantees that they are compatible.

Digital inputs



With M8 connections
- IP68 protection

Page 4.9.1



With M12 connections
- IP68/69K protection

Page 4.9.4

Digital inputs/outputs



With M8 connections
- IP68 protection

Page 4.9.6



With M12 connections
- IP68/69K protection
- Models with safe outputs (safety)

Page 4.9.7

Installation technology



Converters/Accessories

Accessories for round cables
see page 3.6.24

Page 4.9.9

MURR ELEKTRONIK
stay connected

Digital inputs

– M8 Round Plug Connectors

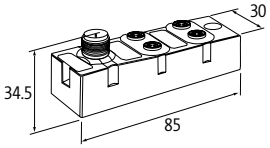
Approvals:

MASI68

Compact module



Order Data	Art-No.	Art-No.
DI4 - 0.2 A (C) 4×M8	**56435**	
DI4 - 0.2 A (C) 4×M8 (AB)		**56434**
Technical Data		
Bus voltage (AS-Interface)	26.5...31.6 V DC	
Addressing	via master or M12 connection and programming device	
Address range	1...31	1...62 (1...31 A or B)
Profile (IO/ID/ID2 code)	S-0.0	S-0.A.0
Total current	max. 250 mA	
Input		
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
Sensor supply US	max. 200 mA from AS-Interface (short-circuit and overload protected)	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Monitoring - no voltage	yes	
General data		
Protection	IP68	
Temperature range	-20...+60 °C (storage temperature -20...+70 °C)	
Mounting method	screw fixing	
Dimension drawing		



Notes

MASI68

Digital inputs

– M8 Round Plug Connectors

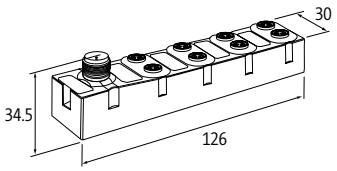
Approvals:

MASI68

Compact module



Order Data		Art-No.
DI8 - 0.2 A (C) 8×M8 (AB)		**56420**
	pre-programmed – ASI	**564201**
Technical Data		
Bus voltage (AS-Interface)	26.5...31.6 V DC	
ASI-Power 24	yes	
Total current	max. 250 mA	
Addressing	via master or M12 connection and programming device, presetting 2 × address 0	
Address range	2 × 1...62 (2 × 1...31 A or B)	
Profile (IO/ID/ID2 code)	2 × S-0.A.0	
Input		
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
Sensor supply US	max. 200 mA from AS-Interface (short-circuit and overload protected)	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Monitoring - no voltage	yes	
General data		
Protection	IP68	
Temperature range	-20...+60 °C (storage temperature -20...+70 °C)	
Mounting method	screw fixing	
Dimension drawing		



Notes

MURR ELEKTRONIK
stay connected

Digital inputs

– M8 Round Plug Connectors

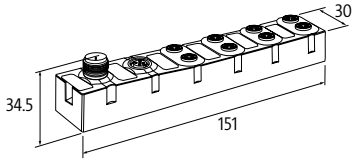
Approvals:

MASI68

Expansion module



Order Data		Art-No.
DI8 - 0.2 A (E) 8×M8 (AB)		**56436**
Technical Data		
Bus voltage (AS-Interface)	26.5...31.6 V DC	
ASI-Power 24	yes	
Addressing	via master or M12 connection and programming device, presetting 1 × address 31 A, 1 × address 31 B	
Address range	2 × 1...62 (2 × 1...31 A or B)	
Profile (IO/ID/ID2 code)	2 × S-0.A.E	
Total current	max. 300 mA	
Input		
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
Sensor supply US	max. 240 mA from AS-Interface (short-circuit and overload protected)	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Monitoring - no voltage	yes	
General data		
Protection	IP68	
Temperature range	-20...+60 °C (storage temperature -20...+70 °C)	
Mounting method	screw fixing	
Dimension drawing		



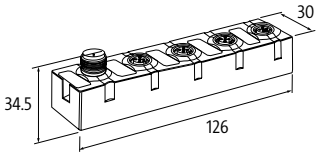
Notes	

MASI68

Digital inputs

– M12 Round Plug Connectors

Approvals:

	MASI68 Compact module Y-wiring	**MASI68** Compact module
		
Order Data	**Art-No.**	**Art-No.**
DI4 - 0.2 A (C) 4×M12 (AB) Y	**56421**	
DI8 - 0.2 A (C) 4×M12 (AB)		**56424**
Technical Data		
Bus voltage (AS-Interface)	26.5...31.6 V DC	
ASI-Power 24	yes	
Total current	max. 250 mA	
Addressing	via master or M12 connection and programming device	
Address range	1...62 (1...31 A or B)	2 × 1...62 (2 × 1...31 A or B)
Profile (IO/ID/ID2 code)	S-0.A.2	2 × S-0.A.2
Address presetting	–	Slave 1: address 31 A; Slave 2: address 31 B
Input		
Sensor supply US	max. 200 mA from AS-Interface (short-circuit and overload protected)	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
M12 configuration	Y-wiring	–
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Monitoring - no voltage	yes	
General data		
Protection	IP68	
Temperature range	-20...+60 °C (storage temperature -20...+70 °C)	
Mounting method	screw fixing	
Dimension drawing		
		
Notes		

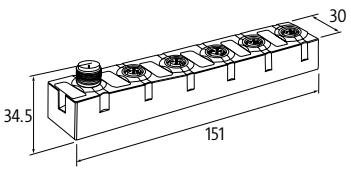
MURR ELEKTRONIK
stay connected

Digital inputs

– M12 Round Plug Connectors

Approvals:

	MASI68 Expansion module		MASI68 Expansion module Y-wiring	MASI68 Expansion module
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
DI4 - 0.2 A (E) 4×M12 (AB)	**56425**			
DI8 - 0.2 A (E) 4×M12 (AB)		**56426**		
DI4 - 0.2 A (E) 4×M12 (AB) AUX-Y			**56443**	
DI8 - 0.2 A (E) 4×M12 (AB) AUX				**56444**
Technical Data				
Bus voltage (AS-Interface)	26.5...31.6 V DC			
Addressing	via master or M12 connection and programming device			
Address range	1...62 (1...31 A or B)	2 × 1...62 (2 × 1...31 A or B)	1...62 (1...31 A or B)	2 × 1...62 (2 × 1...31 A or B)
Profile (IO/ID/ID2 code)	S-0.A.2	2 × S-0.A.2	S-0.A.2	2 × S-0.A.2
Total current	max. 250 mA			
Address presetting	–	Slave 1: address 31 A; Slave 2: address 31 B	–	
Input				
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)			
Sensor supply US	max. 200 mA from AS-Interface (short-circuit and overload protected)		max. 200 mA from AUX Power, (short-circuit and overload protected)	
M12 configuration	–		Y-wiring	–
Diagnostic				
Communication status	via LED			
Diagnostic via LED	per module			
Monitoring - no voltage	yes			
General data				
Protection	IP68			
Temperature range	-20...+60 °C (storage temperature -20...+70 °C)			
Mounting method	screw fixing			
Dimension drawing				



Notes

MASI68

Digital inputs/outputs

– M8 Round Plug Connectors

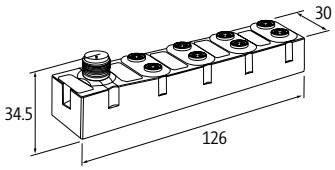
Approvals:

MASI68

Compact module



Order Data	Art-No.	Art-No.
DI4 - 0.2 A DO3 - 0.5 A (C) 7×M8 (AB)	**56418**	
DI4 - 0.2 A DO4 - 0.5 A (C) 8×M8		**56419**
Technical Data		
Bus voltage (AS-Interface)	26.5...31.6 V DC	
Addressing	via master or M12 connection and programming device	
Profile (IO/ID/ID2 code)	S-7.A.0	S-7.0.0
Address range	1...62 (1...31 A or B)	1...31
Total current	max. 250 mA	
Input		
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
Sensor supply US	max. 200 mA from AS-Interface (short-circuit and overload protected)	
Output		
Supply voltage	24 V DC external (18...30.2 V DC) EN 61131-2, connection via black AS-Interface profile cable, 2 safely separated supplies possible	24 V DC external (18...30.2 V DC) EN 61131-2
Switching current per output	max. 0.5 A (short-circuit and overload protected)	
Total current	max. 1.5 A	max. 2 A
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Monitoring - no voltage	yes	
General data		
Protection	IP68	
Temperature range	-20...+60 °C (storage temperature -20...+70 °C)	
Mounting method	screw fixing	
Dimension drawing		



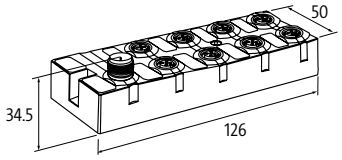
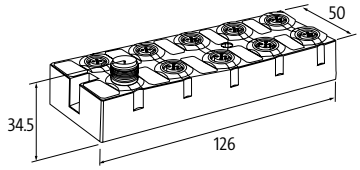
Notes

MURR ELEKTRONIK
stay connected

Digital inputs/outputs

– M12 Round Plug Connectors

Approvals:

	MASI68 Compact module Y-wiring	**MASI68** Expansion module
		
Order Data	**Art-No.**	**Art-No.**
DI4 - 0.2 A DO4 - 2 A (C) 8×M12 (Y)	**56422**	
DI4 - 0.2 A DO4 - 2 A (E) 8×M12 (Y)		**56427**
Technical Data		
Bus voltage (AS-Interface)	26.5...31.6 V DC	
ASI-Power 24	yes	
Total current	max. 250 mA	
Addressing	via master or M12 connection and programming device	
Address range	1...31	
Profile (IO/ID/ID2 code)	S-7.F.E	
Input		
Sensor supply US	max. 200 mA from AS-Interface (short-circuit and overload protected)	
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
M12 configuration	Y-wiring	–
Output		
Switching current per output	max. 2 A (short-circuit and overload protected)	
Total current	max. 4 A	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Monitoring - no voltage	yes	
General data		
Protection	IP68	
Temperature range	-20...+60 °C (storage temperature -20...+70 °C)	
Mounting method	screw fixing	
Dimension drawing		
		
Notes		

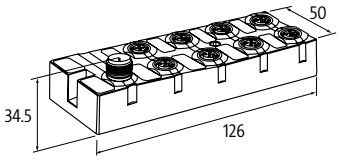
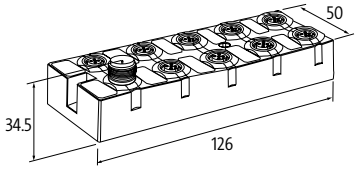
MASI68

Passive

– output groups up to PLd (EN ISO 13849-1) can be switched off via safety relays

– M12 Round Plug Connectors

Approvals:

	MASI68 Compact module Y-wiring	**MASI68** Expansion module Y-wiring
		
Order Data	**Art-No.**	**Art-No.**
DI4 - 0.2 A DO4 - 1.6 A (AB) 8×M12 (Y) K3	**56423**	
DI4 - 0.2 A DO4 - 1.6 A (E) 8×M12 (AB) Y (K3)		**56428**
Technical Data		
Bus voltage (AS-Interface)	26.5...31.6 V DC	
Addressing	via master or M12 connection and programming device	
ASI-Power 24	–	yes
Profile (IO/ID/ID2 code)	S-7.A.7	
Address range	1...62 (1...31 A or B)	
Total current	max. 250 mA	
Input		
Type	for 3-wire sensors or mechanical switches, p-switching (EN 61131-2)	
Sensor supply US	max. 200 mA from AS-Interface (short-circuit and overload protected)	
Output		
Supply voltage	24 V DC external (18...30.2 V DC) EN 61131-2	
Switching current per output	max. 2 A (short-circuit and overload protected)	
Total current	max. 4 A	
M12 configuration	Y-wiring	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Monitoring - no voltage	yes	
General data		
Protection	IP68	
Temperature range	-20...+60 °C (storage temperature -20...+70 °C)	
Mounting method	screw fixing	
Dimension drawing		
		
Notes		

Accessories			Art-No.
	**MASI Z-Plug**		
	Passive bus terminator	AS-Interface	**55779**
	**Programming device**		
		AS-Interface	**55696**
Blind Plug/caps			**Art-No.**
	**Screw plug M8 × 1 mm (for female)**		
	Plastic, hex	Quantity: 10 pcs.	**3858627**
	**Screw plug M12 × 1 mm**		
	Plastic, hex	Quantity: 4 pcs.	**55468**
Connection accessories			**Art-No.**
	**AS-Interface Distributor**		
	from profile to profile cable	AS-Interface	**55749**
	**Distribution box**		
	from profile to round cable	AS-Interface	**55745**
	**T-coupler M12/M12, female/male**		
	straight, A-coded, 4-pole	MASI68 additional actuator power supply	**7060-42701-0000000**
	**T-coupler (Slimline) M12 - M12**		
	5-pole Parallel circuit		**7000-41151-0000000**

Connection accessories			Art-No.
	**Adapter**		
	from profile cable to PG11	AS-Interface	**55732**
	**Mounting bracket**		
	Quantity: 50 pcs.	AS-Interface profile cable	**55742**
	**Adapter**		
	from profile cable to M12 2-pole	AS-Interface	**55741**
	Spare cable		
		AS-Interface programming device	**55727**
	Profie cable yellow, 2 × 1.5 mm²		
	By the meter	AS-Interface	**55743**
	Profile cable black, 2 × 1.5 mm²		
	By the meter	AS-Interface	**55744**

System components			Art-No.
	**Gateway-Singlemaster**		
	via screw terminals on the front	AS-Interface/PROFIBUS DP	**55707**
	**Gateway-Singlemaster**		
	via pluggable spring clamp terminals on the front 0.2...2.5 mm² Specification 2.1	AS-Interface/PROFIBUS DP cULus	**556612**

System components			Art-No.
	**Gateway-Singlemaster**		
	via pluggable spring clamp terminals on the front 0.2...2.5 mm² Specification 3.0	AS-Interface/PROFIBUS DP cULus	**56451**
	**Gateway-Doublemaster**		
	via pluggable spring clamp terminals on the front 0.2...2.5 mm² Specification 3.0	AS-Interface/PROFIBUS DP cULus	**556616**
	**Switch mode power supplies**		
	INPUT: 95...265 V AC Current: 4 A	AS-Interface cULus	**85381**
	**Switch mode power supplies**		
	INPUT: 95...265 V AC Current: 4 A with EFD (earth fault detection)	AS-Interface cULus	**85382**



M8 DISTRIBUTION SYSTEMS
EXACT8

- **Saves space**
- **Versatile**
- **Application oriented**

EXACT8 – THE NEW GENERATION OF MURRELEKTRONIK'S M8 DISTRIBUTION BOXES

- Small dimensions (30 mm width)
- PUR/PVC cable for flexible and fixed assembly
- High-quality, halogen-free PUR cable suitable for C-tracks, UL/CSA approved
- Standard or side mounting for limited space
- Quick and easy replacement of connection cables

For Sensors and Actuators – Molded Homerun Cables or Connection Caps



Exact8
• 4-, 6-, 8-, 10-way
• PUR or PUR/PVC homerun cable

Page 4.10.1



Exact8 Basic Modules
• 4-, 6-, 8-, 10-way

Page 4.10.5



Exact8 Connection Caps
• Pre-wired
• PUR or PUR/PVC homerun cable

Page 4.10.8



Exact8 Set
• 4-, 6-, 8-, 10-way
• Field-wireable

Page 4.10.11

For Sensors – with M12 Connection



Exact8
• 4-, 6-, 8-, 10-way
• with 8- or 12-pole M12 connection

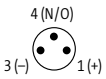
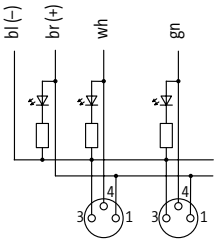
Page 4.10.12

For sensors and actuators

– with molded homerun cable

– inline face or side mounting

Approvals: cULus Listed, PCT

	Exact8 4-way	Exact8 6-way	Exact8 8-way	Exact8 10-way
				
1 Form	**84010**	**86010**	**88010**	**80010**
Type	**PNP, 3-pole**	**PNP, 3-pole**	**PNP, 3-pole**	**PNP, 3-pole**
Contact layout	M8-Females 3-pole   for 1 signal per port			
2 Cable Type	**Jacket Color** – No./diameter of wires			
	gray	**gray**	**gray**	**gray**
PUR/PVC	**337** – 4 × 0.34 + 2 × 0.75 mm²	**350** – 6 × 0.34 + 2 × 0.75 mm²	**357** – 8 × 0.34 + 2 × 0.75 mm²	**385** – 10 × 0.34 + 2 × 0.75 mm²
PUR (UL/CSA)	**334** – 4 × 0.34 + 2 × 0.75 mm²	**356** – 6 × 0.34 + 2 × 0.75 mm²	**359** – 8 × 0.34 + 2 × 0.75 mm²	**384** – 10 × 0.34 + 2 × 0.75 mm²
3 Cable Length				
3.0 m	**0300**			
5.0 m	**0500**			
10.0 m	**1000**			
15.0 m	**1500**			
Technical Data				
Operating voltage	24 V DC			
Total current	max. 10 A			
Protection	IP65, IP67			
Temperature range	-20...+80 °C, depending on cable quality			
Contact Layout				
Contact 1	(+)			
Contact 3	(-)			
Contact 4	(NO)/(S1)			
LED display	LED (green): power / LED (yellow): (S1)			
Article No.				
The composition of your article number is explained on page 3.1.i	**8 0 0 0** – _ _ _ _ _ – _ _ _			_ _ _ _
		1 Form	**2 Cable Type**	**3 Cable Length**

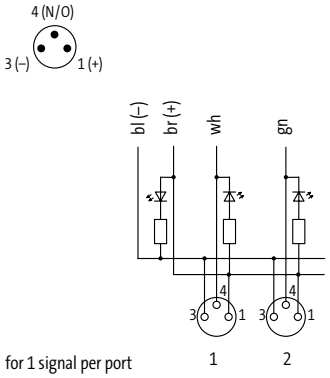
Notes

For sensors and actuators

– with molded homerun cable

– inline face or side mounting

Approvals: cULus Listed, PCT

	Exact8 4-way	Exact8 6-way	Exact8 8-way	Exact8 10-way
				
1 Form	**84011**	**86011**	**88011**	**80011**
Type	**NPN, 3-pole**	**NPN, 3-pole**	**NPN, 3-pole**	**NPN, 3-pole**
Contact layout	M8-Females 3-pole  for 1 signal per port			
2 Cable Type	**Jacket Color** – No./diameter of wires			
	gray	**gray**	**gray**	**gray**
PUR/PVC	**337** – 4 × 0.34 + 2 × 0.75 mm²	**350** – 6 × 0.34 + 2 × 0.75 mm²	**357** – 8 × 0.34 + 2 × 0.75 mm²	**385** – 10 × 0.34 + 2 × 0.75 mm²
PUR (UL/CSA)	**334** – 4 × 0.34 + 2 × 0.75 mm²	**356** – 6 × 0.34 + 2 × 0.75 mm²	**359** – 8 × 0.34 + 2 × 0.75 mm²	**384** – 10 × 0.34 + 2 × 0.75 mm²
3 Cable Length				
5.0 m	**0500**			
10.0 m	**1000**			
Technical Data				
Operating voltage	24 V DC			
Total current	max. 10 A			
Protection	IP65, IP67			
Temperature range	-20...+80 °C, depending on cable quality			
Contact Layout				
Contact 1	(+)			
Contact 3	(-)			
Contact 4	(NO)/(S1)			
LED display	LED (green): power / LED (yellow): (S1)			
Article No.				
The composition of your article number is explained on page 3.1.i	**8 0 0 0** – _ _ _ _ _ – _ _ _			_ _ _ _
		1 Form	**2 Cable Type**	**3 Cable Length**

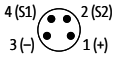
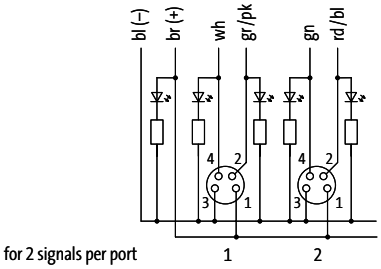
Notes

For sensors and actuators

– with molded homerun cable

– inline face or side mounting

Approvals: cULus Listed, PCT

	Exact8 4-way	Exact8 6-way	Exact8 8-way	Exact8 10-way
				
1 Form	**84110**	**86110**	**88110**	**80110**
Type	**PNP, 4-pole**	**PNP, 4-pole**	**PNP, 4-pole**	**PNP, 4-pole**
Contact layout	M8-Females 4-pole  			

2 Cable Type	**Jacket Color** – No./diameter of wires			
	gray	**gray**	**gray**	**gray**
PUR/PVC	**358** – 8 × 0.34 + 2 × 0.75 mm²	**386** – 12 × 0.34 + 2 × 0.75 mm²	**395** – 16 × 0.34 + 2 × 0.75 mm²	**412** – 20 × 0.34 + 2 × 0.75 mm²
PUR (UL/CSA)	**360** – 8 × 0.34 + 2 × 0.75 mm²	**389** – 12 × 0.34 + 2 × 0.75 mm²	**396** – 16 × 0.34 + 2 × 0.75 mm²	**411** – 20 × 0.34 + 2 × 0.75 mm²

3 Cable Length	
3.0 m	**0300**
5.0 m	**0500**
10.0 m	**1000**
15.0 m	**1500**

Technical Data	
Operating voltage	24 V DC
Total current	max. 10 A
Protection	IP65, IP67
Temperature range	-20...+80 °C, depending on cable quality

Contact Layout	
Contact 1	(+)
Contact 2	(NC)/(S2)
Contact 3	(-)
Contact 4	(NO)/(S1)
LED display	LED (green): power / LED (yellow): (S1) / LED (white): signal (S2)

Article No.

The composition of your article number is explained on page 3.1.i

8 0 0 0 –	_ _ _ _ _ –	_ _ _	_ _ _ _
	1 Form	**2 Cable Type**	**3 Cable Length**

Notes

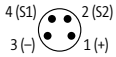
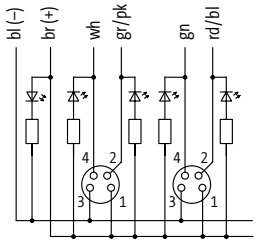
M8 DISTRIBUTION SYSTEMS

For sensors and actuators

– with molded homerun cable

– inline face or side mounting

Approvals: cULus Listed, PCT

	Exact8 4-way	**Exact8** 6-way	**Exact8** 8-way	**Exact8** 10-way
				
1 Form	**84111**	**86111**	**88111**	**80111**
Type	**NPN, 4-pole**	**NPN, 4-pole**	**NPN, 4-pole**	**NPN, 4-pole**
Contact layout	M8-Females 4-pole  			
2 Cable Type	**Jacket Color** – No./diameter of wires			
	gray	**gray**	**gray**	**gray**
PUR/PVC	**358** – 8 × 0.34 + 2 × 0.75 mm²	**386** – 12 × 0.34 + 2 × 0.75 mm²	**395** – 16 × 0.34 + 2 × 0.75 mm²	**412** – 20 × 0.34 + 2 × 0.75 mm²
PUR (UL/CSA)	**360** – 8 × 0.34 + 2 × 0.75 mm²	**389** – 12 × 0.34 + 2 × 0.75 mm²	**396** – 16 × 0.34 + 2 × 0.75 mm²	**411** – 20 × 0.34 + 2 × 0.75 mm²
3 Cable Length				
5.0 m	**0500**			
10.0 m	**1000**			
Technical Data				
Operating voltage	24 V DC			
Total current	max. 10 A			
Protection	IP65, IP67			
Temperature range	-20...+80 °C, depending on cable quality			
Contact Layout				
Contact 1	(+)			
Contact 2	(NC)/(S2)			
Contact 3	(-)			
Contact 4	(NO)/(S1)			
LED display	LED (green): power / LED (yellow): (S1) / LED (white): signal (S2)			
Article No.				
The composition of your article number is explained on page 3.1.i	**8 0 0 0** – _ _ _ _ _ –		_ _ _	_ _ _ _
		1 Form	**2 Cable Type**	**3 Cable Length**

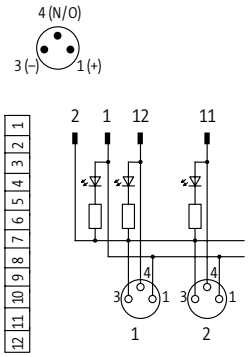
Notes

For sensors and actuators

– Base modules

– inline face or side mounting

Approvals: cULus Listed, PCT

	Exact8 4-way	Exact8 6-way	Exact8 8-way	Exact8 10-way
				
1 Form	**84000**	**86000**	**88000**	**80000**
Type	**PNP, 3-pole**	**PNP, 3-pole**	**PNP, 3-pole**	**PNP, 3-pole**
Contact layout	M8-Females 3-pole  for 1 signal per port			

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 2 A
Total current	max. 8 A
Protection	IP65, IP67
Temperature range	-20...+70 °C, depending on cable quality

Contact Layout

Contact 1	(+)
Contact 3	(-)
Contact 4	(NO)/(S1)
LED display	LED (green): power / LED (yellow): (S1)

Article No.

The composition of your article number is explained on page 3.1.i

8000	– _____	– 000	0000
	1 Form		

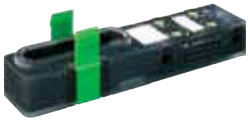
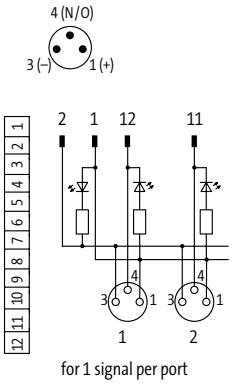
Notes

For sensors and actuators

– Base modules

– inline face or side mounting

Approvals: cULus Listed, PCT

	Exact8 4-way	Exact8 6-way	Exact8 8-way	Exact8 10-way
				
1 Form	**84001**	**86001**	**88001**	**80001**
Type	**NPN, 3-pole**	**NPN, 3-pole**	**NPN, 3-pole**	**NPN, 3-pole**
Contact layout	M8-Females 3-pole  for 1 signal per port			

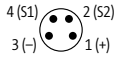
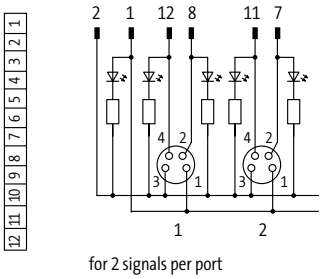
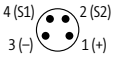
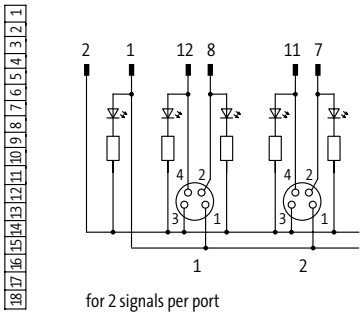
Technical Data				
Operating voltage	24 V DC			
Operating current per contact	max. 2 A			
Total current	max. 8 A			
Protection	IP65, IP67			
Temperature range	-20...+70 °C, depending on cable quality			
Contact Layout				
Contact 1	(+)			
Contact 3	(-)			
Contact 4	(NO)/(S1)			
LED display	LED (green): power / LED (yellow): (S1)			
Article No.				
The composition of your article number is explained on page 3.1.i	8 0 0 0 – _ _ _ _ _	**1 Form**	– 0 0 0	0 0 0 0
Notes				

For sensors and actuators

– Base modules

– inline face or side mounting

Approvals: cULus Listed, PCT

	Exact8 4-way	Exact8 6-way	Exact8 8-way
			
1 Form	**84100**	**86100**	**88100**
Type	**PNP, 4-pole**	**PNP, 4-pole**	**PNP, 4-pole**
Contact layout	M8 Females 4-pole   for 2 signals per port	M8-Females 4-pole   for 2 signals per port	

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 2 A
Total current	max. 8 A
Protection	IP65, IP67
Temperature range	-20...+70 °C, depending on cable quality

Contact Layout

Contact 1	(+)
Contact 2	(NC)/(S2)
Contact 3	(-)
Contact 4	(NO)/(S1)
LED display	LED (green): power / LED (yellow): (S1) / LED (white): signal (S2)

Article No.

The composition of your article number is explained on page 3.1.i

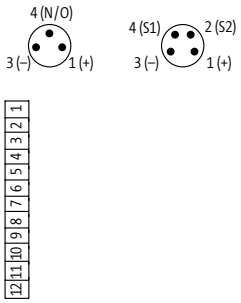
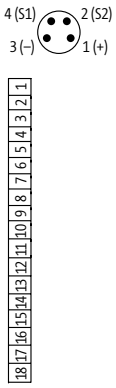
8000	–	_____	–	000	0000
		1 Form			

Notes

For sensors and actuators

– Field-wireable (pluggable spring clamp terminals)

Approvals:

	Exact8 Connection cap short	**Exact8** Connection cap long
		
1 Form	**84949**	**80949**
Type	**for 4-way distribution box, 3-/4-pole, for 4...10-way, 3-pole**	**6-, and 8-way distribution box, 4-pole**
Contact layout	M8-Females 3-pole/4-pole 	M8-Females 4-pole 
Technical Data		
Total current	max. 8 A	
Housing	Plastic, flame retardant	
Temperature range	-20...+80 °C	
Article No.		
The composition of your article number is explained on page 3.1.i	**8 0 0 0 – _ _ _ _ _ – 0 0 0 0 0 0 0**	
	1 Form	
Notes		

For sensors and actuators

– with homerun cable

– with pluggable spring clamp terminals

Approvals: cULus Listed, PCT

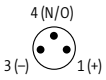
Exact8

Connection cap short



1 Form

	84049	86049	88049	80049
Type	**for 4-way distribution box, 3-pole**	**for 6-way distribution box, 3-pole**	**for 8-way distribution box, 3-pole**	**for 10-way distribution box, 3-pole**
Contact layout	M8-Females 3-pole			





2 Cable Type

Jacket Color – No./diameter of wires

	gray	gray	gray	gray
PUR/PVC	**337** – 4 × 0.34 + 2 × 0.75 mm²	**350** – 6 × 0.34 + 2 × 0.75 mm²	**357** – 8 × 0.34 + 2 × 0.75 mm²	**385** – 10 × 0.34 + 2 × 0.75 mm²
PUR (UL/CSA)	**334** – 4 × 0.34 + 2 × 0.75 mm²	**356** – 6 × 0.34 + 2 × 0.75 mm²	**359** – 8 × 0.34 + 2 × 0.75 mm²	**384** – 10 × 0.34 + 2 × 0.75 mm²

3 Cable Length

3.0 m	**0300**
5.0 m	**0500**
10.0 m	**1000**
15.0 m	**1500**

Technical Data

Temperature range	-20...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

8000	–	_____	–	___	____
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

M8 DISTRIBUTION SYSTEMS

For sensors and actuators

– with homerun cable

– with pluggable spring clamp terminals

Approvals: c UL us Listed, PG

Exact8
Connection cap short



Exact8
Connection cap long



1 Form

	84149	86149	88149
Type	**for 4-way distribution box, 4-pole**	**for 6-way distribution box, 4-pole**	**for 8-way distribution box, 4-pole**
Contact layout	M8-Females 4-pole 4 (S1) 2 (S2) 3 (–) 1 (+) 12 11 10 9 8 7 6 5 4 3 2 1	M8-Females 4-pole 4 (S1) 2 (S2) 3 (–) 1 (+) 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1	

2 Cable Type

Jacket Color – No./diameter of wires

	gray	gray	gray
PUR/PVC	**358** – 8 × 0.34 + 2 × 0.75 mm²	**386** – 12 × 0.34 + 2 × 0.75 mm²	**395** – 16 × 0.34 + 2 × 0.75 mm²
PUR (UL/CSA)	**360** – 8 × 0.34 + 2 × 0.75 mm²	**389** – 12 × 0.34 + 2 × 0.75 mm²	**396** – 16 × 0.34 + 2 × 0.75 mm²

3 Cable Length

3.0 m	**0300**
5.0 m	**0500**
10.0 m	**1000**
15.0 m	**1500**

Technical Data

Temperature range	-20...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

8 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

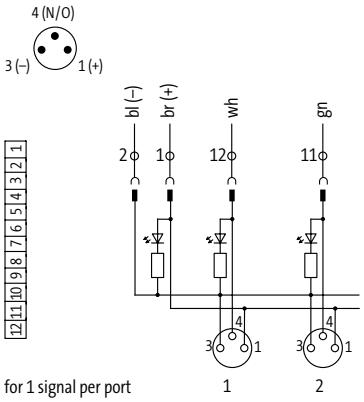
Notes

For sensors and actuators

– Sets (basic module and cap)

– inline face or side mounting

Approvals: cULus Listed, PCT

	Exact8 4-way	Exact8 6-way	Exact8 8-way	Exact8 10-way
				
1 Form	**84040**	**86040**	**88040**	**80040**
Type	**3-pole**	**3-pole**	**3-pole**	**3-pole**
Contact layout	M8-Females 3-pole 			
2 Cable Type	**Jacket Color** – No./diameter of wires			
	gray	**gray**	**gray**	**gray**
PUR (UL/CSA)	**334** – 4 × 0.34 + 2 × 0.75 mm²	**356** – 6 × 0.34 + 2 × 0.75 mm²	**359** – 8 × 0.34 + 2 × 0.75 mm²	**384** – 10 × 0.34 + 2 × 0.75 mm²
3 Cable Length				
3.0 m	**0300**			
5.0 m	**0500**			
10.0 m	**1000**			
15.0 m	**1500**			
Technical Data				
Operating voltage	24 V DC			
Total current	max. 8 A			
Protection	IP65, IP67			
Temperature range	-20...+80 °C, depending on cable quality			
Contact Layout				
Contact 1	(+)			
Contact 3	(-)			
Contact 4	(NO)/(S1)			
LED display	LED (green): power / LED (yellow): (S1)			
Article No.				
The composition of your article number is explained on page 3.1.i	8 0 0 0 – _ _ _ _ _		– _ _ _	_ _ _ _
		1 Form	**2 Cable Type**	**3 Cable Length**

Notes

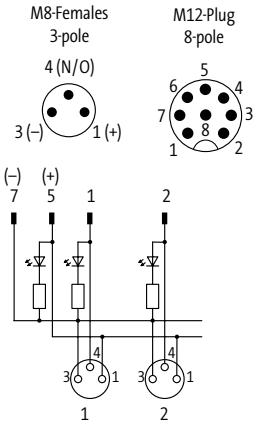
For sensors

– M12 plug connection

– 8-pole

– inline face or side mounting

Approvals: c UL us Listed, PG

	Exact8 4-way	**Exact8** 6-way
		
1 Form	**84070**	**86070**
Type	**3-pole**	**3-pole**
Contact layout	 for 1 signal per port	

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 2 A
Protection	IP65, IP67
Housing	Plastic, flame retardant
Temperature range	-20...+70 °C, depending on cable quality

Contact Layout

Contact 1	(+)
Contact 3	(-)
Contact 4	(NO)/(S1)
LED display	LED (green): power / LED (yellow): (S1)

Article No.

The composition of your article number is explained on page 3.1.i

8000	– _____	– 000	0000
	1 Form		

Notes

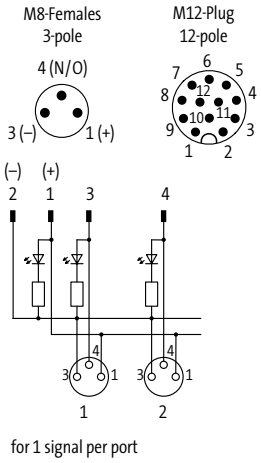
For sensors

– M12 plug connection

– 12-pole

– inline face or side mounting

Approvals: cULus Listed, PCT

	Exact8 4-way	Exact8 6-way	Exact8 8-way	Exact8 10-way
				
1 Form	**84060**	**86060**	**88060**	**80060**
Type	**3-pole**	**3-pole**	**3-pole**	**3-pole**
Contact layout				

for 1 signal per port

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 1.5 A
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Housing	Plastic, flame retardant
Temperature range	-20...+70 °C, depending on cable quality

Contact Layout

Contact 1	(+)
Contact 3	(-)
Contact 4	(NO)/(S1)
LED display	LED (green): power / LED (yellow): (S1)

Article No.

The composition of your article number is explained on page 3.1.i

8000	–	_____	–	000	0000
		1 Form			

Notes

For sensors

– M12 plug connection

– 12-pole

– inline face or side mounting

Approvals: c UL us Listed, PG

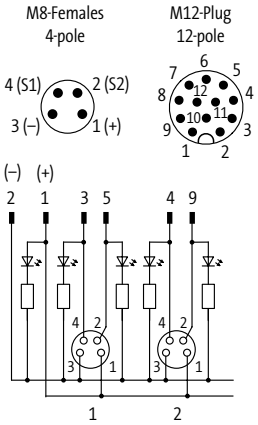
Exact8

4-way



1 Form

84160

Type	**4-pole**
Contact layout	

for 2 signals per port

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 1.5 A
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Housing	Plastic, flame retardant
Temperature range	-20...+70 °C, depending on cable quality

Contact Layout

Contact 1	(+)
Contact 2	(NC)/(S2)
Contact 3	(-)
Contact 4	(NO)/(S1)
LED display	LED (green): power / LED (yellow): (S1) / LED (white): signal (S2)

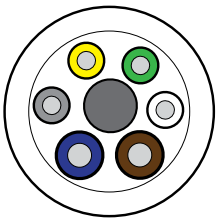
Article No.

The composition of your article number is explained on page 3.1.i

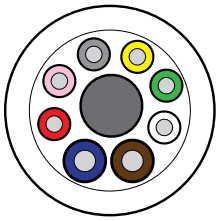
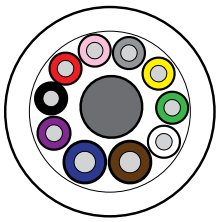
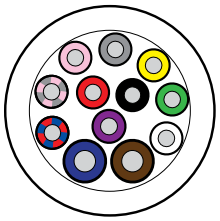
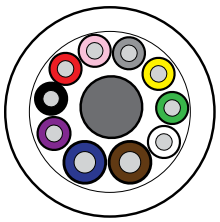
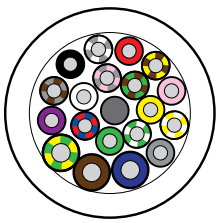
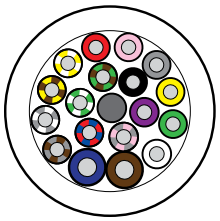
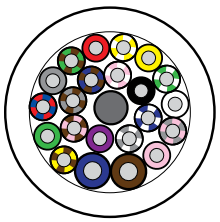
8000	–	84160	–	000	0000
		1 Form			

Notes

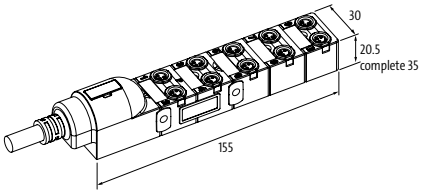
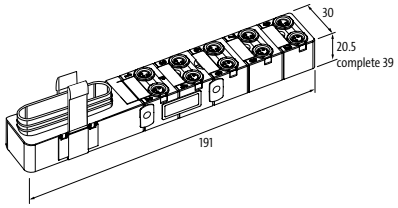
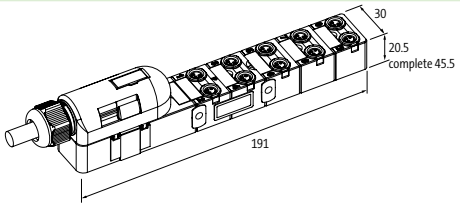
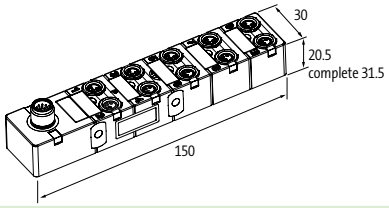
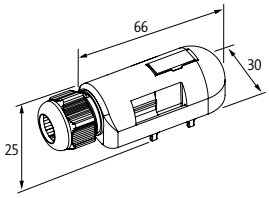
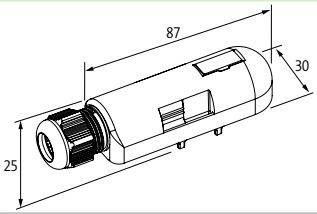
Plug accessories			Art-No.
	**Torque wrench set**		
	M8 (0.4 Nm, AF9)		**7000-99101-0000000**
	**Screw plug M8 × 1 mm (for female)**		
	Plastic, hex	Quantity: 10 pcs.	**3858627**
	**Adapter M8/M12**		
	3-pole	M8 Distribution Systems	**7000-88521-0000000**
	4-pole	M8 Distribution Systems	**7000-88531-0000000**
	**Label plates**		
	KES 20 × 8 (white)	(10 pieces/2 plates)	**996067**
	**T-coupler (Nano) M8 - M8**		
	Distribution function (NO)	M8 distribution systems, 4-pole	**7000-88602-0000000**
	**Screw plug M12 × 1 mm (for male)**		
	Plastic	Quantity: 4 pcs.	**56951**

Homerun cable accessories			Art-No.
	**Connection cap short**		
	Spring clamp terminals, 12-pole	4-way distribution box, 3-/4-pole, 4...10-way, 3-pole Cable diameter (7.4...13 mm)	**8000-84949-0000000**
	**Connection cap long**		
	Spring clamp terminals, 18-pole	6-, and 8-way distribution box, 4-pole Cable diameter (7.4...13 mm)	**8000-80949-0000000**
	**Cable rings (50 m), 3-pole, PUR/PVC**		
	4×0.34 + 2×0.75 mm²	4-way distribution boxes M8	**8000-00000-3375000**
	4×0.34 + 2×0.75 mm²	4-way distribution boxes M8	**8000-00000-3345000**

M8 DISTRIBUTION SYSTEMS

Homerun cable accessories			Art-No.
	**Cable rings (50 m), 3-pole, PUR/PVC**		
	6×0.34 + 2×0.75 mm²	6-way distribution boxes M8	**8000-00000-3505000**
	6×0.34 + 2×0.75 mm²	6-way distribution boxes M8	**8000-00000-3565000**
	**Cable rings (50 m), 3-pole, PUR/PVC**		
	8×0.34 + 2×0.75 mm²	8-way distribution boxes M8	**8000-00000-3575000**
	8×0.34 + 2×0.75 mm²	8-way distribution boxes M8	**8000-00000-3595000**
	**Cable rings (50 m), 3-pole, PUR/PVC**		
	10×0.34 + 2×0.75 mm²	10-way distribution boxes M8	**8000-00000-3855000**
	10×0.34 + 2×0.75 mm²	10-way distribution boxes M8	**8000-00000-3845000**
	**Cable rings (50 m), 4-pole, PUR/PVC**		
	8×0.34 + 2×0.75 mm²	4-way distribution boxes M8	**8000-00000-3585000**
	8×0.34 + 2×0.75 mm²	4-way distribution boxes M8	**8000-00000-3605000**
	**Cable rings (50 m), 4-pole, PUR/PVC**		
	12×0.34 + 2×0.75 mm²	6-way distribution boxes M8	**8000-00000-3865000**
	12×0.34 + 2×0.75 mm²	6-way distribution boxes M8	**8000-00000-3895000**
	**Cable rings (50 m), 4-pole, PUR/PVC**		
	16×0.34 + 2×0.75 mm²	8-way distribution boxes M8	**8000-00000-3955000**
	16×0.34 + 2×0.75 mm²	8-way distribution boxes M8	**8000-00000-3965000**
	**Cable rings (50 m), 4-pole, PUR (UL/CSA), halogen free**		
	20×0.34 + 2×0.75 mm²	10-way distribution boxes M8	**8000-00000-4115000**
	20×0.34 + 2×0.75 mm²	10-way distribution boxes M8	**8000-00000-4125000**

M8 Distribution Systems Technical Data

	Description	4-way	6-way	8-way	10-way
	**Exact8** Molded homerun cable	96 mm	109 mm	132 mm	155 mm
	Description	**4-way**	**6-way**	**8-way**	**10-way**
	**Exact8** Basic module 3-pole Basic module 4-pole	 132 mm 132 mm	 145 mm 166 mm	 168 mm 189 mm	 191 mm –
	Description	**4-way**	**6-way**	**8-way**	**10-way**
	**Exact8** Sets 3-pole Sets 4-pole	 132 mm 132 mm	 145 mm 166 mm	 168 mm 189 mm	 191 mm –
	Description	**4-way**	**6-way**	**8-way**	**10-way**
	**Exact8** M12 plug connection	91,5 mm	104 mm	127 mm	150 mm
	Description				
	**Exact8** Short connection cap				
	Description				
	**Exact8** Long connection cap				



M12 DISTRIBUTION SYSTEMS
METAL

- **Rugged**
- **Resistant to media**
- **Sealed**

POTTED FORMS FOR HARSH ENVIRONMENTS

- Metal housing withstands mechanical and thermal stress, with molded cable or maintenance-friendly M23 plug connection
- High quality PUR cable: suitable for C-tracks, halogen-free, wider wire cross sections for higher current capacity
- Shielded models for sensitive digital or analog signals for an EMC compatible installation
- Universal configuration - contacts designed 1:1
- Fully potted

With molded homerun cable or M23 plug connection



MVP12 Metal
- 4-, 8-way
- With LED for PNP or NPN signals
- Without LED for analog signals and voltages up to 125 V AC/DC
- With PUR homerun cable or M23 connection

Page 4.11.1



MVP12 metal universal
- 4-way
- M12 Pin 1, 2, 3, and 4 freely configurable

Page 4.11.8

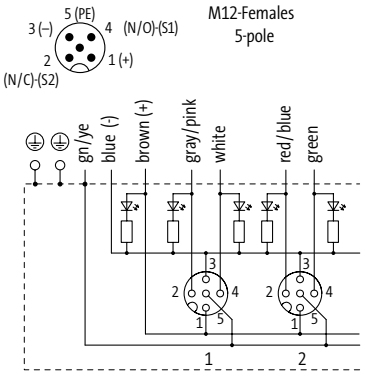
MURR ELEKTRONIK
stay connected

For sensors and actuators

– with molded homerun cable

– unshielded

Approvals: cULus Listed, PCT

	MVP12 Metal 4-way for PNP signals 24 V DC	**MVP12 Metal** 8-way for PNP signals 24 V DC
		
1 Form	**54510**	**58510**
Type	**PNP, 5-pole**	**PNP, 5-pole**
Contact layout	 for 2 signals per port	
2 Cable Type	**Jacket Color** – No./diameter of wires	
	gray	**gray**
PUR (UL/CSA)	**448** – 8 × 0.5 + 3 × 1.0 mm²	**452** – 16 × 0.5 + 3 × 1.0 mm²
3 Cable Length		
3.0 m	**0300**	
5.0 m	**0500**	
10.0 m	**1000**	
15.0 m	**1500**	
Technical Data		
Operating voltage	24 V DC	
Total current	max. 12 A	
Protection	IP65, IP67, IP68	
Temperature range	-20...+90 °C, depending on cable quality	
Contact Layout		
Contact 1	(+)	
Contact 2	(NC)/(S2)	
Contact 3	(-)	
Contact 4	(NO)/(S1)	
Contact 5	(Earth)	
LED display	LED (green): power / LED (yellow): (S1/S2)	
Article No.		
The composition of your article number is explained on page 3.1.i	**8 0 0 0** – _ _ _ _ _ – _ _ _ _ _ _ _ _	
		1 Form **2 Cable Type** **3 Cable Length**

Notes

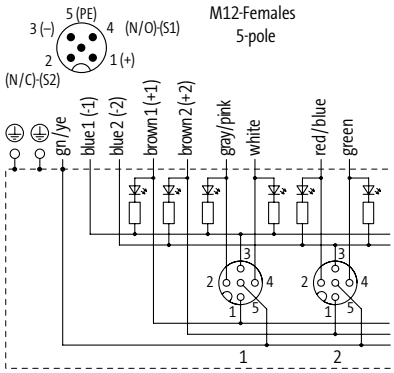
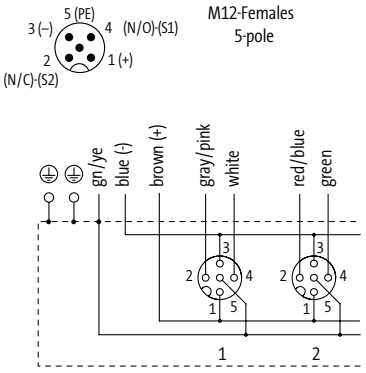
M12 DISTRIBUTION SYSTEMS (METAL)

For sensors and actuators

– with molded homerun cable

– unshielded

Approvals: cULus Listed, PCT

	MVP12 Metal 8-way with potential separation	**MVP12 Metal** 4-way without LED
		
1 Form	**58610**	**54512**
Type	**PNP, 5-pole**	**without LED, 5-pole (for analog signals)**
Contact layout	 for 2 signals per port	 for 2 signals per port
2 Cable Type	**Jacket Color** – No./diameter of wires	
	gray	**gray**
PUR (UL/CSA)	**403** – 16 × 0.34 + 5 × 0.75 mm²	**448** – 8 × 0.5 + 3 × 1.0 mm²
3 Cable Length		
3.0 m	**0300**	
5.0 m	**0500**	
10.0 m	**1000**	
15.0 m	**1500**	
Technical Data		
Operating voltage	24 V DC	max. 125 V AC/DC
Total current	max. 10 A	max. 12 A
Protection	IP65, IP67, IP68	
Temperature range	-20...+90 °C, depending on cable quality	
Contact Layout		
Contact 1	(+)	
Contact 2	(NC)/(S2)	
Contact 3	(-)	
Contact 4	(NO)/(S1)	
Contact 5	(Earth)	
LED display	LED (green): power / LED (yellow): (S1/S2)	–
Article No.		
The composition of your article number is explained on page 3.1.i	**8 0 0 0** – _ _ _ _ _ – _ _ _	_ _ _ _
	1 Form	**2 Cable Type** / **3 Cable Length**
Notes		

MURR ELEKTRONIK
stay connected

For sensors and actuators

– with molded homerun cable

– unshielded

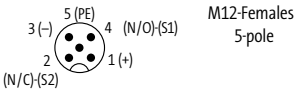
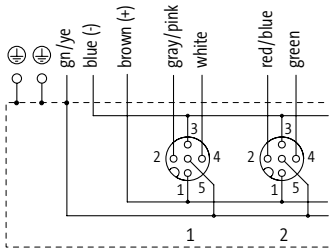
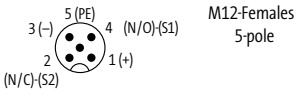
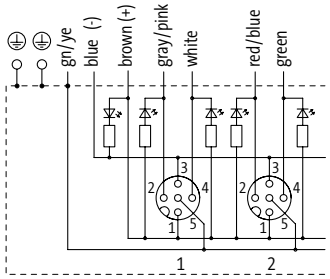
Approvals: cULus Listed, PCT

MVP12 Metal
8-way
without LED



MVP12 Metal
8-way
for NPN signals 24 V DC



1	**Form**	**58512**	**58511**
	Type	**without LED, 5-pole (for analog signals)**	**NPN, 5-pole**
	Contact layout	  for 2 signals per port	  for 2 signals per port
2	**Cable Type**	**Jacket Color** – No./diameter of wires	
		gray	**gray**
	PUR (UL/CSA)	**452** – 16 × 0.5 + 3 × 1.0 mm²	**452** – 16 × 0.5 + 3 × 1.0 mm²
3	**Cable Length**		
	3.0 m	**0300**	
	5.0 m	**0500**	
	10.0 m	**1000**	
	15.0 m	**1500**	
	Technical Data		
	Operating voltage	max. 125 V AC/DC	24 V DC
	Total current	max. 12 A	
	Protection	IP65, IP67, IP68	
	Temperature range	-20...+90 °C, depending on cable quality	
	Contact Layout		
	Contact 1	(+)	
	Contact 2	(NC)/(S2)	
	Contact 3	(-)	
	Contact 4	(NO)/(S1)	
	Contact 5	(Earth)	
	LED display	–	LED (green): power / LED (yellow): (S1/S2)
	Article No.		
	The composition of your article number is explained on page 3.1.i	**8 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _**	
		1 Form	**2 Cable Type** **3 Cable Length**

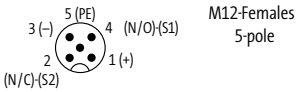
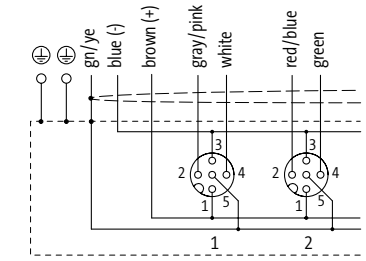
Notes

For sensors and actuators

– with molded homerun cable

– shielded

Approvals: cULus Listed, PG

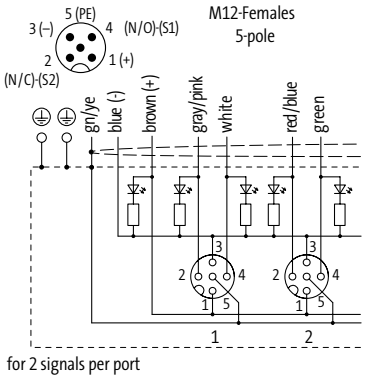
	MVP12 Metal 4-way	**MVP12 Metal** 8-way
		
1 Form	**54515**	**58515**
Type	**without LED, 5-pole (for analog signals)**	**without LED, 5-pole (for analog signals)**
Contact layout	  for 2 signals per port	
2 Cable Type	**Jacket Color** – No./diameter of wires	
	gray	**gray**
PUR (UL/CSA)	**373** – 8 × 0.34 + 3 × 0.75 mm²	**401** – 16 × 0.34 + 3 × 0.75 mm²
3 Cable Length		
3.0 m	**0300**	
5.0 m	**0500**	
10.0 m	**1000**	
15.0 m	**1500**	
Technical Data		
Operating voltage	max. 125 V AC/DC	
Total current	max. 10 A	
Protection	IP65, IP67, IP68	
Temperature range	-20...+90 °C, depending on cable quality	
Contact Layout		
Contact 1	(+)	
Contact 2	(NC)/(S2)	
Contact 3	(-)	
Contact 4	(NO)/(S1)	
Contact 5	(Earth)	
Shield	via M12 thread	
Article No.		
The composition of your article number is explained on page 3.1.i	**8000** – _____ – ___ ____	
	1 Form	**2 Cable Type** / **3 Cable Length**
Notes		

For sensors and actuators

– with molded homerun cable

– shielded

Approvals: cULus Listed, PCT

	MVP12 Metal 4-way for PNP signals 24 V DC	**MVP12 Metal** 8-way for PNP signals 24 V DC
		
1 Form	**54513**	**58513**
Type	**PNP, 5-pole**	**PNP, 5-pole**
Contact layout	 for 2 signals per port	
2 Cable Type	**Jacket Color** – No./diameter of wires	
	gray	**gray**
PUR (UL/CSA)	**373** – 8 × 0.34 + 3 × 0.75 mm²	**401** – 16 × 0.34 + 3 × 0.75 mm²
3 Cable Length		
3.0 m	**0300**	
5.0 m	**0500**	
10.0 m	**1000**	
15.0 m	**1500**	
Technical Data		
Operating voltage	24 V DC	
Total current	max. 10 A	
Protection	IP65, IP67, IP68	
Temperature range	-20...+90 °C, depending on cable quality	
Contact Layout		
Contact 1	(+)	
Contact 2	(NC)/(S2)	
Contact 3	(-)	
Contact 4	(NO)/(S1)	
Contact 5	(Earth)	
LED display	LED (green): power / LED (yellow): (S1/S2)	
Shield	via M12 thread	
Article No.		
The composition of your article number is explained on page 3.1.i	**8 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _**	
		1 Form / **2 Cable Type** / **3 Cable Length**
Notes		

M12 DISTRIBUTION SYSTEMS (METAL)

For sensors and actuators

– M23 plug connection, 19-pole

– for unshielded or shielded use

Approvals: c UL us Listed

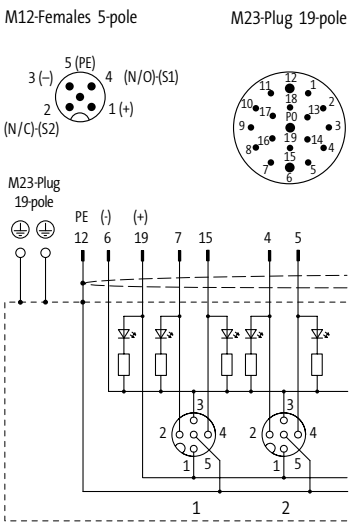
MVP12 Metal
4-way
for PNP signals 24 V DC



MVP12 Metal
8-way
for PNP signals 24 V DC



1 Form	**54520**	**58520**
Type	**PNP, 5-pole**	**PNP, 5-pole**
Contact layout		



for 2 signals per port

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 4 A
Total current	max. 10 A
Protection	IP65, IP67, IP68
Housing	Zinc die casting, matte nickel plated
Temperature range	-25...+90 °C

Contact Layout

Contact 1	(+)
Contact 2	(NC)/(S2)
Contact 3	(-)
Contact 4	(NO)/(S1)
Contact 5	(Earth)
LED display	LED (green): power / LED (yellow): (S1/S2)
Shield	via M12 outer thread and M23 outer thread

Article No.

The composition of your article number is explained on page 3.1.i

8 0 0 0	– _ _ _ _ _	– 0 0 0	0 0 0 0

1 Form

Notes

M12 DISTRIBUTION SYSTEMS (METAL)

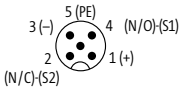
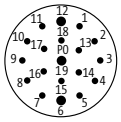
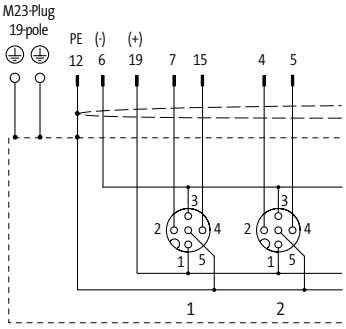
MURR ELEKTRONIK
stay connected

For sensors and actuators

– M23 plug connection, 19-pole

– for unshielded or shielded use

Approvals: c UL us Listed

	MVP12 Metal 4-way	**MVP12 Metal** 8-way
		
1 Form	**54522**	**58522**
Type	**without LED, 5-pole (for analog signals)**	**without LED, 5-pole (for analog signals)**
Contact layout	M12-Females 5-pole  M23-Plug 19-pole   for 2 signals per port	

Technical Data

Operating voltage	max. 125 V AC/DC
Operating current per contact	max. 4 A
Total current	max. 10 A
Protection	IP65, IP67, IP68
Housing	Zinc die casting, matte nickel plated
Temperature range	-25...+80 °C

Contact Layout

Contact 1	(+)
Contact 2	(NC)/(S2)
Contact 3	(-)
Contact 4	(NO)/(S1)
Contact 5	(Earth)
Shield	via M12 outer thread and M23 outer thread

Article No.

The composition of your article number is explained on page 3.1.i

8 0 0 0	–	_ _ _ _ _	– 0 0 0	0 0 0 0
		1 Form		

Notes

For harsh environments

– for unshielded or shielded use

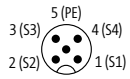
Approvals:

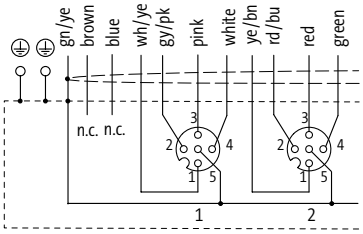
MVP12 Metal UNIVERSAL

with molded homerun cable
4-way



1 Form — 54712

Type	**without LED, 5-pole (for analog signals)**
Contact layout	 M12-Females 5-pole



for 4 signals per port
free arrangeable, PE bridged

2 Cable Type — Jacket Color – No./diameter of wires

	gray
PUR (UL/CSA)	**401** – 16 × 0.34 + 3 × 0.75 mm²

3 Cable Length

3.0 m	**0300**
5.0 m	**0500**
10.0 m	**1000**
15.0 m	**1500**

Technical Data

Operating voltage	max. 42 V AC/DC
Total current	max. 10 A
Protection	IP65, IP67, IP68
Temperature range	-20...+90 °C, depending on cable quality

Contact Layout

Contact 1	(S1)
Contact 2	(S2)
Contact 3	(S3)
Contact 4	(S4)
Contact 5	(Earth)
Shield	via M12 thread

Article No.

The composition of your article number is explained on page 3.1.i

8000	–	54712	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

For harsh environments

– for unshielded or shielded use

MVP12 Metal UNIVERSAL

M23 plug connection, 19-pole

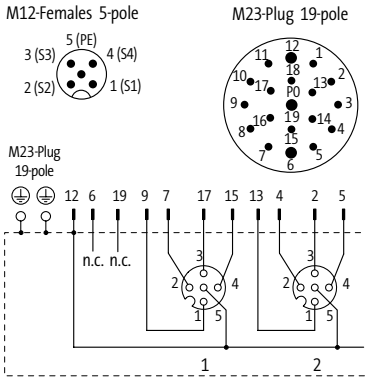
4-way



Approvals: c UL us Listed, PCT

1 Form

54722

Type	**without LED, 5-pole (for analog signals)**
Contact layout	

for 4 signals per port

Technical Data

Operating voltage	max. 125 V AC/DC
Operating current per contact	max. 4 A
Total current	max. 10 A
Protection	IP65, IP67, IP68
Housing	Zinc die casting, matte nickel plated
Temperature range	-25...+90 °C

Contact Layout

Contact 1	(S1)
Contact 2	(S2)
Contact 3	(S3)
Contact 4	(S4)
Contact 5	(Earth)

Article No.

The composition of your article number is explained on page 3.1.i

8000	– 54722	– 000	0000
	1 Form		

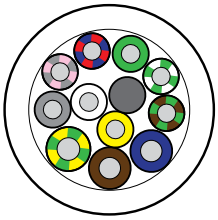
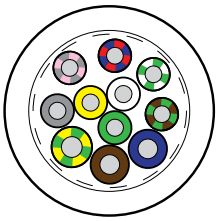
Notes

M12 DISTRIBUTION SYSTEMS (METAL)

Mounting accessories			Art-No.
	**Torque wrench set**		
	M12 (0.6 Nm, AF13)	M12 Round Plug Connectors	**7000-99102-0000000**
	**Torque wrench**		
	M12 (SW13)		**7000-99109-0000000**
	**Torque wrench**		
	M12 (SW14)		**7000-99108-0000000**
	**Torque wrench**		
	M12 (SW17)		**7000-99094-0000000**
	**Torque wrench**		
	M12 (SW18)		**7000-99103-0000000**
	**DIN-rail adapter**		
	with fixing screws, plastic		**27905**
	**Earth connection set**		
			996064
	**V2A-base plate**		
		MVP12 Metal, 4-way	**996065**
		MVP12 Metal, 8-way	**996066**
	**Ground strap 4 mm²**		
	100 mm for hole M3		**4000-71001-0410003**
	End fitting set M3		
		Ground straps	**4000-71003-0101403**

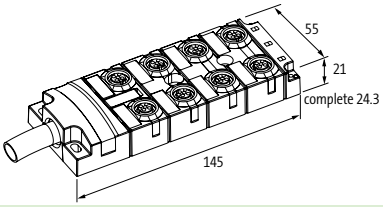
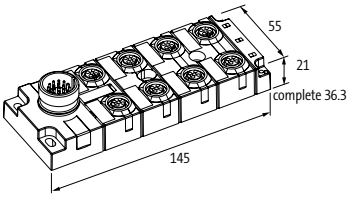
Plug accessories			Art-No.
	**Torque wrench set**		
	M12 (0.6 Nm, AF13)	M12 Round Plug Connectors	**7000-99102-0000000**
	**Screw plug M12 × 1 mm**		
	Metal, hex, 1 piece		**996049**

Plug accessories			Art-No.
	**Label plates**		
	KES 20 × 8 (white)	(10 pieces/2 plates)	**996067**
	**Adapter M12/M8**		
	3-pole		**7000-42201-0000000**
	4-pole		**7000-42211-0000000**

Homerun cable accessories			Art-No.
	**Screw plug M23**		
	Metal		**55352**
	**Cable rings (50 m), 5-pole, PUR (UL/CSA), halogen free**		
	8×0.5 + 3×1.0 mm²	4-way distribution boxes M12	**8000-00000-4485000**
	16×0.5 + 3×1.0 mm²	8-way distribution boxes M12	**8000-00000-4525000**
	16×0.34 + 5×0.75 mm²	8-way distribution boxes M12, potentially separated	**8000-00000-4035000**
	**Cable rings (50 m), 5-pole, PUR (UL/CSA), halogen free**		
	8×0.34 + 3×0.75 mm²	4-way distribution boxes M12, shielded	**8000-00000-3735000**
	16×0.34 + 3×0.75 mm²	8-way distribution boxes M12, shielded	**8000-00000-4015000**

M12 DISTRIBUTION SYSTEMS (METAL)

M12 Distribution Systems Technical Data

	Description	4-way	8-way
	**MVP Metal and MVP Metal UNIVERSAL** Molded homerun cable	95 mm	145 mm
	Description	**4-way**	**8-way**
	**MVP Metal and MVP Metal UNIVERSAL** M23 plug connection	95 mm	145 mm



M12 DISTRIBUTION SYSTEMS
PLASTIC

- **Fully potted, sealed**
- **Highly resistant**
- **Application oriented**

PLUGGABLE CONNECTIONS FROM THE PROCESS TO THE CONTROL

- Quick installation with pre-wired and tested cables
- Easy to separate during transportation and simple when redesigning your system, rapid replacement of damaged cables
- Double assignment of M12 ports saves space
- Safety models for inputs and outputs according to EN ISO 13849-2
- Universal configuration – contacts designed 1:1

Pluggable or pre-wired homerun cable



Exact12
- 4-, 8-way
- With LED for PNP or NPN signals
- Without LED for voltages up to 125 V AC/DC
- Analog signals

Page 4.12.1



Exact12
- 4-, 8-way
- with 8- or 12-pole M12 connection

Page 4.12.27

With pluggable homerun cable



Exact12 Basic Module
- 4-, 8-way
- With LED for PNP or NPN signals
- Without LED for voltages up to 125 V AC/DC
- Analog signals

Page 4.12.8



Exact12/MVP12 connection caps
- Field-wireable with screw or spring clamp terminals
- With pre-wired homerun cable and screw-plug terminals

Page 4.12.14



Exact12 set
- 4-, 8-way
- With pluggable cap and screw plug terminals or spring clamp terminals

Page 4.12.17



Exact12 with connection on the back
- 8-way
- with pluggable connection on the back
- Potential separation optional

Page 4.12.25



Exact12/MVP12 universal
- 4-, 6-, 8-way
- With pluggable 12- or 19-pole M23 connection
- With pluggable connection cap
- M12 pin 1, 2, 3, and 4 freely configurable

Page 4.12.30



MSDS – safety distribution system
- 8-way
- With pluggable cap and screw terminals
- With and without electrical feed back

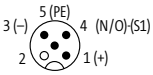
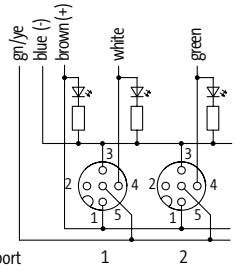
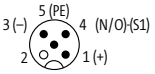
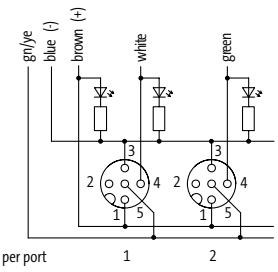
Page 4.12.35

MURR ELEKTRONIK
stay connected

For sensors and actuators

– with molded homerun cable

Approvals: cULus Listed, PCT

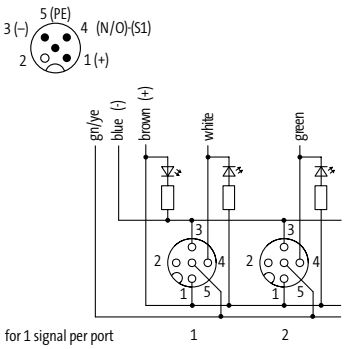
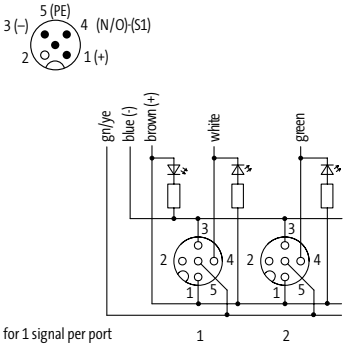
	Exact12	**Exact12**
	4-way for PNP signals 24 V DC	8-way for PNP signals 24 V DC
		
1 Form	**84410**	**88410**
Type	**PNP, 4-pole**	**PNP, 4-pole**
Contact layout	M12-Females 4-pole  	M12-Females 4-pole  
2 Cable Type	**Jacket Color** – No./diameter of wires	
	gray	**gray**
PUR/PVC	**333** – 4 × 0.34 + 3 × 0.75 mm²	**362** – 8 × 0.34 + 3 × 0.75 mm²
PUR (UL/CSA)		**447** – 8 × 0.5 + 3 × 1.0 mm²
3 Cable Length		
3.0 m	**0300**	
5.0 m	**0500**	
10.0 m	**1000**	
15.0 m	**1500**	
Technical Data		
Operating voltage	24 V DC	
Total current	max. 10 A	
Protection	IP65, IP67	
Temperature range	-20...+70 °C, depending on cable quality	
Contact Layout		
Contact 1	(+)	
Contact 3	(-)	
Contact 4	(NO)/(S1)	
Contact 5	(Earth)	
LED display	LED (green): power / LED (yellow): (S1)	
Article No.		
The composition of your article number is explained on page 3.1.i	**8 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _**	
		1 Form / **2 Cable Type** / **3 Cable Length**
Notes		
	Further cable lengths on request.	

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– with molded homerun cable

Approvals: cULus Listed, PCT

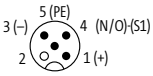
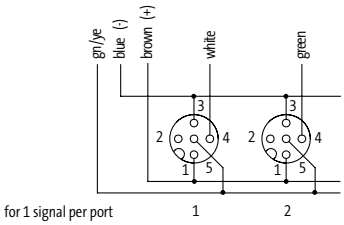
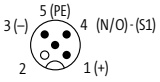
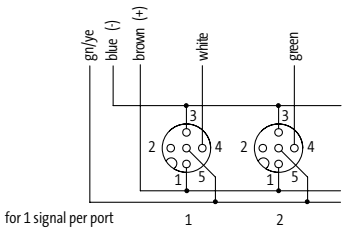
	Exact12 4-way for NPN signals 24 V DC	**Exact12** 8-way for NPN signals 24 V DC
		
1 Form	**84411**	**88411**
Type	**NPN, 4-pole**	**NPN, 4-pole**
Contact layout	M12-Females 4-pole 	M12-Females 4-pole 
2 Cable Type	**Jacket Color** – No./diameter of wires	
	gray	**gray**
PUR/PVC	**333** – 4 × 0.34 + 3 × 0.75 mm²	**362** – 8 × 0.34 + 3 × 0.75 mm²
PUR (UL/CSA)		**447** – 8 × 0.5 + 3 × 1.0 mm²
3 Cable Length		
5.0 m	**0500**	
10.0 m	**1000**	
Technical Data		
Operating voltage	24 V DC	
Total current	max. 10 A	
Protection	IP65, IP67	
Temperature range	-20...+70 °C, depending on cable quality	
Contact Layout		
Contact 1	(+)	
Contact 3	(-)	
Contact 4	(NO)/(S1)	
Contact 5	(Earth)	
LED display	LED (green): power / LED (yellow): (S1)	
Article No.		
The composition of your article number is explained on page 3.1.i	**8 0 0 0** – _ _ _ _ _ – _ _ _ _ _ _ _ _	
		1 Form **2 Cable Type** **3 Cable Length**
Notes		
	Further cable lengths on request.	

MURR ELEKTRONIK
stay connected

For sensors and actuators

– with molded homerun cable

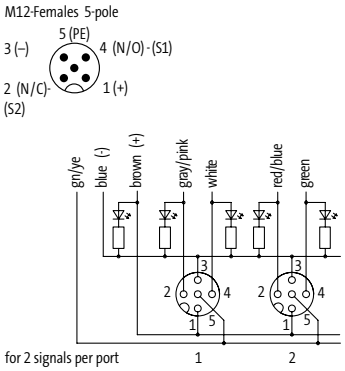
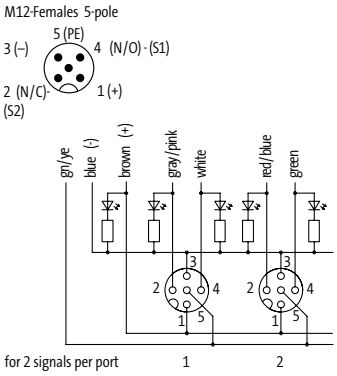
Approvals: c UL us Listed, PCT

	Exact12 4-way without LED	**Exact12** 8-way without LED
		
1 Form	**84412**	**88412**
Type	**without LED, 4-pole**	**without LED, 4-pole**
Contact layout	M12-Females 4-pole  	M12-Females 4-pole  
2 Cable Type	**Jacket Color** – No./diameter of wires	
	gray	**gray**
PUR/PVC	**333** – 4 × 0.34 + 3 × 0.75 mm²	**362** – 8 × 0.34 + 3 × 0.75 mm²
PUR (UL/CSA)		**447** – 8 × 0.5 + 3 × 1.0 mm²
3 Cable Length		
5.0 m	**0500**	
10.0 m	**1000**	
Technical Data		
Operating voltage	125 V AC/DC	
Total current	max. 10 A	
Protection	IP65, IP67	
Temperature range	-20...+70 °C, depending on cable quality	
Contact Layout		
Contact 1	(+)	
Contact 3	(-)	
Contact 4	(NO)/(S1)	
Contact 5	(Earth)	
Article No.		
The composition of your article number is explained on page 3.1.i	8 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _	
	1 Form	**2 Cable Type** / **3 Cable Length**
Notes		
	Further cable lengths on request.	

For sensors and actuators

– with molded homerun cable

Approvals: c UL us Listed, PCT

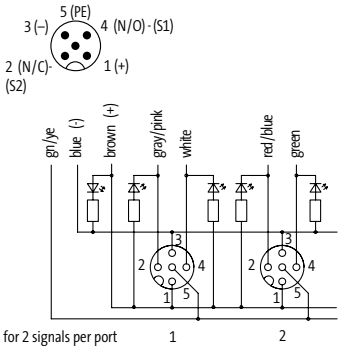
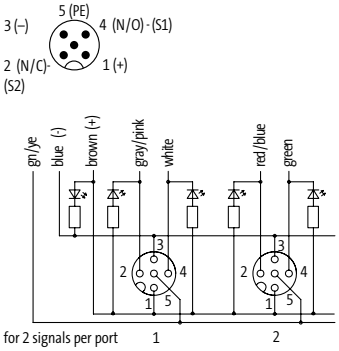
	Exact12 4-way for PNP signals 24 V DC	**Exact12** 8-way for PNP signals 24 V DC
		
1 Form	**84510**	**88510**
Type	**PNP, 5-pole**	**PNP, 5-pole**
Contact layout		
2 Cable Type	**Jacket Color** – No./diameter of wires	
	gray	**gray**
PUR/PVC	**363** – 8 × 0.34 + 3 × 0.75 mm²	**398** – 16 × 0.34 + 3 × 0.75 mm²
PUR (UL/CSA)	**448** – 8 × 0.5 + 3 × 1.0 mm²	**452** – 16 × 0.5 + 3 × 1.0 mm²
3 Cable Length		
3.0 m	**0300**	
5.0 m	**0500**	
10.0 m	**1000**	
15.0 m	**1500**	
Technical Data		
Operating voltage	24 V DC	
Total current	max. 10 A	
Protection	IP65, IP67	
Temperature range	-20...+70 °C, depending on cable quality	
Contact Layout		
Contact 1	(+)	
Contact 2	(NC)/(S2)	
Contact 3	(-)	
Contact 4	(NO)/(S1)	
Contact 5	(Earth)	
LED display	LED (green): power / LED (yellow): (S1) / LED (white): signal (S2)	
Article No.		
The composition of your article number is explained on page 3.1.i	**8 0 0 0** – _ _ _ _ _ – _ _ _ _ _ _ _ _	
		1 Form / **2 Cable Type** / **3 Cable Length**
Notes		
	Further cable lengths on request.	

MURR ELEKTRONIK
stay connected

For sensors and actuators

– with molded homerun cable

Approvals: cULus Listed, PCT

	Exact12 4-way for NPN signals 24 V DC	**Exact12** 8-way for NPN signals 24 V DC
		
1 Form	**84511**	**88511**
Type	**NPN, 5-pole**	**NPN, 5-pole**
Contact layout	M12-Females 5-pole 	M12-Females 5-pole 
2 Cable Type	**Jacket Color** – No./diameter of wires	
	gray	**gray**
PUR/PVC	**363** – 8 × 0.34 + 3 × 0.75 mm²	**398** – 16 × 0.34 + 3 × 0.75 mm²
PUR (UL/CSA)	**448** – 8 × 0.5 + 3 × 1.0 mm²	**452** – 16 × 0.5 + 3 × 1.0 mm²
3 Cable Length		
5.0 m	**0500**	
10.0 m	**1000**	
Technical Data		
Operating voltage	24 V DC	
Total current	max. 10 A	
Protection	IP65, IP67	
Temperature range	-20...+70 °C, depending on cable quality	
Contact Layout		
Contact 1	(+)	
Contact 2	(NC)/(S2)	
Contact 3	(-)	
Contact 4	(NO)/(S1)	
Contact 5	(Earth)	
LED display	LED (green): power / LED (yellow): (S1) / LED (white): signal (S2)	
Article No.		
The composition of your article number is explained on page 3.1.i	**8 0 0 0** – _ _ _ _ _ – _ _ _ _ _ _ _ _	
	1 Form	**2 Cable Type** / **3 Cable Length**

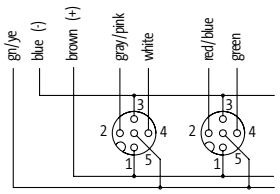
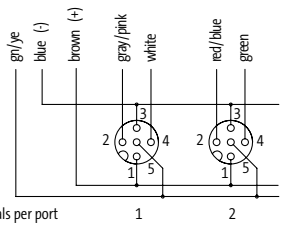
Notes

Further cable lengths on request.

For sensors and actuators

– with molded homerun cable

Approvals: cULus Listed, PCT

	Exact12 4-way without LED	**Exact12** 8-way without LED
		
1 Form	**84512**	**88512**
Type	**without LED, 5-pole**	**without LED, 5-pole**
Contact layout	M12-Females 5-pole 3 (–) 5 (PE) 4 (N/O)·(S1) 2 (N/C)·(S2) 1 (+)  	M12-Females 5-pole 3 (–) 5 (PE) 4 (N/O)·(S1) 2 (N/C)·(S2) 1 (+) 
2 Cable Type	**Jacket Color** – No./diameter of wires	
	gray	**gray**
PUR/PVC	**363** – 8 × 0.34 + 3 × 0.75 mm²	**398** – 16 × 0.34 + 3 × 0.75 mm²
PUR (UL/CSA)	**448** – 8 × 0.5 + 3 × 1.0 mm²	**452** – 16 × 0.5 + 3 × 1.0 mm²
3 Cable Length		
5.0 m	**0500**	
10.0 m	**1000**	
Technical Data		
Operating voltage	125 V AC/DC	
Total current	max. 10 A	
Protection	IP65, IP67	
Temperature range	-20...+70 °C, depending on cable quality	
Contact Layout		
Contact 1	(+)	
Contact 2	(NC)/(S2)	
Contact 3	(-)	
Contact 4	(NO)/(S1)	
Contact 5	(Earth)	
Article No.		
The composition of your article number is explained on page 3.1.i	**8 0 0 0** – _ _ _ _ _ – _ _ _ _ _ _ _ _	
	1 Form	**2 Cable Type** / **3 Cable Length**

Notes

Further cable lengths on request.

MURR ELEKTRONIK
stay connected

For sensors and actuators

– with molded homerun cable

– Homerun cable with spring clamp terminals

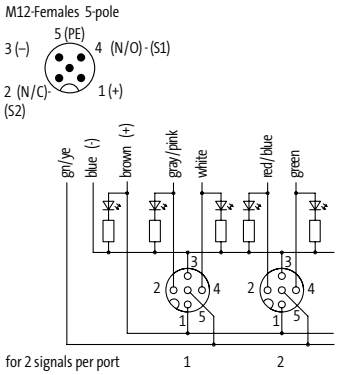
Approvals: cULus Listed, PCT

Exact12

8-way
for PNP signals 24 V DC



1 Form — 98510

Type	**PNP, 5-pole**
Contact layout	

2 Cable Type — Jacket Color – No./diameter of wires

	gray
PUR/PVC	**398** – 16 × 0.34 + 3 × 0.75 mm²

3 Cable Length

3.0 m	**0300**
5.0 m	**0500**
10.0 m	**1000**
15.0 m	**1500**

Technical Data

Protection	IP65, IP67
Operating voltage	24 V DC
Total current	max. 10 A
Temperature range	-20...+70 °C, depending on cable quality

Contact Layout

Contact 1	(+)
Contact 2	(NC)/(S2)
Contact 3	(-)
Contact 4	(NO)/(S1)
Contact 5	(Earth)
LED display	LED (green): power / LED (yellow): (S1) / LED (white): signal (S2)

Article No.

The composition of your article number is explained on page 3.1.i

8000	–	98510	–	___	____
		1 Form		2 Cable Type	3 Cable Length

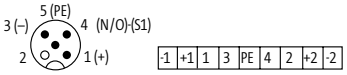
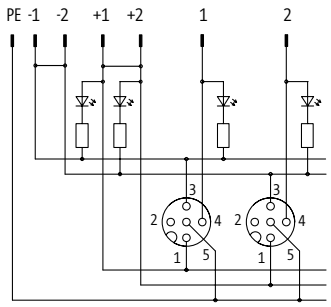
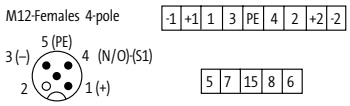
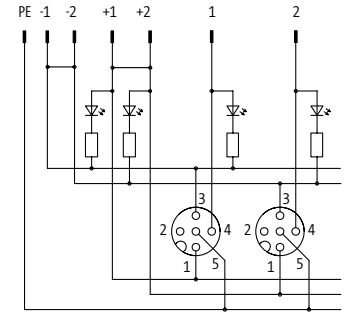
Notes

Further cable lengths on request.

For sensors and actuators

– Base modules

Approvals: cULus Listed, PCT

	Exact12 4-way for PNP signals 24 V DC	**Exact12** 8-way for PNP signals 24 V DC
		
1 Form	**84400**	**88400**
Type	**PNP, 4-pole**	**PNP, 4-pole**
Contact layout	M12-Females 4-pole   	M12-Females 4-pole  

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 4 A
Total current	max. 8 A
Protection	IP65, IP67
Housing	Plastic, flame retardant
Temperature range	-20...+70 °C

Contact Layout

Contact 1	(+)
Contact 3	(-)
Contact 4	(NO)/(S1)
Contact 5	(Earth)
LED display	LED (green): power / LED (yellow): (S1)

Article No.

The composition of your article number is explained on page 3.1.i

1 Form			
8 0 0 0	– _ _ _ _ _	– 0 0 0	0 0 0 0

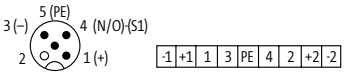
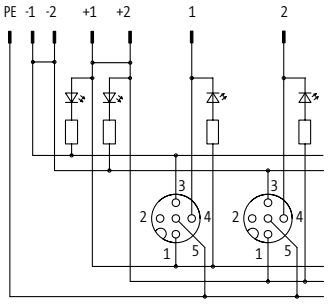
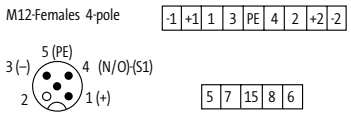
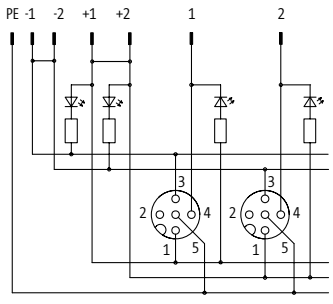
Notes

MURR ELEKTRONIK
stay connected

For sensors and actuators

– Base modules

Approvals: cULus Listed, PCT

	Exact12 4-way for NPN signals 24 V DC	**Exact12** 8-way for NPN signals 24 V DC
		
1 Form	**84401**	**88401**
Type	**NPN, 4-pole**	**NPN, 4-pole**
Contact layout	M12-Females 4-pole  	M12-Females 4-pole  

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 4 A
Total current	max. 8 A
Protection	IP65, IP67
Housing	Plastic, flame retardant
Temperature range	-20...+70 °C

Contact Layout

Contact 1	(+)
Contact 3	(-)
Contact 4	(NO)/(S1)
Contact 5	(Earth)
LED display	LED (green): power / LED (yellow): (S1)

Article No.

The composition of your article number is explained on page 3.1.i

8000	–	_____	–	000	0000
		1 Form			

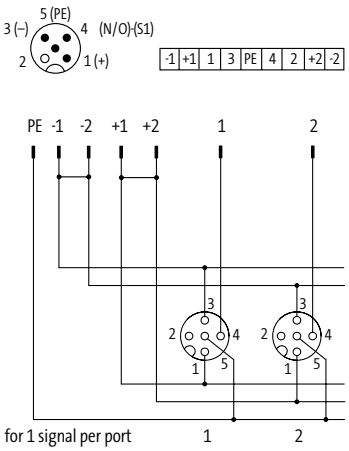
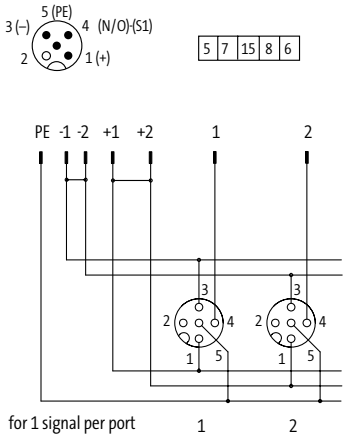
Notes

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Base modules

Approvals: cULus Listed, PCT

	Exact12 4-way without LED	**Exact12** 8-way without LED
		
1 Form	**84402**	**88402**
Type	**without LED, 4-pole**	**without LED, 4-pole**
Contact layout	M12 Females 4-pole 	M12-Females 4-pole -1 +1 1 3 PE 4 2 +2 -2 

Technical Data

Operating voltage	125 V AC/DC
Operating current per contact	max. 4 A
Total current	max. 8 A
Protection	IP65, IP67
Housing	Plastic, flame retardant
Temperature range	-20...+70 °C

Contact Layout

Contact 1	(+)
Contact 3	(-)
Contact 4	(NO)/(S1)
Contact 5	(Earth)

Article No.

The composition of your article number is explained on page 3.1.i

8000	– _____	– 000	0000
	1 Form		

Notes

For sensors and actuators

– Base modules

Approvals: cULus Listed, PCT

Exact12

4-way
for PNP signals 24 V DC

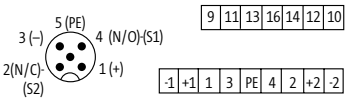
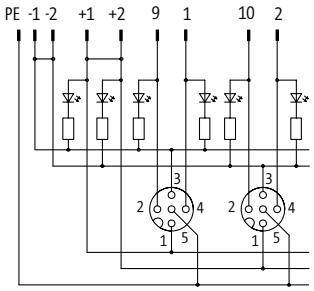
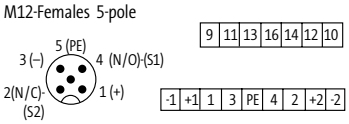
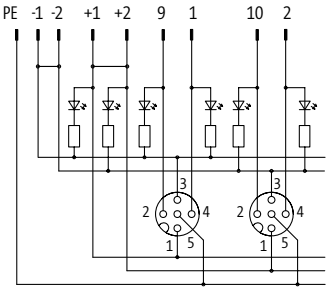


Exact12

8-way
for PNP signals 24 V DC



1 Form

	84500	88500
Type	**PNP, 5-pole**	**PNP, 5-pole**
Contact layout	M12-Females 5-pole   for 2 signals per port 1 2	M12-Females 5-pole   for 2 signals per port 1 2

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 4 A
Total current	max. 8 A
Protection	IP65, IP67
Housing	Plastic, flame retardant
Temperature range	-20...+70 °C

Contact Layout

Contact 1	(+)
Contact 2	(NC)/(S2)
Contact 3	(-)
Contact 4	(NO)/(S1)
Contact 5	(Earth)
LED display	LED (green): power / LED (yellow): (S1) / LED (white): signal (S2)

Article No.

The composition of your article number is explained on page 3.1.i

8000	–	_____	–	000	0000
		1 Form			

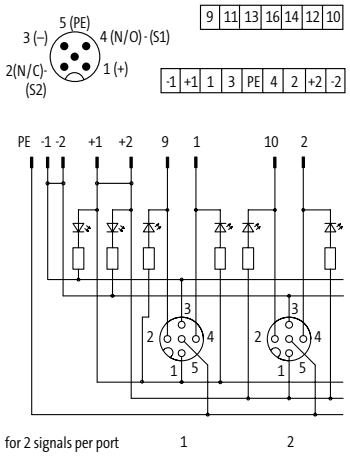
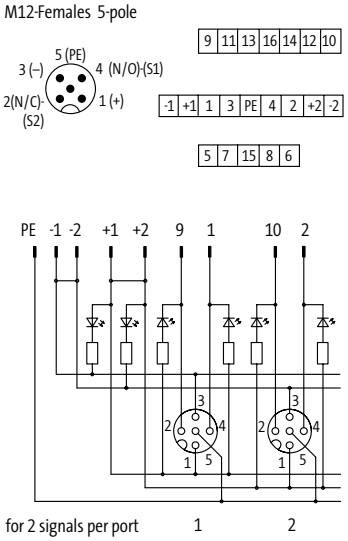
Notes

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Base modules

Approvals: cULus Listed, PCT

	Exact12 4-way for NPN signals 24 V DC	**Exact12** 8-way for NPN signals 24 V DC
		
1 Form	**84501**	**88501**
Type	**NPN, 5-pole**	**NPN, 5-pole**
Contact layout	M12-Females 5-pole 	M12-Females 5-pole 

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 4 A
Total current	max. 8 A
Protection	IP65, IP67
Housing	Plastic, flame retardant
Temperature range	-20...+70 °C

Contact Layout

Contact 1	(+)
Contact 2	(NC)/(S2)
Contact 3	(-)
Contact 4	(NO)/(S1)
Contact 5	(Earth)
LED display	LED (green): power / LED (yellow): (S1) / LED (white): signal (S2)

Article No.

The composition of your article number is explained on page 3.1.i

8000	– _____	– 000	0000
	1 Form		

Notes

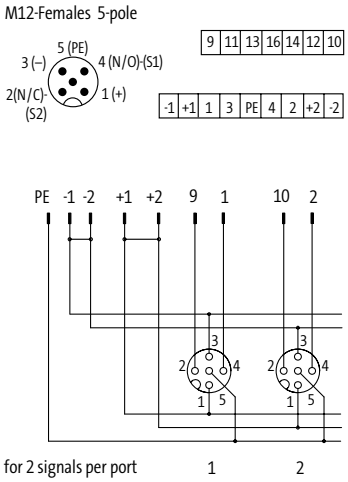
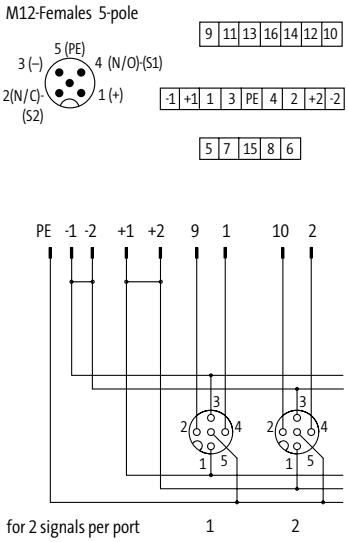
M12 DISTRIBUTION SYSTEMS (PLASTIC)

MURR ELEKTRONIK
stay connected

For sensors and actuators

– Base modules

Approvals: c UL us Listed

	Exact12 4-way without LED	**Exact12** 8-way without LED
		
1 Form	**84502**	**88502**
Type	**without LED, 5-pole**	**without LED, 5-pole**
Contact layout		

Technical Data

Operating voltage	125 V AC/DC
Operating current per contact	max. 4 A
Total current	max. 8 A
Protection	IP65, IP67
Housing	Plastic, flame retardant
Temperature range	-20...+70 °C

Contact Layout

Contact 1	(+)
Contact 2	(NC)/(S2)
Contact 3	(-)
Contact 4	(NO)/(S1)
Contact 5	(Earth)

Article No.

The composition of your article number is explained on page 3.1.i

8 0 0 0	–	_ _ _ _ _	– 0 0 0	0 0 0 0
		1 Form		

Notes

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Field-wireable

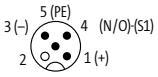
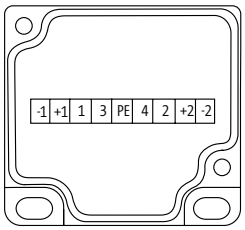
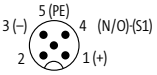
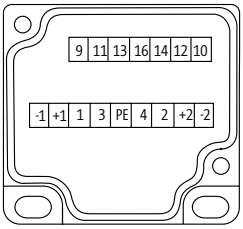
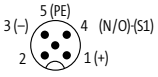
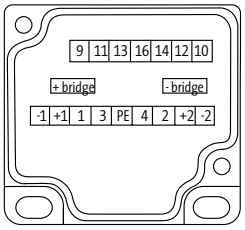
– with homerun cable

Approvals:

Exact12

for 4-way distribution boxes



1 Form	84459	84559	84659
Type	4-pole Screw plug-in terminals	5-pole Screw plug-in terminals	5-pole, potential separation as option Screw plug-in terminals
Contact layout	M12-Females 4-pole   for 1 signal per port	M12-Females 5-pole   for 2 signals per port	M12 Females 5-pole   for 2 signals per port

2 Cable Type	Jacket Color – No./diameter of wires		
	gray	gray	gray
PUR/PVC	**333** – 4 × 0.34 + 3 × 0.75 mm²	**363** – 8 × 0.34 + 3 × 0.75 mm²	**374** – 8 × 0.34 + 5 × 0.75 mm²
PUR (UL/CSA)		**448** – 8 × 0.5 + 3 × 1.0 mm²	

3 Cable Length	
3.0 m	**0300**
5.0 m	**0500**
10.0 m	**1000**
15.0 m	**1500**
20.0 m	**2000**
25.0 m	**2500**
30.0 m	**3000**

Technical Data	
Temperature range	-20...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

8 0 0 0 –	_ _ _ _ _ –	_ _ _	_ _ _ _
	1 Form	2 Cable Type	3 Cable Length

Notes

MURR ELEKTRONIK
stay connected

For sensors and actuators

– Field-wireable

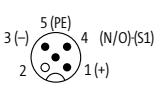
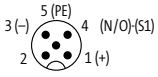
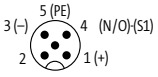
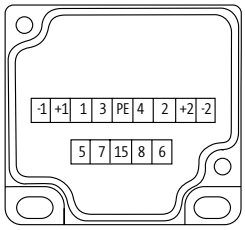
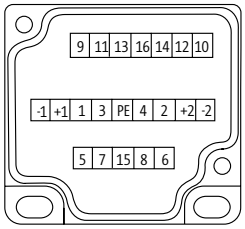
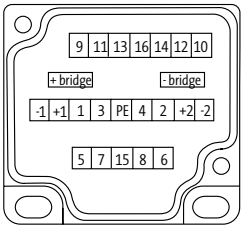
– with homerun cable

Approvals:

Exact12

for 8-way distribution boxes



1 Form	88459	88559	88659
Type	**4-pole** **Screw plug-in terminals**	**5-pole** **Screw plug-in terminals**	**5-pole, potential separation as option** **Screw plug-in terminals**
Contact layout	M12 Females 4-pole 	M12-Females 5-pole 	M12-Females 5-pole 
	 for 1 signal per port	 for 2 signals per port	 for 2 signals per port

2 Cable Type	**Jacket Color** – No./diameter of wires		
	gray	**gray**	**gray**
PUR/PVC	**362** – 8 × 0.34 + 3 × 0.75 mm²	**398** – 16 × 0.34 + 3 × 0.75 mm²	**404** – 16 × 0.34 + 5 × 0.75 mm²
PUR (UL/CSA)	**447** – 8 × 0.5 + 3 × 1.0 mm²	**452** – 16 × 0.5 + 3 × 1.0 mm²	

3 Cable Length	
3.0 m	**0300**
5.0 m	**0500**
10.0 m	**1000**
15.0 m	**1500**
20.0 m	**2000**
25.0 m	**2500**
30.0 m	**3000**

Technical Data

Temperature range	-20...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

8000	– _____	– ___	____
	1 Form	2 Cable Type	3 Cable Length

Notes

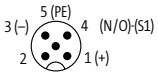
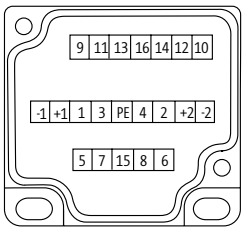
M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Field-wireable

– without homerun cable

Approvals:

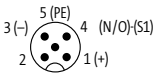
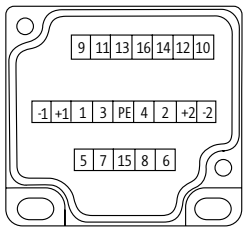
	Exact12 Spring clamp plug-in terminals for 4-, and 8-way distribution boxes	**Exact12** Screw plug-in terminals for 4-, and 8-way distribution boxes
		
1 Form	**88549**	**88559**
Type	**5-pole** **Spring clamp plug-in terminals**	**5-pole** **Screw plug-in terminals**
Contact layout	M12-Females 5-pole   for 2 signals per port	
Technical Data		
Total current	max. 2 × 8 A	
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)	Screw plug-in terminals: max. 1.5 mm² (AWG 16)
Housing	Plastic, flame retardant	
Temperature range	-20...+80 °C, depending on cable quality	
Article No.		
The composition of your article number is explained on page 3.1.i	8 0 0 0 – _ _ _ _ _ – 0 0 0	0 0 0 0
	1 Form	
Notes		

For sensors and actuators

– Field-wireable

– without homerun cable

Approvals:

	Exact12 Spring clamp plug-in terminals for 4-, and 8-way distribution boxes	**Exact12** Screw plug-in terminals for 4-, and 8-way distribution boxes
		
1 Form	**88549**	**88559**
Type	**5-pole** **Spring clamp plug-in terminals**	**5-pole** **Screw plug-in terminals**
Contact layout	M12-Females 5-pole   for 2 signals per port	

Technical Data

Total current	max. 2 × 8 A	
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)	Screw plug-in terminals: max. 1.5 mm² (AWG 16)
Housing	Plastic, flame retardant	
Temperature range	-20...+80 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

8000	– _____	– 000	0000
	1 Form		

Notes

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Sets (basic module and cap)

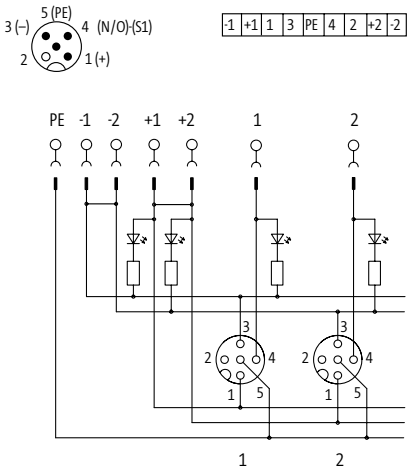
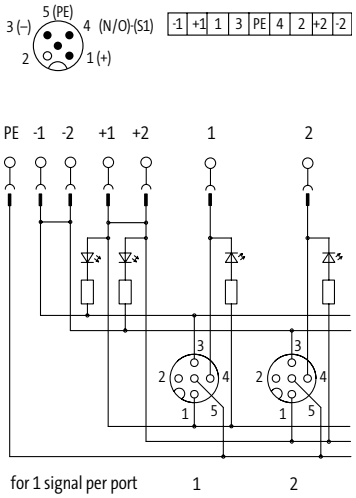
– Field-wireable

Approvals: cULus Listed, PG

Exact12

4-way



1 Form	**84440**	**84450**	**84451**
Type	**PNP, 4-pole** **Spring clamp plug-in terminals**	**PNP, 4-pole** **Screw plug-in terminals**	**NPN, 4-pole** **Screw plug-in terminals**
Contact layout	M12-Females 4-pole  for 1 signal per port		M12-Females 4-pole  for 1 signal per port

Technical Data

Operating voltage	24 V DC	
Operating current per contact	max. 4 A	
Total current	max. 8 A	
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)	Screw plug-in terminals: max. 1.5 mm² (AWG 16)
Protection	IP65, IP67	
Housing	Plastic, flame retardant	
Temperature range	-20...+70 °C	

Contact Layout

Contact 1	(+)
Contact 3	(-)
Contact 4	(NO)/(S1)
Contact 5	(Earth)
LED display	LED (green): power / LED (yellow): (S1)

Article No.

The composition of your article number is explained on page 3.1.i

8000	– _____	– 000	0000
	1 Form		

Notes

For sensors and actuators

– Sets (basic module and cap)

– Field-wireable

Approvals:

Exact12

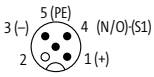
4-way



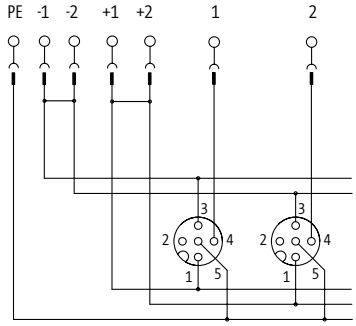
1 Form

84452

Type	**without LED, 4-pole** **Screw plug-in terminals**
Contact layout	M12-Females 4-pole



-1	+1	1	3	PE	4	2	+2	-2



Technical Data

Operating voltage	125 V AC/DC
Operating current per contact	max. 4 A
Total current	max. 8 A
Connection	Screw plug-in terminals: max. 1.5 mm² (AWG 16)
Protection	IP65, IP67
Housing	Plastic, flame retardant
Temperature range	-20...+70 °C

Contact Layout

Contact 1	(+)
Contact 3	(-)
Contact 4	(NO)/(S1)
Contact 5	(Earth)

Article No.

The composition of your article number is explained on page 3.1.i

8000	–	84452	–	000	0000
		1 Form			

Notes

For sensors and actuators

– Sets (basic module and cap)

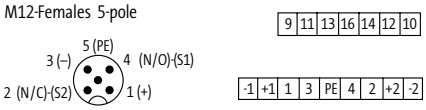
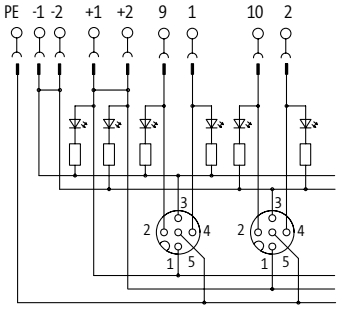
– Field-wireable

Approvals: cULus Listed, PG

Exact12

4-way



1 Form	84540	84550
Type	PNP, 5-pole Spring clamp plug-in terminals	PNP, 5-pole Screw plug-in terminals
Contact layout	M12-Females 5-pole   for 2 signals per port 1 2	

Technical Data

Operating voltage	24 V DC	
Operating current per contact	max. 4 A	
Total current	max. 8 A	
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)	Screw plug-in terminals: max. 1.5 mm² (AWG 16)
Protection	IP65, IP67	
Housing	Plastic, flame retardant	
Temperature range	-20...+70 °C	

Contact Layout

Contact 1	(+)
Contact 2	(NC)/(S2)
Contact 3	(-)
Contact 4	(NO)/(S1)
Contact 5	(Earth)
LED display	LED (green): power / LED (yellow): (S1) / LED (white): signal (S2)

Article No.

The composition of your article number is explained on page 3.1.i

8000	– _____	– 000	0000
	1 Form		

Notes

For sensors and actuators

– Sets (basic module and cap)

– Field-wireable

Approvals:

Exact12

4-way



1 Form

	84551	84552
Approvals	**cULus**	
Type	**NPN, 5-pole** **Screw plug-in terminals**	**without LED, 5-pole** **Screw plug-in terminals**
Contact layout	M12-Females 5-pole 5 (PE), 3 (–), 4 (N/O)-(S1), 2 (N/C)-(S2), 1 (+) 9 11 13 16 14 12 10 -1 +1 1 3 PE 4 2 +2 -2 PE -1 -2 +1 +2 9 1 10 2 for 2 signals per port 1 2	M12-Females 5-pole 5 (PE), 3 (–), 4 (N/O)-(S1), 2 (N/C)-(S2), 1 (+) 9 11 13 16 14 12 10 -1 +1 1 3 PE 4 2 +2 -2 PE -1 -2 +1 +2 9 1 10 2 for 2 signals per port 1 2

Technical Data

Operating voltage	24 V DC	125 V AC/DC
Operating current per contact	max. 4 A	
Total current	max. 8 A	
Connection	Screw plug-in terminals: max. 1.5 mm² (AWG 16)	
Protection	IP65, IP67	
Housing	Plastic, flame retardant	
Temperature range	-20...+70 °C	

Contact Layout

Contact 1	(+)	
Contact 2	(NC)/(S2)	
Contact 3	(-)	
Contact 4	(NO)/(S1)	
Contact 5	(Earth)	
LED display	LED (green): power / LED (yellow): (S1) / LED (white): signal (S2)	–

Article No.

The composition of your article number is explained on page 3.1.i

8000	–	_____	–	000	0000
		1 Form			

Notes

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Sets (basic module and cap)

– Field-wireable

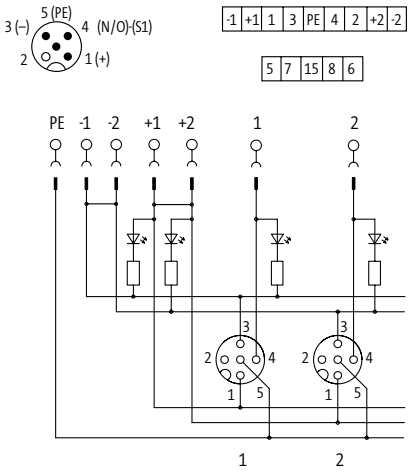
Approvals: c UL us Listed, PG

Exact12

8-way



1 Form	**88440**	**88450**
Type	**PNP, 4-pole** **Spring clamp plug-in terminals**	**PNP, 4-pole** **Screw plug-in terminals**
Contact layout	M12-Females 4-pole	



for 1 signal per port

Technical Data

Operating voltage	24 V DC	
Operating current per contact	max. 4 A	
Total current	max. 8 A	
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)	Screw plug-in terminals: max. 1.5 mm² (AWG 16)
Protection	IP65, IP67	
Housing	Plastic, flame retardant	
Temperature range	-20...+70 °C	

Contact Layout

Contact 1	(+)
Contact 3	(-)
Contact 4	(NO)/(S1)
Contact 5	(Earth)
LED display	LED (green): power / LED (yellow): (S1)

Article No.

The composition of your article number is explained on page 3.1.i

8000	– _____	– 000	0000
	1 Form		

Notes

For sensors and actuators

– Sets (basic module and cap)

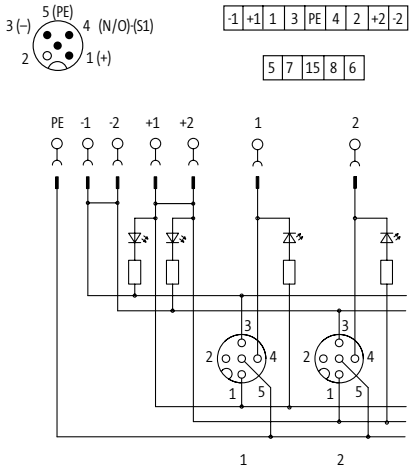
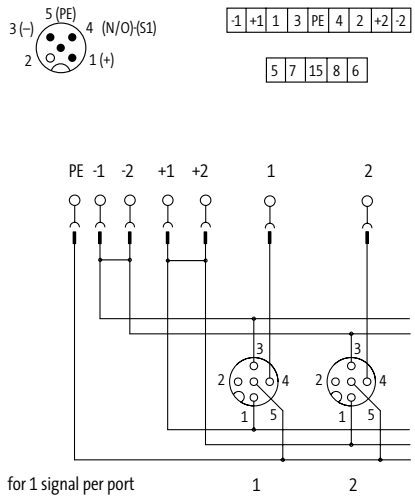
– Field-wireable

Approvals:

Exact12

8-way



1 Form	88451	88452
Approvals	cULus	
Type	NPN, 4-pole Screw plug-in terminals	without LED, 4-pole Screw plug-in terminals
Contact layout	M12-Females 4-pole  for 1 signal per port	M12-Females 4-pole  for 1 signal per port

Technical Data

Operating voltage	24 V DC	125 V AC/DC
Operating current per contact	max. 4 A	
Total current	max. 8 A	
Connection	Screw plug-in terminals: max. 1.5 mm² (AWG 16)	
Protection	IP65, IP67	
Housing	Plastic, flame retardant	
Temperature range	-20...+70 °C	

Contact Layout

Contact 1	(+)	
Contact 3	(-)	
Contact 4	(NO)/(S1)	
Contact 5	(Earth)	
LED display	LED (green): power / LED (yellow): (S1)	–

Article No.

The composition of your article number is explained on page 3.1.i

8000	–	_____	–	000	0000
		1 Form			

Notes

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Sets (basic module and cap)

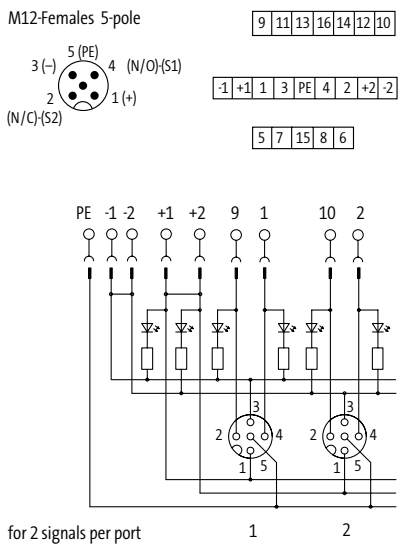
– Field-wireable

Exact12

8-way



Approvals: c UL us Listed

1 Form	**88540**	**88550**
Type	**PNP, 5-pole**	**PNP, 5-pole**
	Spring clamp plug-in terminals	**Screw plug-in terminals**
Contact layout		

Technical Data		
Operating voltage	24 V DC	
Operating current per contact	max. 4 A	
Total current	max. 8 A	
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)	Screw plug-in terminals: max. 1.5 mm² (AWG 16)
Protection	IP65, IP67	
Housing	Plastic, flame retardant	
Temperature range	-20...+70 °C	

Contact Layout	
Contact 1	(+)
Contact 2	(NC)/(S2)
Contact 3	(-)
Contact 4	(NO)/(S1)
Contact 5	(Earth)
LED display	LED (green): power / LED (yellow): (S1) / LED (white): signal (S2)

Article No.				
The composition of your article number is explained on page 3.1.i	8 0 0 0	– _ _ _ _ _	– 0 0 0	0 0 0 0
		1 Form		

Notes

For sensors and actuators

– Sets (basic module and cap)

– Field-wireable

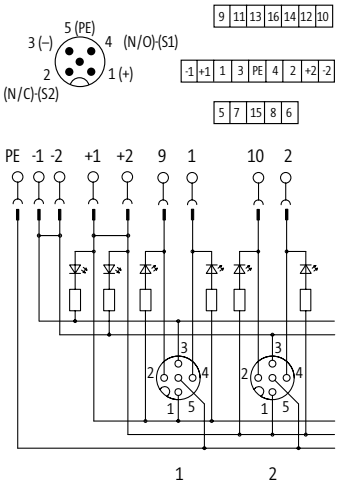
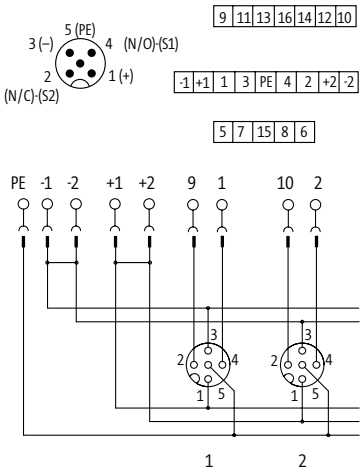
Approvals:

Exact12

8-way



1 Form

	88551	88552
Approvals	**cULus**	
Type	**NPN, 5-pole** **Screw plug-in terminals**	**without LED, 5-pole** **Screw plug-in terminals**
Contact layout	M12 Females 5-pole  for 2 signals per port	M12 Females 5-pole  for 2 signals per port

Technical Data

Operating voltage	24 V DC	125 V AC/DC
Operating current per contact	max. 4 A	
Total current	max. 8 A	
Connection	Screw plug-in terminals: max. 1.5 mm² (AWG 16)	
Protection	IP65, IP67	
Housing	Plastic, flame retardant	
Temperature range	-20...+70 °C	

Contact Layout

Contact 1	(+)	
Contact 2	(NC)/(S2)	
Contact 3	(-)	
Contact 4	(NO)/(S1)	
Contact 5	(Earth)	
LED display	LED (green): power / LED (yellow): (S1) / LED (white): signal (S2)	–

Article No.

The composition of your article number is explained on page 3.1.i

8000	– _____	– 000	0000
	1 Form		

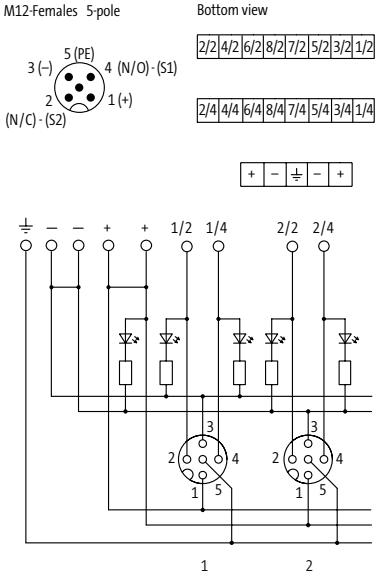
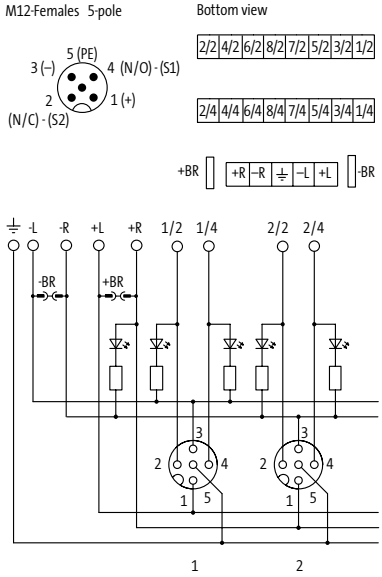
Notes

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– rear connection

Approvals:

	Exact12 rear connection	**Exact12** rear connection with potential separation
		
1 Form	**88580**	**88680**
Type	**PNP, 5-pole** **Spring clamp terminals**	**PNP, 5-pole** **Spring clamp terminals**
Contact layout	 for 2 signals per port	 for 2 signals per port

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 4 A
Total current	max. 2 × 8 A
Protection	IP65, IP67
Housing	Plastic, flame retardant
Temperature range	-20...+70 °C

Contact Layout

Contact 1	(+)
Contact 2	(NC)/(S2)
Contact 3	(-)
Contact 4	(NO)/(S1)
Contact 5	(Earth)
LED display	LED (green): power / LED (yellow): (S1) / LED (white): signal (S2)

Article No.

The composition of your article number is explained on page 3.1.i

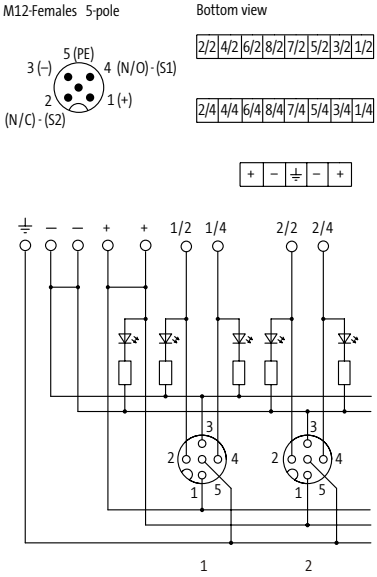
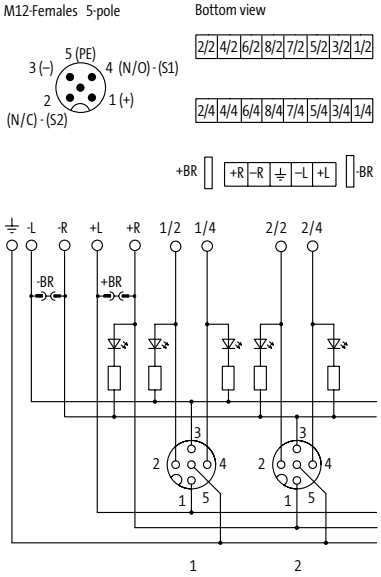
8000	–	_____	–	000	0000
		1 Form			

Notes

For sensors and actuators

– rear connection

Approvals:

	Exact12 pluggable rear connection	**Exact12** pluggable rear connection with potential separation
		
1 Form	**88590**	**88690**
Type	**PNP, 5-pole** **Spring clamp plug-in terminals**	**PNP, 5-pole** **Spring clamp plug-in terminals**
Contact layout	 for 2 signals per port	 for 2 signals per port

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 4 A
Total current	max. 2 × 8 A
Protection	IP65, IP67
Housing	Plastic, flame retardant
Temperature range	-20...+70 °C

Contact Layout

Contact 1	(+)
Contact 2	(NC)/(S2)
Contact 3	(-)
Contact 4	(NO)/(S1)
Contact 5	(Earth)
LED display	LED (green): power / LED (yellow): (S1) / LED (white): signal (S2)

Article No.

The composition of your article number is explained on page 3.1.i

8000	– _____	– 000	0000
	1 Form		

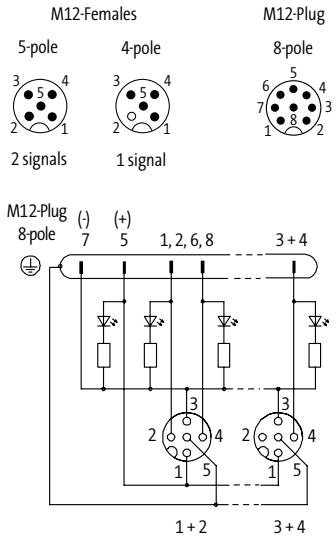
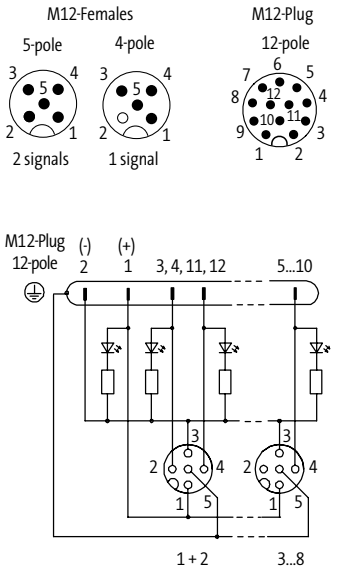
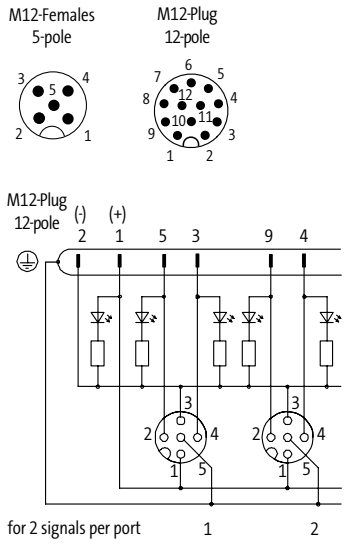
Notes

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– M12 plug connection

Approvals: c UL us Listed

	Exact12	Exact12	Exact12
	4-way	8-way	4-way
			
1 Form	**84470**	**88460**	**84560**
Type	**5-, 4-pole**	**5-, 4-pole**	**5-pole**
	M12 plug connection, 8-pole	**M12 plug connection, 12-pole**	**M12 plug connection, 12-pole**
Contact layout			

Technical Data

Operating voltage	24 V DC	
Operating current per contact	max. 2 A	max. 1.5 A
Total current	max. 2 A	max. 1.5 A
Protection	IP65, IP67	
Housing	Plastic, flame retardant	
Temperature range	-20...+70 °C	

Contact Layout

Contact 1	(+)
Contact 2	(NC)/(S2)
Contact 3	(-)
Contact 4	(NO)/(S1)
Contact 5	(Earth)
LED display	LED (green): power / LED (yellow): (S1) / LED (white): signal (S2)

Article No.

The composition of your article number is explained on page 3.1.i

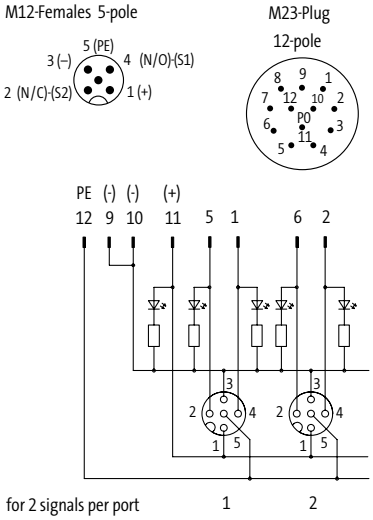
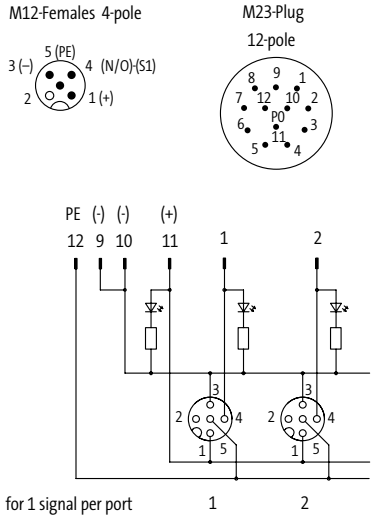
8 0 0 0	– _ _ _ _ _	– 0 0 0	0 0 0 0
	1 Form		

Notes

For sensors and actuators

– M23 plug connection

Approvals: cULus Listed, PCT

	Exact12 4-way	**Exact12** 8-way
		
1 Form	**84530**	**88430**
Type	**5-pole** **M23 plug connection, 12-pole**	**4-pole** **M23 plug connection, 12-pole**
Contact layout		
Technical Data		
Operating voltage	24 V DC	
Operating current per contact	max. 4 A	
Total current	max. 8 A	
Protection	IP65, IP67	
Housing	Plastic, flame retardant	
Temperature range	-20...+75 °C	
Contact Layout		
Contact 1	(+)	
Contact 2	(NC)/(S2)	–
Contact 3	(-)	
Contact 4	(NO)/(S1)	
Contact 5	(Earth)	
LED display	LED (green): power / LED (yellow): (S1) / LED (white): signal (S2)	LED (green): power / LED (yellow): (S1)
Article No.		
The composition of your article number is explained on page 3.1.i	**8 0 0 0 – _ _ _ _ _ – 0 0 0**	**0 0 0 0**
	1 Form	

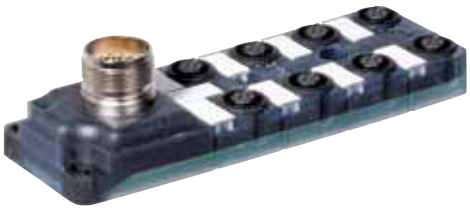
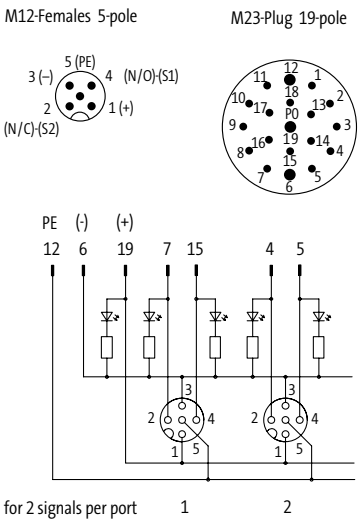
Notes

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– M23 plug connection

Approvals: cULus Listed, PCT

	Exact12 4-way	**Exact12** 8-way
		
1 Form	**84520**	**88520**
Type	**5-pole** **M23 plug connection, 19-pole**	**5-pole** **M23 plug connection, 19-pole**
Contact layout		
Technical Data		
Operating voltage	24 V DC	
Operating current per contact	max. 4 A	
Total current	max. 10 A	max. 8 A
Protection	IP65, IP67	
Housing	Plastic, flame retardant	
Temperature range	-20...+80 °C	
Contact Layout		
Contact 1	(+)	
Contact 2	(NC)/(S2)	
Contact 3	(-)	
Contact 4	(NO)/(S1)	
Contact 5	(Earth)	
LED display	LED (green): power / LED (yellow): (S1/S2) / LED (white): signal (S2)	
Article No.		

The composition of your article number is explained on page 3.1.i

8000	– _____	– 000	0000
	1 Form		

Notes

For general applications

– with molded homerun cable

Approvals: c UL us Listed

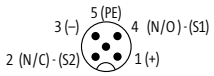
Exact12 UNIVERSAL

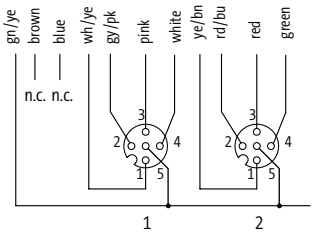
4-way



1 Form — 84712

Type	**without LED, 5-pole (for analog signals)**
Contact layout	M12-Females 5-pole





free arrangeable, contact 1:1 on terminals
for 4 signals per port, PIN5 bridged on terminals

2 Cable Type — Jacket Color – No./diameter of wires

	gray
PUR/PVC	**398** – 16 × 0.34 + 3 × 0.75 mm²

3 Cable Length

3.0 m	**0300**
5.0 m	**0500**
10.0 m	**1000**
15.0 m	**1500**

Technical Data

Operating voltage	42 V AC/DC
Total current	max. 10 A
Protection	IP65, IP67
Temperature range	-20...+70 °C, depending on cable quality

Contact Layout

Contact 1	(S1)
Contact 2	(S2)
Contact 3	(S3)
Contact 4	(S4)
Contact 5	(Earth)

Article No.

The composition of your article number is explained on page 3.1.i

8000	–	84712	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For general applications

– Basic module

Approvals: c UL us Listed

MVP12 UNIVERSAL

4-way



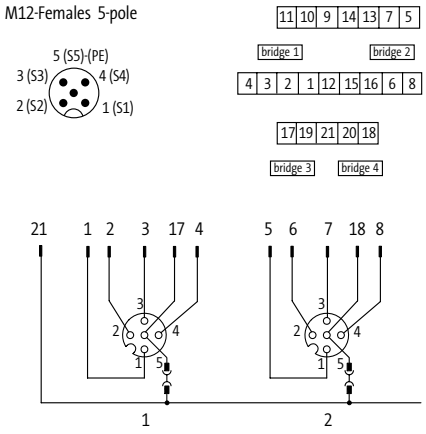
1 Form

44702

Type

without LED, 5-pole (for analog signals)

Contact layout



free arrangeable, contact 1:1 on terminals
for 5 signals per port, possibilty to bridge each PIN5

Technical Data

Operating voltage	max. 42 V AC/DC
Operating current per contact	max. 4 A
Total current	max. 8 A
Protection	IP65, IP67
Housing	Plastic, flame retardant
Temperature range	-20...+80 °C

Contact Layout

Contact 1	(S1)
Contact 2	(S2)
Contact 3	(S3)
Contact 4	(S4)
Contact 5	(S5)/(Earth)

Article No.

The composition of your article number is explained on page 3.1.i

8000	– 44702	– 000	0000
	1 Form		

Notes

For general applications

– with homerun cable

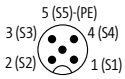
MVP12 UNIVERSAL

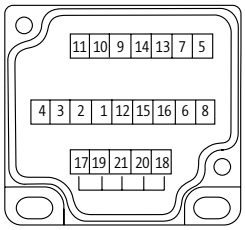


1 Form

84759

Type	**universal**
	Screw plug-in terminals
Contact layout	M12-Females 5-pole





free arrangeable, contact 1:1 on terminals

2 Cable Type

Jacket Color – No./diameter of wires

	gray
PUR/PVC	**533** – 18 × 0.75 mm²

3 Cable Length

1.0 m	**0100**
5.0 m	**0500**

Technical Data

Total current	max. 8 A
Temperature range	-20...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

8000	–	84759	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

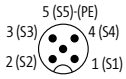
For general applications

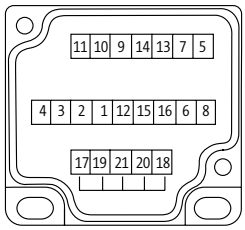
– Field-wireable

MVP12 UNIVERSAL



1 Form	84749	84759
Approvals		cULus
Type	universal	universal
	Spring clamp plug-in terminals	Screw plug-in terminals
Contact layout	M12-Females 5-pole	





free arrangeable, contact 1:1 on terminals

Technical Data

Total current	max. 8 A	
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)	Screw plug-in terminals: max. 1.5 mm² (AWG 16)
Housing	Plastic, flame retardant	
Temperature range	-20...+80 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

8000	– _____	– 000	0000
	1 Form		

Notes

For general applications

– Sets (basic module and cap)

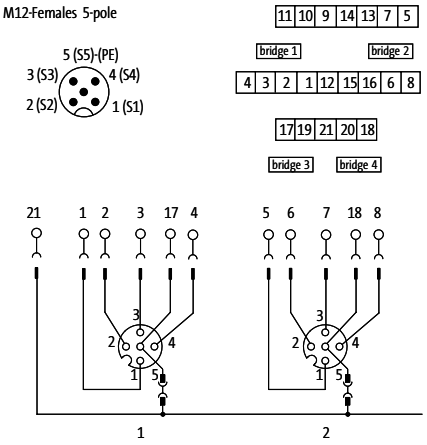
– Field-wireable

Approvals: c UL us Listed

MVP12 UNIVERSAL

4-way



1 Form	44742	44752
Type	universal, without LED, 5-pole (for analog signals) Spring clamp plug-in terminals	universal, without LED, 5-pole (for analog signals) Screw plug-in terminals
Contact layout		

free arrangeable, contact 1:1 on terminals
for 5 signals per port, possibilty to bridge each PIN5

Technical Data

Operating voltage	max. 42 V AC/DC	
Operating current per contact	max. 4 A	
Total current	max. 8 A	
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)	Screw plug-in terminals: max. 1.5 mm² (AWG 16)
Protection	IP65, IP67	
Housing	Plastic, flame retardant	
Temperature range	-20...+80 °C	

Contact Layout

Contact 1	(S1)
Contact 2	(S2)
Contact 3	(S3)
Contact 4	(S4)
Contact 5	(S5)/(Earth)

Article No.

The composition of your article number is explained on page 3.1.i

8000	– _____	– 000	0000
	1 Form		

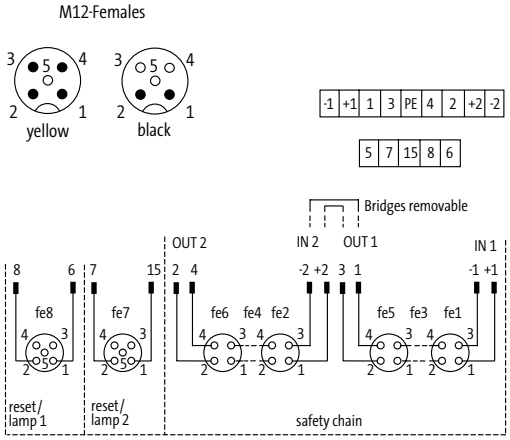
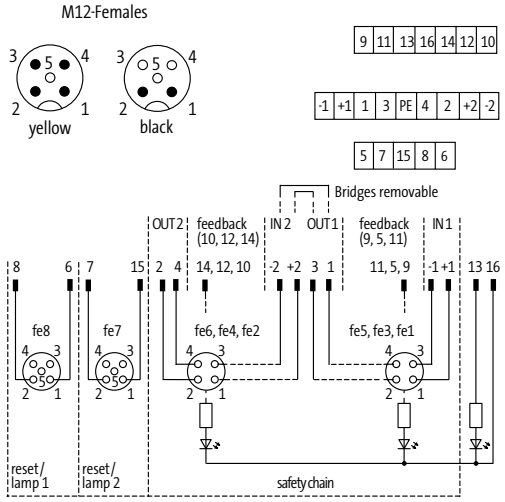
Notes

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For safety wiring

– Sets (basic module and cap)

– Field-wireable

	MSDS8 without electrical feedback	**MSDS8R** with electrical feedback
		
1 Form	**98752**	**98750**
Type	**without LED** **Screw plug-in terminals**	**with LED** **Screw plug-in terminals**
Contact layout		

Technical Data

Operating voltage	24 V DC (EN 61131-2)	
Operating current (chain)	max. per 1 A	
Operating current (black females)	max. per 1 A	
Isolation resistance	min. 1000 MOhm	
Material group	(EN 60664-1) over voltage, category III	

Contact Layout

Contact 1	MSDS: 11 (yellow), 13 (black); EMERGENCY-STOP: 11 (black)	
Contact 2	MSDS: 12 (yellow), 14 (black); EMERGENCY-STOP: 12 (black)	
Contact 3	MSDS: 21 (yellow); EMERGENCY-STOP: 21 (black)	
Contact 4	MSDS: 22 (yellow); EMERGENCY-STOP: 22 (black)	
LED display	–	LED (green): power / LED (yellow): EMERGENCY-STOP

Article No.

The composition of your article number is explained on page 3.1.i

8000	–	_____	–	000	0000
		1 Form			

Notes

For safety wiring

– with molded homerun cable

– Homerun cable with spring clamp terminals

– (EN ISO 13849-2)

Approvals: cULus Listed, PCT

Exact12 Safety

8-way

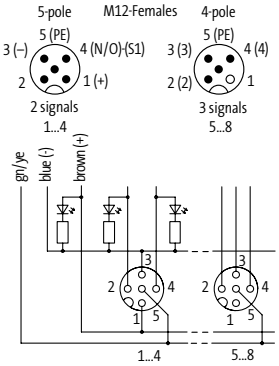
for PNP signals 24 V DC



1 Form — 98710

Type — **PNP, 5-pole, 4/3-pole**

Contact layout



2 Cable Type — Jacket Color – No./diameter of wires

	gray
PUR/PVC	**407** – 20 × 0.34 + 3 × 0.75 mm²

3 Cable Length

3.0 m	**0300**
5.0 m	**0500**
10.0 m	**1000**
15.0 m	**1500**

Technical Data

Operating voltage	24 V DC
Total current	max. 8 A
Protection	IP65, IP67
Temperature range	-20...+60 °C, depending on cable quality

Contact Layout

Contact 1	(+) port 1...4
Contact 2	(NC)/(S2) port 1...4; (S1) port 5...8
Contact 3	(-) port 1...4; (S2) port 5...8
Contact 4	(NO)/(S1) port 1...4; (S3) port 5...8
Contact 5	(Earth)
LED display	LED (green): power / LED (yellow): (S1) / LED (white): signal (S2) port 1...4

Article No.

The composition of your article number is explained on page 3.1.i

8000	–	98710	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

For safety wiring

– Basic module

– (EN ISO 13849-2)

Approvals: cULus Listed, PCT

Exact12 Safety

8-way

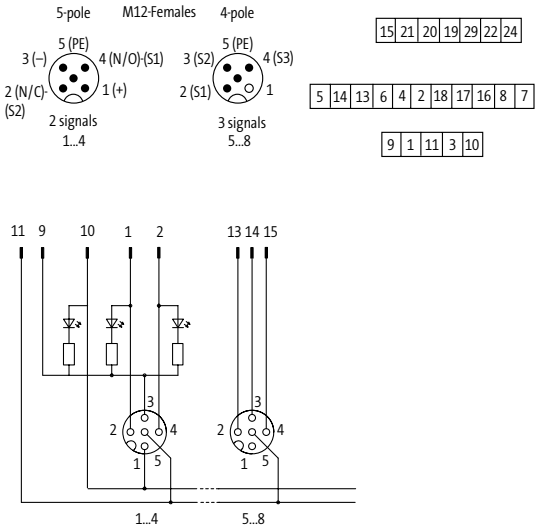
for PNP signals 24 V DC



1 Form

98700

Type	**PNP, 5-pole, 4/3-pole**
Contact layout	



Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 4 A
Total current	max. 8 A
Protection	IP65, IP67
Housing	Plastic, flame retardant
Temperature range	-20...+60 °C

Contact Layout

Contact 1	(+) port 1...4
Contact 2	(NC)/(S2) port 1...4; (S1) port 5...8
Contact 3	(-) port 1...4; (S2) port 5...8
Contact 4	(NO)/(S1) port 1...4; (S3) port 5...8
Contact 5	(Earth)
LED display	LED (green): power / LED (yellow): (S1) / LED (white): signal (S2) port 1...4

Article No.

The composition of your article number is explained on page 3.1.i

8000	–	98700	–	000	0000
		1 Form			

Notes

For safety wiring

– Connection cap

– Homerun cable with spring clamp terminals

– (EN ISO 13849-2)

Approvals: cULus Listed, PCT

Exact12 Safety

for 8-way distribution boxes



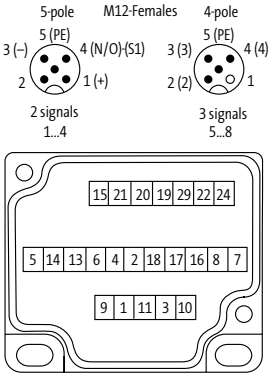
1 Form

98749

Type

5-, 4-pole

Contact layout



2 Cable Type

Jacket Color – No./diameter of wires

	gray
PUR (UL/CSA)	**408** – 16 × 0.5 + 3 × 1.0 mm²

3 Cable Length

3.0 m	**0300**
5.0 m	**0500**
10.0 m	**1000**
15.0 m	**1500**
20.0 m	**2000**

Technical Data

Temperature range	-20...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

8000	–	98749	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

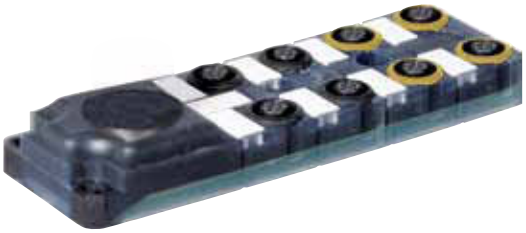
For sensors and actuators

– rear connection

– (EN ISO 13849-2)

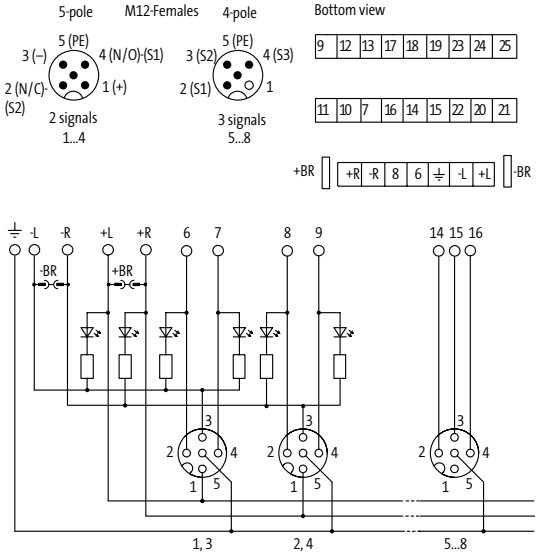
Approvals: cULus Listed

Exact12 Safety
rear connection
with potential separation



1 Form

98790

Type	**PNP, 5-pole, 4/3-pole** **Spring clamp terminals**
Contact layout	

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 4 A
Total current	max. 8 A
Protection	IP65, IP67
Housing	Plastic, flame retardant
Temperature range	-20...+60 °C

Contact Layout

Contact 1	(+) port 1...4
Contact 2	(NC)/(S2) port 1...4; (S1) port 5...8
Contact 3	(-) port 1...4; (S2) port 5...8
Contact 4	(NO)/(S1) port 1...4; (S3) port 5...8
Contact 5	(Earth)
LED display	LED (green): power / LED (yellow): (S1) / LED (white): signal (S2) port 1...4

Article No.

The composition of your article number is explained on page 3.1.i

8000	–	98790	–	000	0000
		1 Form			

Notes

Mounting accessories			Art-No.
	**Torque wrench set**		
	M12 (0.6 Nm, AF13)	M12 Round Plug Connectors	**7000-99102-0000000**
	**Torque wrench**		
	M12 (SW13)		**7000-99109-0000000**
	**Torque wrench**		
	M12 (SW14)		**7000-99108-0000000**
	**Torque wrench**		
	M12 (SW17)		**7000-99094-0000000**
	**Torque wrench**		
	M12 (SW18)		**7000-99103-0000000**
	**DIN-rail adapter**		
	with fixing screws, plastic		**27905**

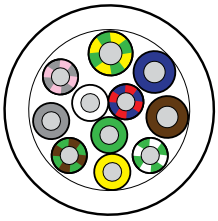
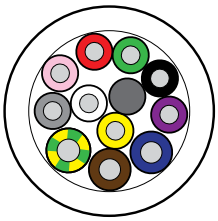
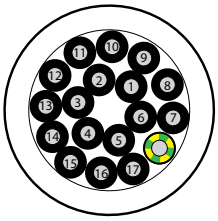
Plug accessories			Art-No.
	**Transfer module**		
	for 1 × 11- and 1 × 12-pole spring clamp terminals		**596154**
	**Service adapter**		
	with LED and SUB-D25	for transfer module Art-No. 596154	**596153**
	**Screw plug M12 × 1 mm**		
	Metal, hex, 1 piece		**996049**
	**Screw plug M12 × 1 mm (for female)**		
	Plastic, hex	Quantity: 10 pcs.	**58627**

M12 DISTRIBUTION SYSTEMS (PLASTIC)

Plug accessories			Art-No.
	**Label plates**		
	KES 20 × 8 (white)	(10 pieces/2 plates)	**996067**
	**Label plates**		
	KES 17 × 9 (Type M) (12 pieces/2 plates)		**996050**
	**Adapter M12/M8**		
	3-pole		**7000-42201-0000000**
	**Adapter M12/M8**		
	4-pole		**7000-42211-0000000**

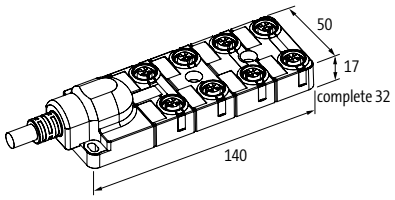
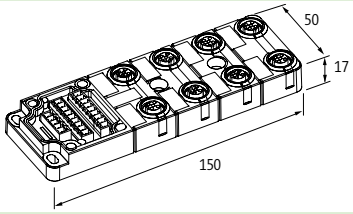
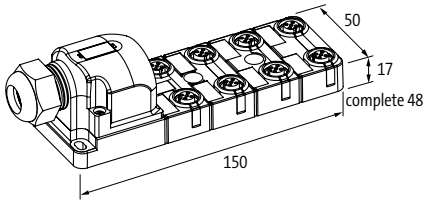
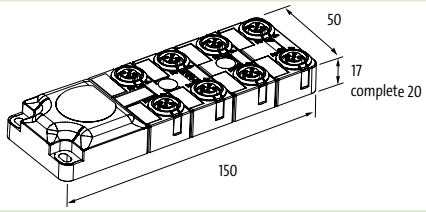
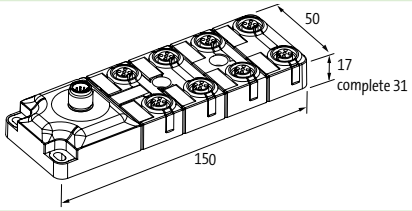
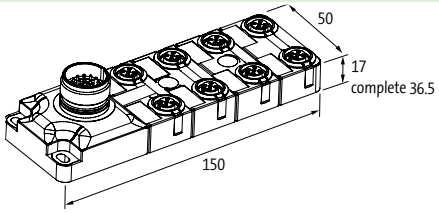
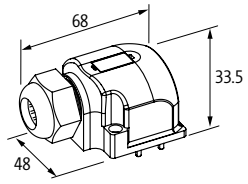
Mounting accessories			Art-No.
	**EMERGENCY-STOP button**		
	with M12 connection	Safety distribution box M12	**55550**
	Coding plug M12		
		4-pole with bridges PIN 1-2 and PIN 3-4	**332779**
	**T-coupler (Slimline) M12 - M12**		
	4-pole		**7000-41165-0000000**

Homerun cable accessories			Art-No.
	Coding element		
	for 6 codings		**996054**
	**Screw plug M23**		
	Metal		**55352**

Homerun cable accessories			Art-No.
	**Screw plug M12 × 1 mm (for male)**		
	Plastic	Quantity: 4 pcs.	**56951**
	**Cable rings (50 m), 5-pole, PUR/PVC**		
	8×0.34 + 3×0.75 mm²	4-way distribution boxes M12	**8000-00000-3635000**
	12×0.34 + 3×0.75 mm²	6-way distribution boxes M12	**8000-00000-3885000**
	16×0.34 + 3×0.75 mm²	8-way distribution boxes M12	**8000-00000-3985000**
	**Cable rings (50 m), 4-pole, PUR (UL/CSA), halogen free**		
	8×0.5 + 3×1.0 mm²	8-way distribution boxes M12	**8000-00000-4475000**
	8×0.5 + 3×1.0 mm²	4-way distribution boxes M12	**8000-00000-4485000**
	16×0.5 + 3×1.0 mm²	8-way distribution boxes M12	**8000-00000-4525000**
	16×0.34 + 5×0.75 mm²	8-way distribution boxes M12, potentially separated	**8000-00000-4035000**
	**Cable rings (50 m), PUR/PVC**		
	18 × 0.75 mm²	4-way distribution box M12, UNIVERSAL	**8000-00000-5335000**
	4×0.34 + 3×0.75 mm²	4-way distribution boxes M12	**8000-00000-3335000**
	8×0.34 + 3×0.75 mm²	8-way distribution boxes M12	**8000-00000-3625000**
	8×0.34 + 5×0.75 mm²	4-way distribution boxes M12, potentially separated	**8000-00000-3745000**
	16×0.34 + 5×0.75 mm²	8-way distribution boxes M12, potentially separated	**8000-00000-4045000**

M12 DISTRIBUTION SYSTEMS (PLASTIC)

M12 Distribution Systems Technical Data

	Description	4-way	8-way
	**Exact12** Molded homerun cable	100 mm	140 mm
	Description	**4-way**	**8-way**
	**Exact12** Basic module	100 mm	150 mm
	Description	**4-way**	**8-way**
	**Exact12 and MSDS8** Sets: basic module and cap Field-wireable	100 mm	150 mm
	Description	**4-way**	**8-way**
	**Exact12** Rear connection	100 mm	150 mm
	Description	**4-way**	**8-way**
	**Exact12** M12 plug connection	100 mm	150 mm
	Description	**4-way**	**8-way**
	**Exact12** M23 plug connection	100 mm	150 mm
	Description		
	**Exact12** Caps		

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MURR ELEKTRONIK
stay connected

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