

Table of Contents – Fluid and Diagnostic Sensors

Level



<i>Point-level sensors – bulk powders/liquids – pushbutton adjustment, switching output</i>	<i>170 - 171</i>
<i>Point-level sensors – bulk powders/liquids – potentiometer adjustment, switching output</i>	<i>172 - 173</i>
<i>Point-level sensors – bulk materials/liquids – pushbutton set-up, switching output</i>	<i>174 - 175</i>
<i>Point-level sensors – overflow protection – switching output</i>	<i>176 - 177</i>
<i>Point-level sensors - water or water-coolant based or oil /powder-based media</i>	<i>178 - 179</i>
<i>Continuous level sensors – water-based media – analog and switching outputs</i>	<i>180 - 181</i>
<i>Continuous level sensors – oils or water-based media – analog and switching outputs</i>	<i>182 - 183</i>
<i>Continuous level sensors – oils and coolants – analog and switching outputs</i>	<i>184 - 185</i>



Top five product features!

- Accurate point-level indication of liquids and solids with low dielectric constant (e.g. oils, plastic pellets)
- Two pushbutton teach allows for easy setup and eliminates difficult sensitivity adjustment
- Senses level through mounting well, sight glass, plastic tank or by direct contact with media
- Sensor offers superior immunity to electrical noise
- Broad range of mounting well accessories

Reliable point-level detection with pushbutton teach function



ifm point-level sensors provide accurate level detection of solid and liquid materials. A ring LED display provides output status indication that is visible from long distances.

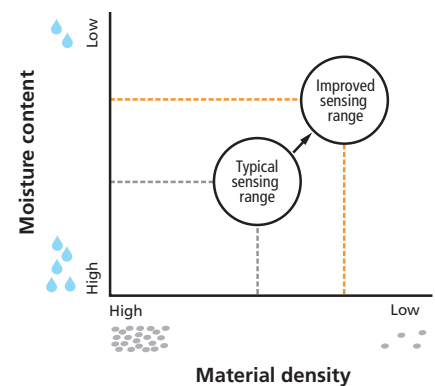
Pushbutton teach function

The KI and KG Series point-level sensors feature a two pushbutton teach function that calibrates the proper setpoint value and simplifies the setup process. The sensor is quickly and easily adjusted for a specific application. The integrated microprocessor automatically balances the sensitivity to provide the safest operating condition.



Improved noise immunity

ifm's patented "charge balance" circuit design for level sensors offers reliable noise immunity and enables ifm level sensors to perform effectively in high noise level environments.



Plastic materials are now being dried at higher temperatures producing very low moisture content. The resulting materials can cause sensing problems for traditional capacitive level sensors.

ifm's capacitive level sensors incorporate sensing electrodes and patented circuitry to detect low-moisture, low-density materials. Combined, these innovations enable the sensors to perform in today's plastic processing applications.

Position Sensors

Company

Inductive

Capacitive

Cylinder
position

Photoelectrics
and lasers

Distance, color
and contrast

Fiber optics

Motion Control

Speed
monitors

Vision Sensors

2D / 3D
inspection

Safety Technology

Safety
products



1 - 7

10 - 47

48 - 53

54 - 59

60 - 91

92 - 97

98 - 103

106 - 109

112 - 125

128 - 141



Product + accessory selector

Output Function	Housing Diameter	Sensing Face Temperature	Sensor Connection	Part No.	List Price (1-pc.)
DC units					
PNP / NPN - N.O. / N.C.	30 mm	-13...230 °F (-25...110 °C)	M12 Micro DC	KI5082	\$126.00
PNP - N.O. / N.C.	30 mm	-13...230 °F (-25...110 °C)	M12 Micro DC	KI5083	\$126.00
PNP / NPN - N.O. / N.C.	18 mm	-13...230 °F (-25...110 °C)	M12 Micro DC	KG5065	\$159.00
PNP - N.O. / N.C.	18 mm	-13...230 °F (-25...110 °C)	M12 Micro DC	KG5066	\$159.00
AC units					
N.O. / N.C.	30 mm	-13...230 °F (-25...110 °C)	1/2" Micro AC	KI0054	\$152.00
N.O. / N.C.	18 mm	-13...230 °F (-25...110 °C)	1/2" Micro AC	KG0016	\$152.00

Optional Accessories

Type	Description	Part No.	List Price (1-pc.)
	3/4" NPT Mounting adapter, PTFE (KG series 18 mm housing)	U10000	\$46.00
	1-1/4" NPT Mounting adapter, PTFE (KI series 30 mm housing)	U10003	\$48.00
	1/2" OD... 3/4" OD Sight glass mounting set, Delrin (KI series 30 mm housing)	U20213	\$38.00

Cordsets

Type	Description	Part No.	List Price (1-pc.)
	M12 Micro DC (4-pin) 2 m, PUR	EVC001	\$9.95
	M12 Micro DC (4-pin) 5 m, PUR	EVC002	\$13.50
	M12 Micro DC (4-pin) 10 m, PUR	EVC003	\$18.00
	M12 Micro DC (4-pin) 2 m, PUR	EVC004	\$9.95
	M12 Micro DC (4-pin) 5 m, PUR	EVC005	\$13.50
	M12 Micro DC (4-pin) 10 m, PUR	EVC006	\$18.00
	1/2" Micro AC 2 m, PVC	E18212	\$15.00
	1/2" Micro AC 5 m, PVC	E18213	\$19.00
	1/2" Micro AC 2 m, PVC	E18214	\$15.00
	1/2" Micro AC 5 m, PVC	E18215	\$19.00

Can't find the right sensor for your application, call 800-441-8246 or visit www.ifm.com/us

Technical Specs

DC DC units
 Supply voltage: 10...36 VDC
 Maximum load current: 200 mA
 Voltage drop: <2.5 V
 Current consumption: <20 mA
 Housing material: Plastic (PBT, PC and TPE)
 Protection rating: IP65 / IP67

AC AC/DC units
 20...250 VDC / 30...250 VAC
 150 mA @ 40 °C
 < 10 V
 N.A.
 Plastic (PBT, PC and TPE)
 IP65 / IP67

Simple and comprehensive website



Data sheets, application examples, software downloads, virtual product demos... just one click away.

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800-441-8246

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Process Sensors

Pressure

Flow

Level

Temperature



144 - 159



160 - 169



170 - 185



186 - 201

Industrial Networks

AS-i network

Safety systems



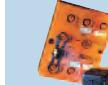
204 - 217



218 - 229

ID Systems

RF identification systems



232 - 235

Machine Condition

Diagnostic systems



238 - 243

Power Supplies

Power supplies



246 - 247

Wiring Technology

Cordset solutions



250 - 261



Top five product features!

- No moving parts for reliable point-level indication
- Easy setpoint adjustment with multi-turn potentiometer
- Senses level through mounting well, sight glass, plastic tank or by direct contact with media
- Bright LEDs for visual indication of output status
- Broad range of mounting well accessories

Reliable point-level detection

ifm point-level sensors provide accurate level detection of solid and liquid materials. An LED display provides power, output and marginal signal status indication. LEDs can alert a user if conditions have changed, buildup is occurring, or if more material needs to be delivered.

Potentiometer adjustment

The sensors feature a potentiometer that adjusts the sensitivity of the sensor. This feature allows the sensor to be precisely tuned for a specific application. These sensors are available in prewired, quick disconnect, and terminal chamber models.

Improved noise immunity

Switching power supplies, variable frequency motor drives, and high-powered communication devices are found in most industrial plants. These devices can generate high noise levels contributing to erratic sensor operation. As a result, ifm's patented "charge balance" circuit design for level sensors offers reliable noise immunity and enables ifm level sensors to perform effectively in high noise level environments.

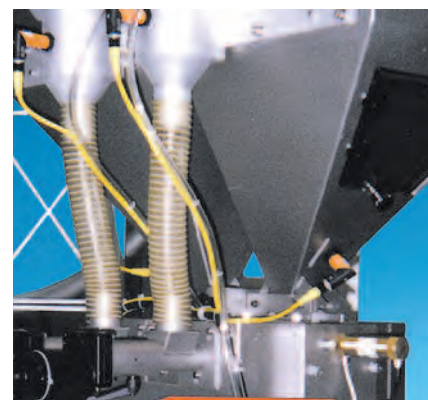


The KI and KG sensors detect granulars such as plastic regrind.













Using a mounting well, the sensor detects the level of liquid.

Simple setup





Point level sensors can be mounted directly to the wall of a tank or with a mounting well.

Position Sensors							Motion Control	Vision Sensors	Safety Technology
Company	Inductive	Capacitive	Cylinder position	Photoelectrics and lasers	Distance, color and contrast	Fiber optics	Speed monitors	2D / 3D inspection	Safety products
									
1 - 7	10 - 47	48 - 53	54 - 59	60 - 91	92 - 97	98 - 103	106 - 109	112 - 125	128 - 141





Product + accessory selector

Output Function	Housing Diameter	Sensing Face Temperature	Electrical Connection	Supply Voltage	Part No.	List Price (1-pc.)
DC units 						
PNP, N.O. / N.C.	30 mm	-13...158 °F (-25...70 °C)	Prewired, 2 m cable	10...36 VDC	KI5207	\$122.00
NPN, N.O. / N.C.	30 mm	-13...158 °F (-25...70 °C)	Prewired, 2 m cable	10...36 VDC	KI5208	\$122.00
PNP, N.O. / N.C.	30 mm	-13...176 °F (-25...80 °C)	0.1 m pigtail with M12 micro DC	10...36 VDC	KI5209	\$122.00
NPN, N.O. / N.C.	30 mm	-13...176 °F (-25...80 °C)	0.1 m pigtail with M12 micro DC	10...36 VDC	KI5210	\$122.00
PNP, N.O.	18 mm	-13...176 °F (-25...80 °C)	Prewired, 2 m cable	10...36 VDC	KG5043	\$183.00
PNP, N.C.	18 mm	-13...176 °F (-25...80 °C)	Prewired, 2 m cable	10...36 VDC	KG5044	\$183.00
NPN, N.O.	18 mm	-13...176 °F (-25...80 °C)	Prewired, 2 m cable	10...36 VDC	KG5045	\$183.00
NPN, N.C.	18 mm	-13...176 °F (-25...80 °C)	Prewired, 2 m cable	10...36 VDC	KG5046	\$183.00

AC units 						
N.O.	30 mm	-13...158 °F (-25...70 °C)	Prewired, 2 m cable	20...250 VAC	KI0202	\$146.00
N.C.	30 mm	-13...158 °F (-25...70 °C)	Prewired, 2 m cable	20...250 VAC	KI0203	\$146.00
N.O. / N.C.	30 mm	-13...158 °F (-25...70 °C)	Terminal chamber	20...250 VAC	KI0205	\$157.00
N.O. / N.C.	30 mm	-13...158 °F (-25...70 °C)	0.1 m pigtail with 1/2" Micro AC	20...250 VAC	KI0206	\$146.00
N.O. / N.C.	30 mm	-13...158 °F (-25...70 °C)	0.1 m pigtail with 1/2" Micro AC	20...250 VAC	KI0207	\$146.00
N.O. / N.C.	30 mm	-13...158 °F (-25...70 °C)	1/2" Micro AC	20...250 VAC	KI3513	\$172.00
N.O.	18 mm	-13...158 °F (-25...70 °C)	Prewired, 2 m cable	20...250 VAC	KG0009	\$163.00
N.C.	18 mm	-13...158 °F (-25...70 °C)	Prewired, 2 m cable	20...250 VAC	KG0010	\$163.00
N.O. / N.C.	18 mm	-13...158 °F (-25...70 °C)	Terminal chamber	20...250 VAC	KG0008	\$166.00

Optional Accessories

Type	Description	Part No.	List Price (1-pc.)
	3/4" NPT Mounting adapter, PTFE (KG series 18 mm housing)	U10000	\$46.00
	1-1/4" NPT Mounting adapter, PTFE (KI series 30 mm housing)	U10003	\$48.00
	1/2" OD... 3/4" OD Sight glass mounting set, Delrin (KI series 30 mm housing)	U20213	\$38.00

Technical Specs

DC sensors 

Maximum load current: 250 mA

Voltage drop: <2.5

Protection rating: IP65 (KI020x, KI520x), IP67 (KG00xx, KG504x)

AC sensors 

Maximum load current: 250 mA @ 50 °C (KI020x), 350 mA @ 50°C (KG00xx)





Min. load current: 5 mA (KI020x), 4 mA (KG00xx)

Leakage current: <2.5 mA @ 250 VAC, <1.7 mA @ 110 VAC

Voltage drop: <10 VAC (KI020x), <6 VDC (KG00xx)

Protection rating: IP65

Cordsets

Type	Description	Part No.	List Price (1-pc.)
	1/2" Micro AC 2 m, PVC	E18212	\$15.00
	1/2" Micro AC 5 m, PVC	E18213	\$19.00
	1/2" Micro AC 2 m, PVC	E18214	\$15.00
	1/2" Micro AC 5 m, PVC	E18215	\$19.00
	M12 Micro DC (4-pin) 2 m, PUR	EVC001	\$9.95
	M12 Micro DC (4-pin) 5 m, PUR	EVC002	\$13.50
	M12 Micro DC (4-pin) 10 m, PUR	EVC003	\$18.00
	M12 Micro DC (4-pin) 2 m, PUR	EVC004	\$9.95
	M12 Micro DC (4-pin) 5 m, PUR	EVC005	\$13.50
	M12 Micro DC (4-pin) 10 m, PUR	EVC006	\$18.00

Process Sensors

Pressure

Flow

Level

Temperature



144 - 159



160 - 169



170 - 185



186 - 201

Industrial Networks

AS-i network



204 - 217

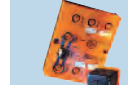
Safety systems



218 - 229

ID Systems

RF identification systems



232 - 235

Machine Condition

Diagnostic systems



238 - 243

Power Supplies

Power supplies



246 - 247

Wiring Technology

Cordset solutions



250 - 261



Top five product features!

- Detects bulk materials or liquids through non-metallic materials such as plastic and glass
- Sensor offers low-profile mounting – less than 15 mm high – provides same sensing range as traditional 30 mm tubular sensor
- Application parameters are quickly set up with the sensor's pushbuttons, eliminating difficult sensitivity adjustments
- Mounts on a flat surface, sight glass, plastic tube, or bypass pipe using brackets or cable ties
- Several models offer auto detection of PNP or NPN output loads

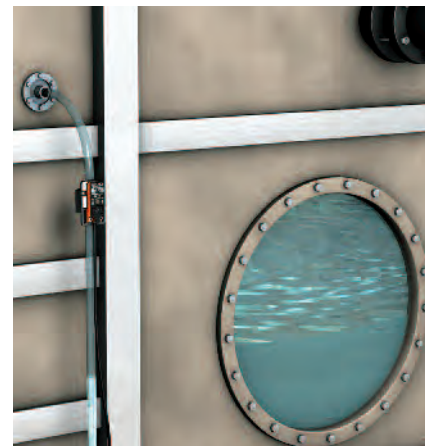
KQ Series point-level sensor with simple pushbutton setup

The KQ capacitive point-level sensor offers low-profile mounting for level sensing applications. The sensor detects bulk materials or liquids through non-metallic materials such as plastic and glass. The compact sensor is only 10 mm high and has the same sensing range as a traditional 30mm tubular sensor.

Application parameters are quickly set up with the sensor's pushbuttons. The sensor's teach function eliminates difficult sensitivity adjustments. Several models offer automatic detection of the PNP or NPN output loads. ifm's patented "charge balance" circuit design provides reliable noise immunity and enables the sensor to reliably perform in high noise level environments.

The sensor mounts on a flat surface, sight glass, plastic tube, or bypass pipe using brackets or cable ties. The 3-wire DC sensors are available in three models: 2m cabled, pigtail with M8 connector, and pigtail with M12 connector.

Detects bulk materials and liquids through non-metallic materials



Detection of liquids on a bypass tube.



Position Sensors							Motion Control	Vision Sensors	Safety Technology
Company	Inductive	Capacitive	Cylinder position	Photoelectrics and lasers	Distance, color and contrast	Fiber optics	Speed monitors	2D / 3D inspection	Safety products
1 - 7	10 - 47	48 - 53	54 - 59	60 - 91	92 - 97	98 - 103	106 - 109	112 - 125	128 - 141





Product + accessory selector


Outputs	Operating Voltage	Max. Load Current	Supply Current	Voltage Drop	Sensor Connection	Part No.	List Price (1-pc.)
PNP / NPN, N.O. / N.C.	10...36 VDC	100 mA	17 mA	2.5 V	2m PVC cable	KQ6001	\$96.00
PNP, N.O. / N.C.	10...36 VDC	100 mA	17 mA	2.5 V	2m PVC cable	KQ6002	\$96.00
PNP / NPN, N.O. / N.C.	10...36 VDC	100 mA	17 mA	2.5 V	40 mm PVC pigtail with M8 Pico DC	KQ6003	\$95.00
PNP, N.O. / N.C.	10...36 VDC	100 mA	17 mA	2.5 V	40 mm PVC pigtail with M8 Pico	KQ6004	\$95.00
PNP, N.O. / N.C.	10...36 VDC	100 mA	17 mA	2.5 V	100 mm PVC pigtail with M12 Micro DC	KQ6005	\$99.00

Mounting Accessories

Type	Description	Part No.	List Price (1-pc.)
	Mounting straps (set of 5)	E10880	\$7.00
	Mounting adapter for strap mounting	E12153	\$7.00

Cordsets

Type	Description	Part No.	List Price (1-pc.)
	M12 Micro DC (4-pin) 2 m, PUR	EVC001	\$9.95
	M12 Micro DC (4-pin) 5 m, PUR	EVC002	\$13.50
	M12 Micro DC (4-pin) 10 m, PUR	EVC003	\$18.00
	M8 Pico DC (4-pin) 2 m, PUR cable	EVC150	\$15.00
	M8 Pico DC (4-pin) 5 m, PUR cable	EVC151	\$18.00

 Can't find the right sensor for your application, call 800-441-8246 or visit www.ifm.com/us

Technical Specs

Dimensions: 48 x 20 x 14 mm
 Ambient temperature: -13...176 °F (-25...80 °C)
 Housing materials: Plastic (PBT, TPE-U and PC)
 Protection rating: IP65/IP67

Reliable service center

The ifm service center team provides tech support, product quotes, delivery information and order placement.

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Process Sensors

Pressure

Flow

Level

Temperature

Industrial Networks

AS-i network

Safety systems

ID Systems

RF identification systems

Machine Condition

Diagnostic systems

Power Supplies

Power supplies

Wiring Technology

Cordset solutions

144 - 159

160 - 169

170 - 185

186 - 201

204 - 217

218 - 229

232 - 235

238 - 243

246 - 247

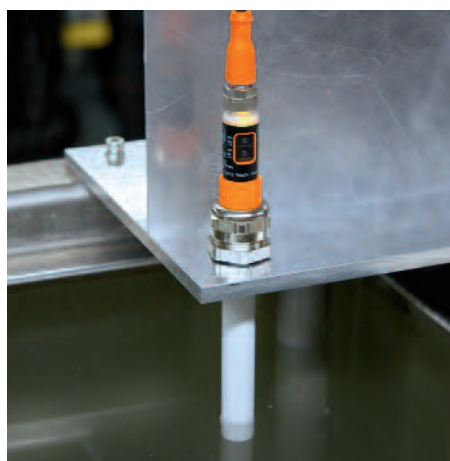
250 - 261



Top five product features!

- Protects against overflow in fluid sensing applications
- Capacitive sensing principle with no moving parts
- Polypropylene housing resistant to most chemicals
- Top-down mounting and simple setup with two pushbuttons
- Available in four lengths with adjustable insertion depths

New generation of overflow level sensors

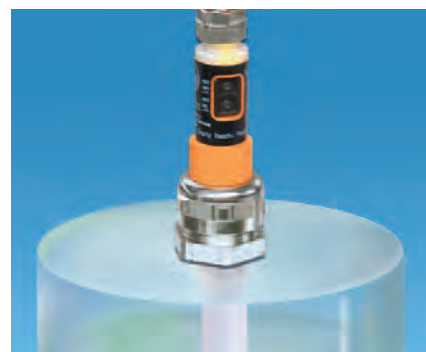


The LI Series level sensor offers reliable limit level detection in tanks, indicating high or low level of hydraulic oils and coolants. They may also be used to monitor the minimum level, leakage or overflow of tanks.

The sensor can be used as an independent overflow protection device or with other level sensors for added security against overflow.

The sensor's 16mm diameter probe is inserted directly into the fluid and is highly resistant to aggressive oils and lubricants. Setup and adjustment is easy using the sensor's "output on - output off" pushbutton teach function without removing the sensor from the process.

Pushbutton setup







The operating concept enables setting and adjustment of the output function via two pushbuttons. Deposits can be suppressed during operation without carrying out a new adjustment.

Position Sensors							Motion Control	Vision Sensors	Safety Technology
Company	Inductive	Capacitive	Cylinder position	Photoelectrics and lasers	Distance, color and contrast	Fiber optics	Speed monitors	2D / 3D inspection	Safety products
1 - 7	10 - 47	48 - 53	54 - 59	60 - 91	92 - 97	98 - 103	106 - 109	112 - 125	128 - 141



Product + accessory selector

Output	Probe Length	Active Sensing Area (from bottom of probe)	Process Connection	Medium Temperature Range	Part No.	List Price (1-pc.)
PNP, N.O. / N.C.	132 mm	31 mm	See Required Accessories	32...149 °F (0...65 °C)	LI5141	\$158.00
PNP, N.O. / N.C.	273 mm	31 mm	See Required Accessories	32...149 °F (0...65 °C)	LI5142	\$164.00
PNP, N.O. / N.C.	481 mm	31 mm	See Required Accessories	32...149 °F (0...65 °C)	LI5143	\$169.00
PNP, N.O. / N.C.	737 mm	31 mm	See Required Accessories	32...149 °F (0...65 °C)	LI5144	\$176.00

Required Accessories (choose one)

Type	Description	Part No.	List Price (1-pc.)
	3/4" NPT adapter	E43012	\$39.00
	1" NPT adapter	E43013	\$43.00
	G3/4 BSPP adapter	E43003	\$39.00
	G1 BSPP adapter	E43004	\$41.00
	Flange adapter	E43001	\$37.00
	Weldable adapter	E43002	\$39.00

Cordsets

Type	Description	Part No.	List Price (1-pc.)
	M12 Micro DC (4-pin) 2 m, PUR	EVC001	\$9.95
	M12 Micro DC (4-pin) 5 m, PUR	EVC002	\$13.50
	M12 Micro DC (4-pin) 10 m, PUR	EVC003	\$18.00
	M12 Micro DC (4-pin) 2 m, PUR	EVC004	\$9.95
	M12 Micro DC (4-pin) 5 m, PUR	EVC005	\$13.50
	M12 Micro DC (4-pin) 10 m, PUR	EVC006	\$18.00

▶ Can't find the right sensor for your application, call 800-441-8246 or visit www.ifm.com/us

Technical Specs

Supply voltage: 10...36 VDC
 Maximum load current: 200 mA
 Pressure rating: 7 psi
 Wetted parts: Polypropylene (PP)
 Recommended media: Aqueous coolant, oil, water, water-based media
 Operating temperature range: -13...176 °F (-25...80 °C)
 Protection rating: IP67

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Process Sensors

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Flow

Level

Temperature

Industrial Networks

AS-i network

Safety systems

ID Systems

RF identification systems

Machine Condition

Diagnostic systems

Power Supplies

Power supplies

Wiring Technology

Cordset solutions

144 - 159

160 - 169

170 - 185

186 - 201

204 - 217

218 - 229

232 - 235

238 - 243

246 - 247

250 - 261



Top five product features!

- Monitors the level of liquids, viscous media and powders in processing tanks and pipes
- Provides reliable level indication in storage tanks and protects pumps from run-dry conditions
- High frequency capacitance technology suppresses residues, foam and deposit build-up
- Smooth PEEK sensing tip resists media from sticking
- Robust 316 stainless steel body withstands the harshest of environments

Point level sensor reliably suppress residues, splashes and foam

NEW! ifm's LMT Series point-level sensor is designed to monitor the level of viscous media and liquids in industrial automation environments.

The LMT provides reliable level indication of storage tanks and protects pumps from run dry protection. ifm's patented high frequency (MHz) capacitive spectrum profiling technology enables the sensor to differentiate between actual product in a tank or only residue.

The 316 stainless steel housing and PEEK sensing tip form a completely sealed unit that prevents liquid ingress and has a high protection rating of IP68/IP69K. A bright LED indicates output status. Units are available with various probe lengths and cover a wide range of applications.

The one-piece LMT is easy to mount and is factory preset for the most commonly used media.



The LMT sensor is ideal for pipe level applications and eliminates obstructions in the flow path that reduce throughput.



The LMT Series level sensor offers reliable level detection in tanks, indicating high or low levels of oils, water and powder-based media.

Position Sensors

Company

Inductive

Capacitive

Cylinder
position

Photoelectrics
and lasers

Distance, color
and contrast

Fiber optics

Motion Control

Speed
monitors

Vision Sensors

2D / 3D
inspection

Safety Technology

Safety
products



1 - 7



10 - 47



48 - 53



54 - 59



60 - 91



92 - 97



98 - 103



106 - 109



112 - 125



128 - 141



Product + accessory selector

Type	Process Connection	Insertion Length (mm)	Factory Default Media Setting	Programmable	Medium Temp Water-Based	Medium Temp Oil-Based	Part No.	List Price (1-pc.)
2 x PNP / NPN · N.O. / N.C. Programmable								
	G 1/2 BSPP	12	Water-based	No	32...185 °F	32...212 °F	LMT100	\$212.00
	G 1/2 BSPP	12	Oil/powder-based	No	32...185 °F	32...212 °F	LMT110	\$212.00
	G 1/2 BSPP	12	Dissolved sugars	Yes	-40...185 °F	-40...212 °F	LMT121	\$212.00
	G 1/2 BSPP	153	Water-based	Yes	-4...185 °F	-4...212 °F	LMT104	\$245.00
	G 1/2 BSPP	253	Water-based	Yes	-4...185 °F	-4...212 °F	LMT105	\$250.00
	1/2" NPT	38	Water-based coolants	Yes	-4...185 °F	-4...212 °F	LMC502	\$195.00

Required Accessories for G 1/2 BSPP Sensors

Type	Description	Part No.	List Price (1-pc.)
	Welding adapter for tanks	E43300	\$38.00
	Welding adapter for pipes	E43301	\$44.00
	3/4" NPT adapter	E43313	\$46.00

Optional Accessories

Type	Description	Part No.	List Price (1-pc.)
	USB IO-Link master cable connects PC to master	E30396	\$140.00
	LineRecorder Sensor App, Software for parameter setting	ZGS210	\$69.00
	Sealing plug	E43308	\$43.00
	Heat sink welding mandrel	E43314	\$34.00

Cordsets

Type	Description	Part No.	List Price (1-pc.)
	M12 Micro DC (4-pin) 2 m, PUR	EVC001	\$9.95
	M12 Micro DC (4-pin) 5 m, PUR	EVC002	\$13.50
	M12 Micro DC (4-pin) 10 m, PUR	EVC003	\$18.00
	M12 Micro DC (4-pin) 2 m, PUR	EVC004	\$9.95
	M12 Micro DC (4-pin) 5 m, PUR	EVC005	\$13.50
	M12 Micro DC (4-pin) 10 m, PUR	EVC006	\$18.00

Technical Specs

Operating Voltage:	18...30 V DC
Current Rating:	100 mA
Housing materials:	316L stainless steel
Materials wetted parts:	PEEK
Protection:	PEEK, 316L stainless steel, Viton™: LMT104, LMT105
Ambient temp:	IP 68 / IP 69K
	-40...185 °F

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Process Sensors

Pressure

Flow

Level

Temperature

Industrial Networks

AS-i network

Safety systems

ID Systems

RF identification systems

Machine Condition

Diagnostic systems

Power Supplies

Power supplies

Wiring Technology

Cordset solutions

144 - 159

160 - 169

170 - 185

186 - 201

204 - 217

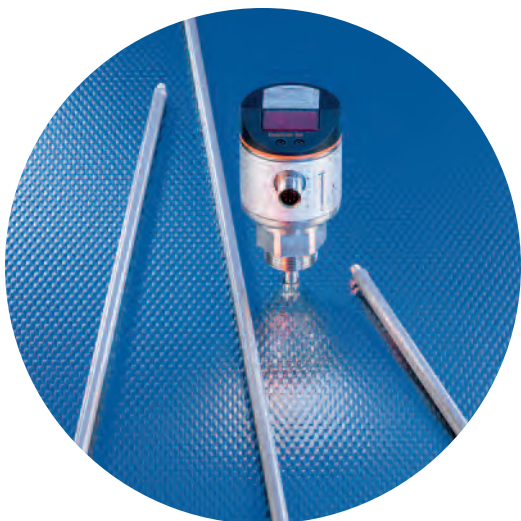
218 - 229

232 - 235

238 - 243

246 - 247

250 - 261



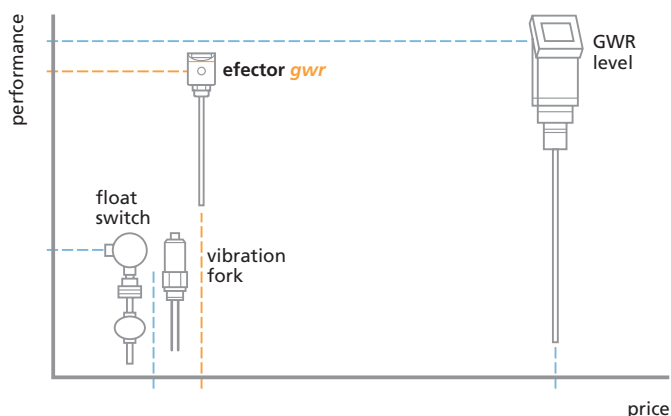
Top five product features!

- Ideal for level detection of water-based media in compact tanks
- No moving parts – replaces float switches
- Integrated display with pushbutton setup
- Built-in switching and analog output
- Simple mounting with cut-to-length measuring probe

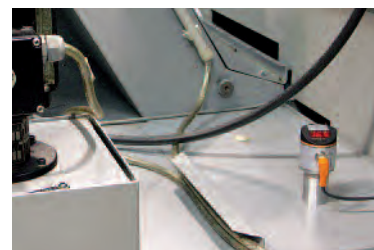
High performance at a great value

The **efector gwr** provides all of the advantages of reliable level detection using innovative guided wave radar technology at a very low price. Alternative level solutions may offer a lower price but may not perform in challenging applications.

Mechanical float switches can stick in an application due to deposits. Vibration forks offer slightly better performance, but multiple units are required to detect the level of the medium. Traditional GWR level sensors offer an improved performance, but at a very high price point.

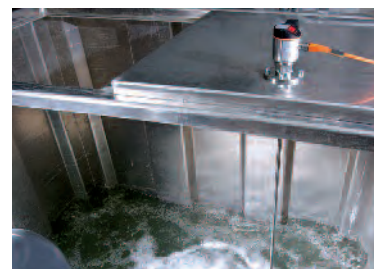


Easy installation



The **efector gwr** is directly mounted into the tank via a threaded process connection or metal bracket. Power and output are provided with an M12 connector. If needed, the probe can be cut to length by the user.

Longer probe lengths



The LR Series offers long probe lengths for depths up to 63".

Position Sensors

Company

Inductive

Capacitive

Cylinder position

Photoelectrics and lasers

Distance, color and contrast

Fiber optics

Motion Control

Speed monitors

Vision Sensors

2D / 3D inspection

Safety Technology

Safety products



1 - 7

10 - 47

48 - 53

54 - 59

60 - 91

92 - 97

98 - 103

106 - 109

112 - 125


128 - 141




Product + accessory selector

Output	Process Connection	Probe Length	Media	Medium Temperature Range	Part No.	List Price (1-pc.)
2 x PNP, N.O. / N.C.	3/4" NPT	See required accessories	Water-based solutions	32...176 °F (0...80 °C)	LR7300	\$413.00
4 x PNP, N.O. / N.C.	3/4" NPT	See required accessories	Water-based solutions	32...176 °F (0...80 °C)	LR8300	\$485.00
4...20 mA / 0...10 V and PNP, N.O. / N.C.	3/4" NPT	See required accessories	Water-based solutions	32...176 °F (0...80 °C)	LR3300	\$492.00
2 x PNP, N.O. / N.C.	G3/4 BSPP	See required accessories	Water-based solutions	32...176 °F (0...80 °C)	LR7000	\$413.00
4 x PNP, N.O. / N.C.	G3/4 BSPP	See required accessories	Water-based solutions	32...176 °F (0...80 °C)	LR8000	\$485.00
4...20 mA / 0...10 V and PNP, N.O. / N.C.	G3/4 BSPP	See required accessories	Water-based solutions	32...176 °F (0...80 °C)	LR3000	\$492.00





Required Accessories (choose one)

Type	Description	Part No.	List Price (1-pc.)
	240 mm Sensing probe, 316 SS	E43203	\$19.00
	450 mm Sensing probe, 316 SS	E43204	\$29.00
	700 mm Sensing probe, 316 SS	E43205	\$40.00
	1000 mm Sensing probe, 316 SS	E43207	\$63.00
	1200 mm Sensing probe, 316 SS	E43208	\$73.00
	1400 mm Sensing probe, 316 SS	E43209	\$88.00
	1600 mm Sensing probe, 316 SS	E43210	\$100.00

Optional Accessories

Type	Description	Part No.	List Price (1-pc.)
	Mounting flange, 3/4" NPT	E43206	\$46.00
	Mounting flange, G3/4 BSPP	E43201	\$46.00

Cordsets

Type	Description	Part No.	List Price (1-pc.)
	M12 Micro DC (4-pin) 2 m, PUR	EVC001	\$9.95
	M12 Micro DC (4-pin) 5 m, PUR	EVC002	\$13.50
	M12 Micro DC (4-pin) 10 m, PUR	EVC003	\$18.00
	M12 Micro DC (4-pin) 2 m, PUR	EVC004	\$9.95
	M12 Micro DC (4-pin) 5 m, PUR	EVC005	\$13.50
	M12 Micro DC (4-pin) 10 m, PUR	EVC006	\$18.00
	M12 Micro DC (8-pin) 2 m, PUR (for LR8)	E11231	\$28.00
	M12 Micro DC (8-pin) 5 m, PUR (for LR8)	E11232	\$34.00
	T-splitter (8-pin female M12 to two 4-pin male M12)	E11627	\$51.00



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Technical Specs

Supply voltage: 18...30 VDC
 Maximum load current: 200 mA per output
 Pressure rating: -14.5...58 psi (-1...4 bar)
 Accuracy: $\pm 0.6'' \pm 0.5\%$ of full range
 ($\pm 1.5 \text{ cm} \pm 0.5\%$ of full range)
 Repeatability: $\pm 0.2'' (\pm 0.5 \text{ cm})$
 Wetted parts: 316 stainless steel, PTFE, NBR
 Protection rating: IP67

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Process Sensors

Pressure

Flow

Level

Temperature

Industrial Networks

AS-i network

Safety systems

ID Systems

RF identification systems

Machine Condition

Diagnostic systems

Power Supplies

Power supplies

Wiring Technology

Cordset solutions

144 - 159

160 - 169

170 - 185

186 - 201

204 - 217

218 - 229

232 - 235

238 - 243

246 - 247

250 - 261



Top five product features!

- *Modular level sensor is ideal for level detection of oils or water-based media in compact tanks*
- *Stainless steel housing with no moving parts that can stick is an ideal alternative to float switches*
- *Integrated display with pushbutton setup*
- *Built-in switching and analog output*
- *Simple mounting with cut-to-length measuring probe*



The LR Series level sensor reliably monitors oil-based media

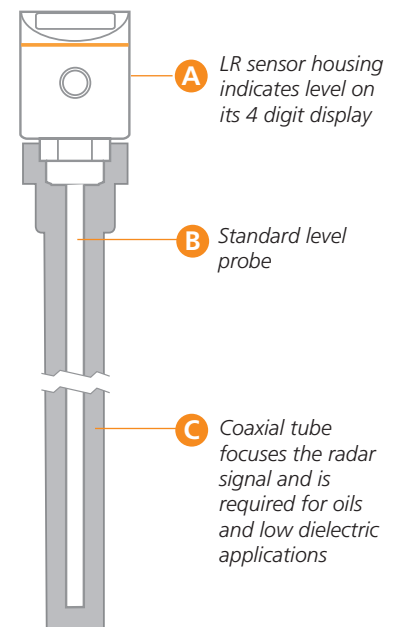
The efector gwr sensor's measuring principle is echo time of flight using guided wave radar technology to detect liquid level in applications such as parts cleaning, coolant monitoring, water treatment and hydraulic power units. This technology enables a strong signal strength and the ability to ignore build up.

The modular system consists of a compact, stainless steel sensor housing with numeric display and pushbutton setup and a cut-to-length stainless steel measuring probe that easily attaches to the sensor housing.

To monitor oil and low-dielectric fluids, a coaxial tube is required for this application. The coaxial tube is an open-ended stainless steel cover that slips over the probe and provides a direct 3/4" NPT (or G3/4 BSPP) process connection. The tube can be cut-to-length and should be the same length as the probe. During operation, the guided wave radar pulse travels down the probe and is contained within the coaxial tube. The tube forces the radar signal back to the sensor head indicating reliable level detection.

With no moving parts, the maintenance-free level sensor does not need routine cleanings and offers a long life-in-application. The units are Micro DC and versions are available with 2 or 4 switch points and a scaleable analog output with a single switchpoint for alarm level detection.

Modular level system is easy to install



Position Sensors

Company

Inductive

Capacitive

Cylinder position

Photoelectrics and lasers

Distance, color and contrast

Fiber optics

Motion Control

Speed monitors

Vision Sensors

2D / 3D inspection

Safety Technology

Safety products



1 - 7

10 - 47

48 - 53

54 - 59

60 - 91

92 - 97

98 - 103

106 - 109

112 - 125

128 - 141




Product + accessory selector





A LR Level Sensor

Output	Probe Length	Media	Medium Temperature Range	Part No.	List Price (1-pc.)
2 x PNP, N.O. / N.C.	See required accessories	Oil and water-based solutions	32...176 °F (0...80 °C)	LR7000	\$413.00
4 x PNP, N.O. / N.C.	See required accessories	Oil and water-based solutions	32...176 °F (0...80 °C)	LR8000	\$485.00
4...20 mA / 0...10 V and PNP, N.O. / N.C.	See required accessories	Oil and water-based solutions	32...176 °F (0...80 °C)	LR3000	\$492.00



B Required Accessory - Probe (choose one)

Type	Description	Part No.	List Price (1-pc.)
	240 mm Probe, 316 SS	E43203	\$19.00
	450 mm Probe, 316 SS	E43204	\$29.00
	700 mm Probe, 316 SS	E43205	\$40.00
	1000 mm Probe, 316 SS	E43207	\$63.00
	1200 mm Probe, 316 SS	E43208	\$73.00
	1400 mm Probe, 316 SS	E43209	\$88.00
	1600 mm Probe, 316 SS	E43210	\$100.00


Cordsets

Type	Description	Part No.	List Price (1-pc.)
	M12 Micro DC (4-pin) 2 m, PUR	EVC001	\$9.95
	M12 Micro DC (4-pin) 5 m, PUR	EVC002	\$13.50
	M12 Micro DC (4-pin) 10 m, PUR	EVC003	\$18.00
	M12 Micro DC (4-pin) 2 m, PUR	EVC004	\$9.95
	M12 Micro DC (4-pin) 5 m, PUR	EVC005	\$13.50
	M12 Micro DC (4-pin) 10 m, PUR	EVC006	\$18.00
	M12 Micro DC (8-pin) 2 m, PUR (for LR8)	E11231	\$28.00
	M12 Micro DC (8-pin) 5 m, PUR (for LR8)	E11232	\$34.00
	T-splitter (8-pin female M12 to two 4-pin male M12)	E11627	\$51.00

C Required Accessory - Coaxial Tube (choose one)

Type	Description	Part No.	List Price (1-pc.)
	450 mm Coaxial tube, 3/4" NPT, 304 SS	E43218	\$86.00
	700 mm Coaxial tube, 3/4" NPT, 304 SS	E43219	\$97.00
	1000 mm Coaxial tube, 3/4" NPT, 304 SS	E43220	\$110.00
	1200 mm Coaxial tube, 3/4" NPT, 304 SS	E43223	\$133.00
	1400 mm Coaxial tube, 3/4" NPT, 304 SS	E43224	\$155.00
	1600 mm Coaxial tube, 3/4" NPT, 304 SS	E43221	\$176.00
	240 mm Coaxial tube, G3/4 BSPP, 304 SS	E43211	\$74.00
	450 mm Coaxial tube, G3/4 BSPP, 304 SS	E43212	\$86.00
	700 mm Coaxial tube, G3/4 BSPP, 304 SS	E43213	\$97.00
	1000 mm Coaxial tube, G3/4 BSPP, 304 SS	E43214	\$110.00
	1200 mm Coaxial tube, G3/4 BSPP, 304 SS	E43215	\$133.00
	1400 mm Coaxial tube, G3/4 BSPP, 304 SS	E43216	\$155.00
	1600 mm Coaxial tube, G3/4 BSPP, 304 SS	E43217	\$176.00

Optional Accessory

Type	Description	Part No.	List Price (1-pc.)
	Replacement centering piece with fixing bracket and o-ring for coaxial tubes	E43222	\$15.00

Technical Specs

Supply voltage:	18...30 VDC
Maximum load current:	200 mA per output
Pressure rating:	-14.5...58 psi (-1...4 bar)
Accuracy:	±0.6" +0.5% of full range (±1.5 cm +0.5% of full range)
Repeatability:	±0.2" (±0.5 cm)
Wetted parts:	316 stainless steel, PTFE, NBR
Protection rating:	IP67

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Process Sensors

Pressure

Flow

Level

Temperature

Industrial Networks

AS-i network

Safety systems

ID Systems

RF identification systems

Machine Condition

Diagnostic systems

Power Supplies

Power supplies

Wiring Technology

Cordset solutions

144 - 159

160 - 169

170 - 185

186 - 201

204 - 217

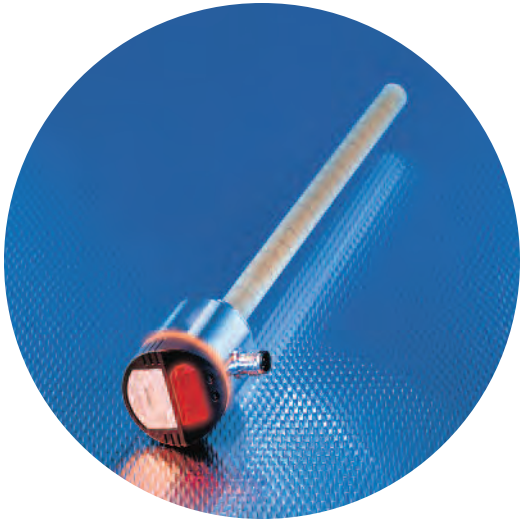
218 - 229

232 - 235

238 - 243

246 - 247

250 - 261



Top five product features!

- *Electronic level sensor replaces mechanical float switches that can stick*
- *Pushbutton setup allows the sensor's parameters to be easily adjusted without removing the sensor from the process*
- *Independent overflow protection*
- *Highly visible numeric display*
- *Models are available with integrated temperature monitoring*

Replaces mechanical float switches

Fluids that contain particles such as metal chips can cause floats on traditional mechanical level switches to stick. ifm efector's LK level sensor is an electronic "floatless" sensor that accurately detects fluid level without any moving parts. Using ifm's patented capacitive sensing technology, the sensor determines level by measuring the point of dielectric contrast that occurs at the level height.



LK level sensors feature an enhanced software algorithm that scans 16 sensing fields along the length of a probe to determine the point at which the change in dielectric occurs. Upon startup, the sensing fields are evaluated every eight milliseconds to provide precise continuous level indication.

Replaces up to four binary switches

ifm's LK level sensors are available with 2 or 4 switching outputs, as well as an analog and switching output model. Thus, one level sensor can replace up to four binary switches, reducing wiring, material, and mounting costs.

Easy mounting



ifm's electronic LK level sensors can be inserted into a tank opening as small as 20 mm in diameter.

Position Sensors							Motion Control	Vision Sensors	Safety Technology
Company	Inductive	Capacitive	Cylinder position	Photoelectrics and lasers	Distance, color and contrast	Fiber optics	Speed monitors	2D / 3D inspection	Safety products
1 - 7	10 - 47	48 - 53	54 - 59	60 - 91	92 - 97	98 - 103	106 - 109	112 - 125	128 - 141



Product + accessory selector







Output	Probe Length	Active Measuring Zone	Required Accessories	Suitable Media	Part No.	List Price (1-pc.)
Continuous Level Monitoring						
2x PNP, N.O. / N.C.	264 mm	196 mm	See below	Oil	LK1022	\$403.00
2x PNP, N.O. / N.C.	472 mm	391 mm	See below	Oil	LK1023	\$437.00
2x PNP, N.O. / N.C.	729 mm	584 mm	See below	Oil	LK1024	\$466.00
3x PNP, N.O. / N.C. & OP*	264 mm	196 mm	See below	Oil	LK8122	\$459.00
3x PNP, N.O. / N.C. & OP*	472 mm	391 mm	See below	Oil	LK8123	\$498.00
3x PNP, N.O. / N.C. & OP*	729 mm	584 mm	See below	Oil	LK8124	\$526.00
4...20 mA / 0...10 V & OP*	264 mm	196 mm	See below	Oil	LK3122	\$465.00
4...20 mA / 0...10 V & OP*	472 mm	391 mm	See below	Oil	LK3123	\$503.00
4...20 mA / 0...10 V & OP*	729 mm	584 mm	See below	Oil	LK3124	\$530.00

*Dedicated overflow output protection







Continuous Level and Temperature Monitoring

2x PNP, N.O. / N.C. (level and temp)	264 mm	196 mm	See below	Oil	LT8022	\$490.00
2x PNP, N.O. / N.C. (level and temp)	472 mm	391 mm	See below	Oil	LT8023	\$527.00
2x PNP, N.O. / N.C. (level and temp)	729 mm	584 mm	See below	Oil	LT8024	\$553.00

Required Accessories

Type	Description	Part No.	List Price (1-pc.)
	3/4" NPT adapter	E43012	\$39.00
	1" NPT adapter	E43013	\$43.00
	G3/4 BSPP adapter	E43003	\$39.00
	G1 BSPP adapter	E43004	\$41.00
	Flange adapter	E43001	\$37.00
	Weldable adapter	E43002	\$39.00

Optional Accessories and Cordsets

Type	Description	Part No.	List Price (1-pc.)
	T-splitter (8-pin female M12 to two 4-pin male M12)	E11627	\$51.00
	M12 Micro DC (4-pin) 5 m, PUR	EVC002	\$13.50
	M12 Micro DC (4-pin) 10 m, PUR	EVC003	\$18.00
	M12 Micro DC (4-pin) 5 m, PUR	EVC005	\$13.50
	M12 Micro DC (4-pin) 10 m, PUR	EVC006	\$18.00
	M12 Micro DC (8-pin) 5 m, PUR (for LK8 and LT8)	E11232	\$34.00


Technical Specs

Supply voltage: 18...30 VDC
 Maximum load current: 200 mA per channel
 Pressure rating: 7 psi
 Media temperature: 32...149 °F (0...65 °C)
 Accuracy: ±5% of full range
 Repeatability: ±2% of full range
 Wetted parts: PP
 Housing material: 304 S15, FKM; NBR; PBT; PC; PEI; PP; TPE/V
 Protection rating: IP67

R&D that delivers solutions



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Process Sensors

Pressure

Flow

Level

Temperature



144 - 159



160 - 169



170 - 185



186 - 201

Industrial Networks

AS-i network



204 - 217

Safety systems



218 - 229

ID Systems

RF identification systems



232 - 235

Machine Condition

Diagnostic systems



238 - 243

Power Supplies

Power supplies



246 - 247

Wiring Technology

Cordset solutions



250 - 261