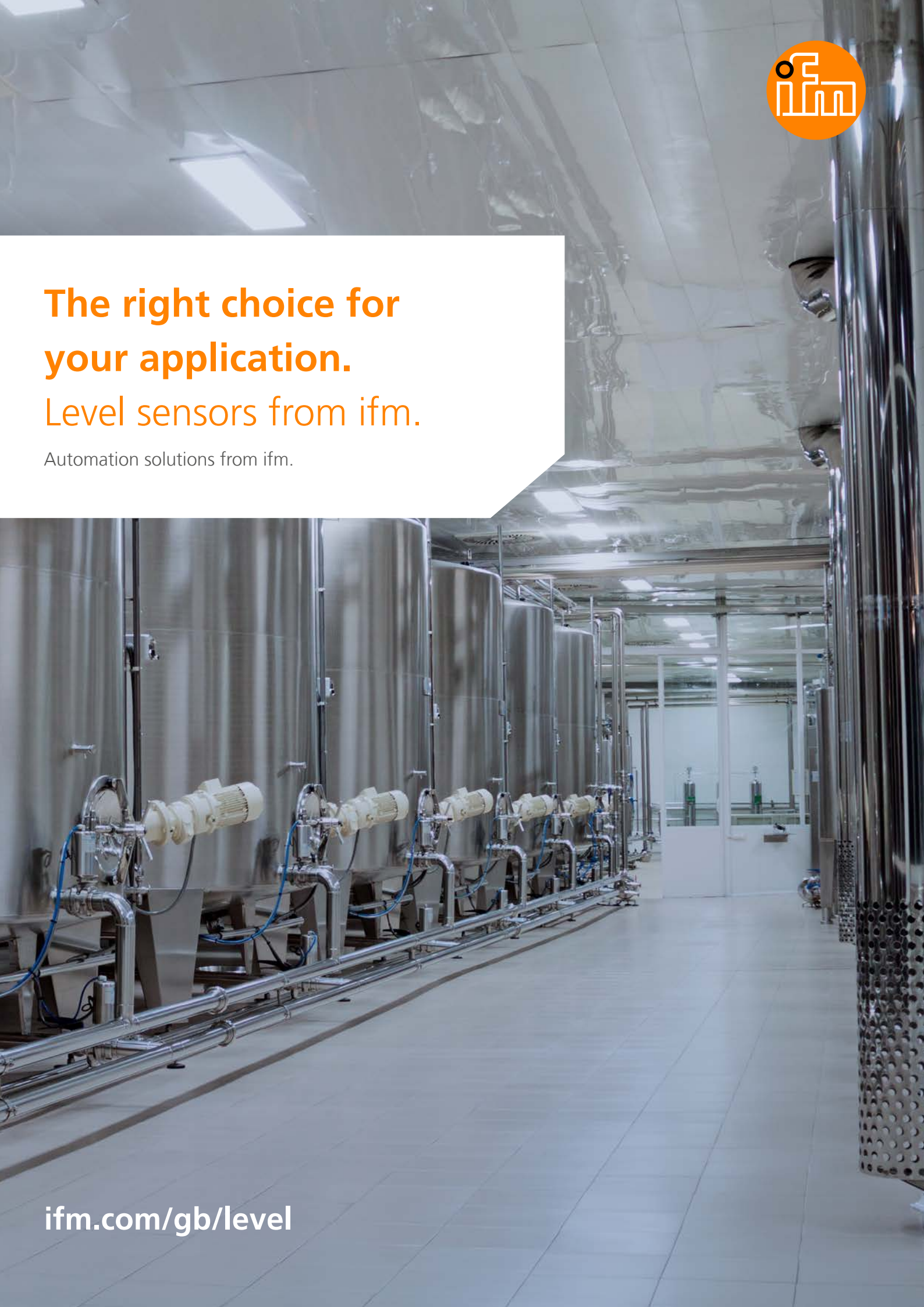


The right choice for your application.

Level sensors from ifm.

Automation solutions from ifm.

ifm.com/gb/level

Systems for level monitoring. The optimum solution for every requirement.

Contents

Sensor type	Max. measuring range	Analogue output	Switching output	Approvals	
LMT, LMC	–	–	√	EHEDG, 3A, FDA, EC1935, WHG, ATEX, DNV/GL, FCM	4 – 5
LI	–	–	√	WHG	6 – 7
KG, KI; KQ	25	–	√		8 – 11
LK, LT	73	√	√	WHG	12 – 13
LW	1000	√	√	EHEDG, 3A, FDA, EC1935, USP VI	14 – 15
LR	200	√	√	EHEDG, 3A, FDA, EC1935, WHG	16 – 19
PG, PI, PA PS, PN, PE, PM	–	√	√	EHEDG, 3A, FDA, EC1935, ATEX, DNV/GL, FCM	20 – 25
UGT, UIT	800	√	√		26 – 27
O1D	980	√	√		28 – 29
O3D	800	√	√		30 – 31
					32 – 33
					34 – 35

Impedance spectroscopy. The alternative to tuning forks. Suppression of residues and foam.

Reliable detection:
Suppression of residues, splashing water or foam.

Better than a tuning fork:
No mechanical components, fully compatible regarding installation and function.

Immediately ready for use:
Factory settings for the most common media.

Adaptable using IO-Link:
Adaptation to and differentiation of media configurable.

More transparency:
Read process values to optimise the application.

Hygienic design:
High-grade stainless steel housing with PEEK sensor tip. Versions for industrial and hygienic applications.

Type LMC level sensors

Flexible mounting thanks to orientation-independent installation.

Approval to DNV/GL.

Complementary switching outputs.

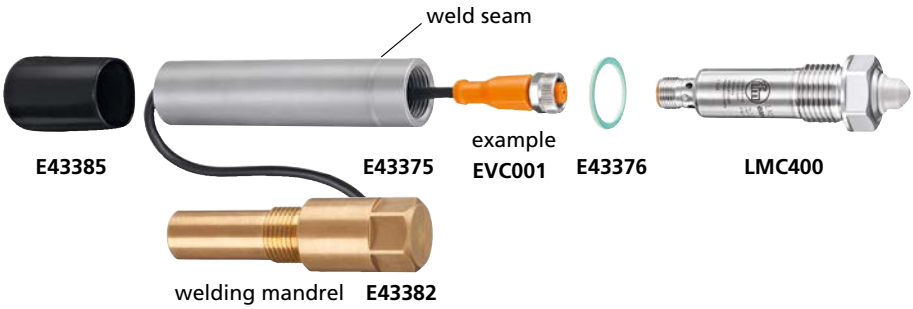
A thread at the back permits variable insertion depths.

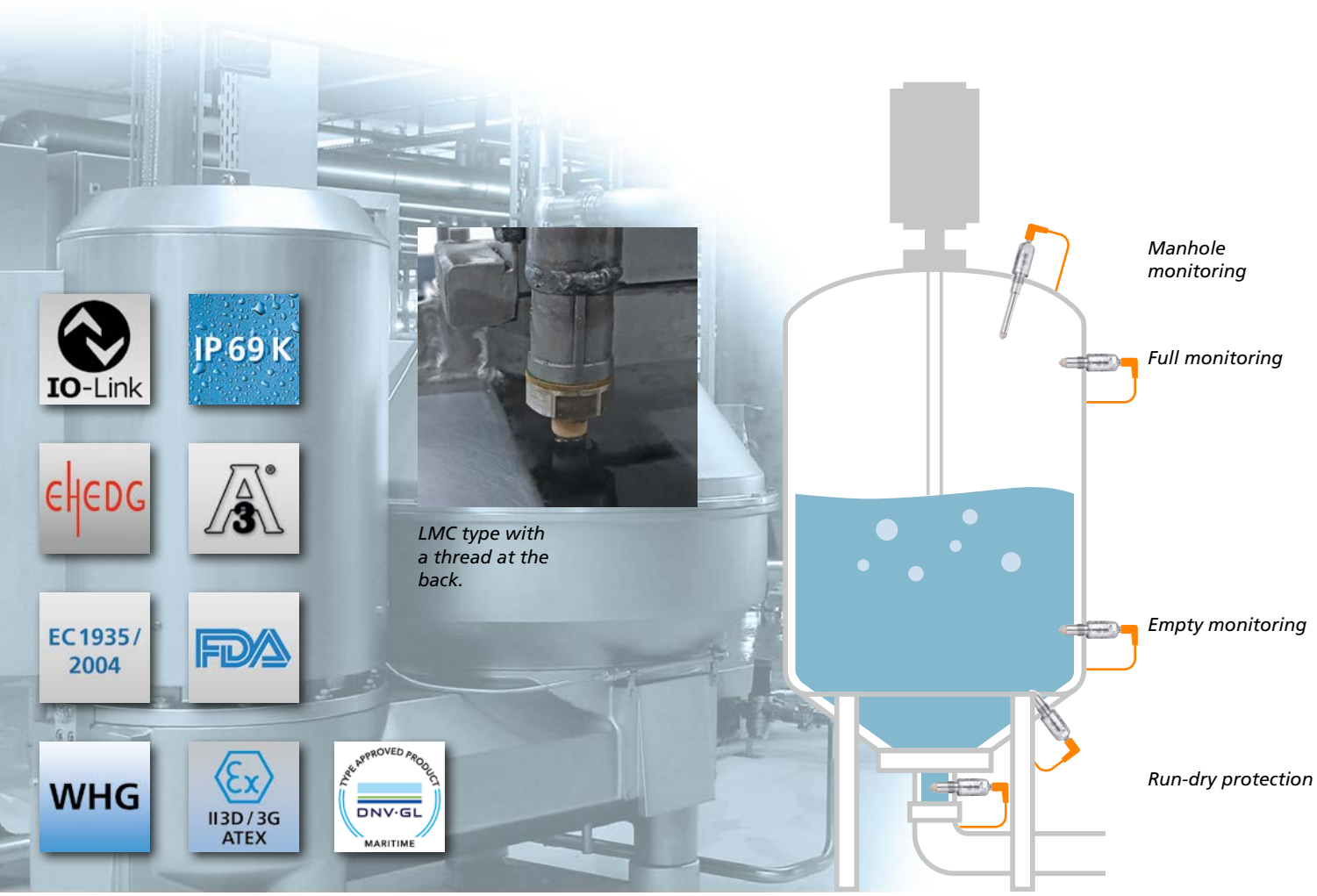
Process connection	Installation depth [mm]	Order no.	Order no.
Use		Water	Oil
G 1/2	10	**LMC100**	**LMC110**
G 1/2	21	**LMC400**	**LMC410**
1/2 NPT	34	**LMC500**	**LMC510**
1/2 NPT	40	**LMC502**	

For adapters see pages 32 - 33

Installation example LMC400:

Rear installation of the LMC400 sensor in the pipe permits variable installation depths.





LMC type with a thread at the back.

LMT level sensors

Flexible mounting thanks to orientation-independent installation.

Shock and vibration resistant in a robust stainless steel housing.

Hygienic approvals EHEDG, 3A and FDA.

Versions available as overflow prevention.

Complementary switching outputs.

Process connection	Installation depth [mm]	Order no.	Order no.	Order no.
Approvals		Sanitary	WHG	ATEX
Preset to aqueous media				
G 1/2	11	**LMT100**	**LMT191**	
G 1/2	38	**LMT102**	**LMT192**	
G 1/2	153	**LMT104**	**LMT194**	
G 1/2	253	**LMT105**	**LMT195**	
G 3/4	28	**LMT202**	**LMT292**	
G 1	38	**LMT302**	**LMT392**	
Preset to oils, fats, powder				
G 1/2	11	**LMT110**		**LMT01A**
G 1/2	153			**LMT03A**
G 1/2	253			**LMT04A**
Preset to sugary media				
G 1/2	11	**LMT121**		

Capacitive.
For overflow prevention and leakage monitoring.

Ready in no time:
Easy mounting adjustment.

Flexible:
Normally closed / normally open programmable.

Clear:
Clearly visible indication of the switch points.

Variable use:
Insertion depths of 132 to 737 mm.

Certified:
Approval as overflow protection or leakage sensor to the German Federal Water Act.

LI type point level sensor

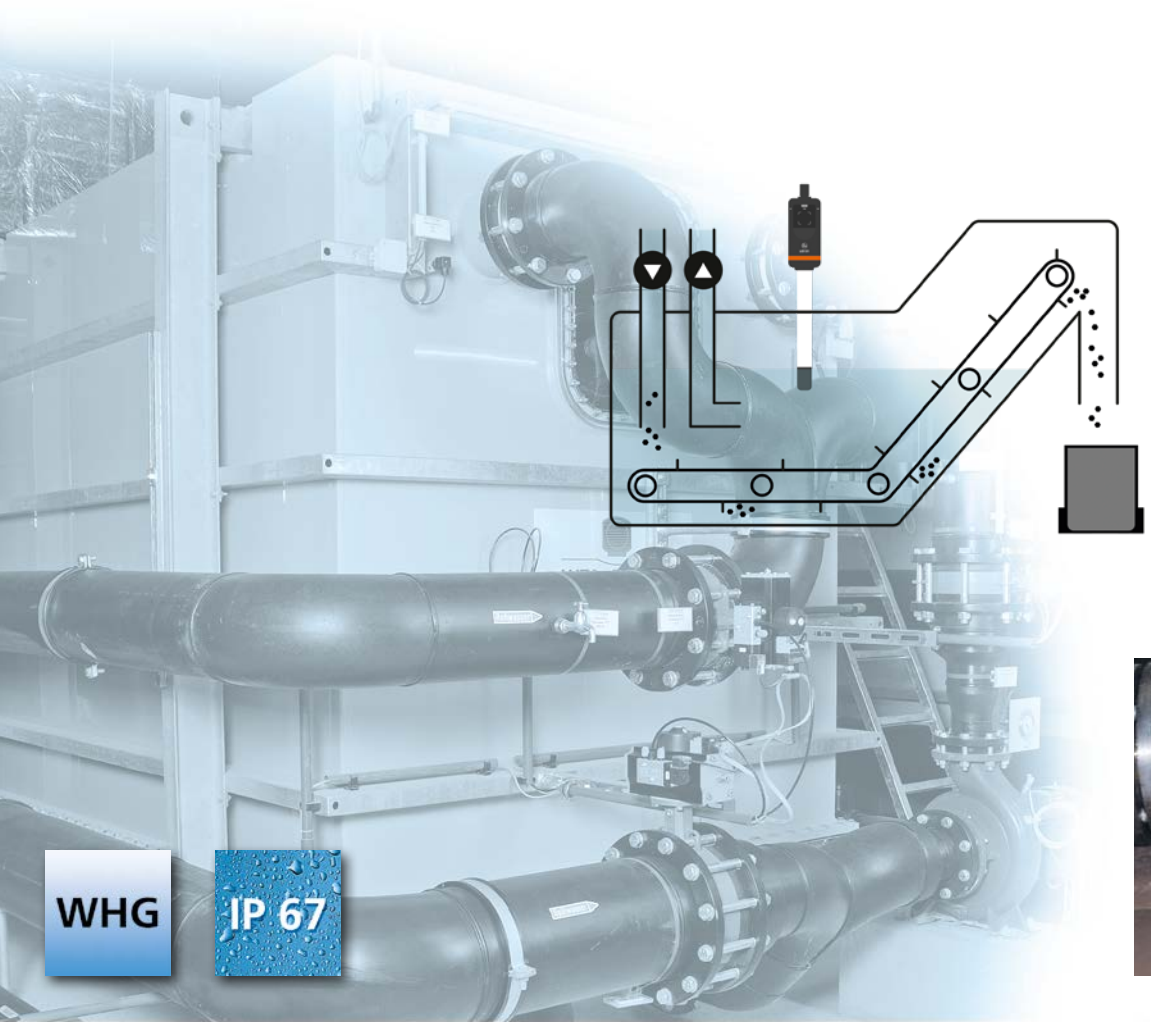
Optimised for use in hydraulic oils and coolants.

Modular mounting concept for flexible use.

It only takes one push of a button to adjust and set the output function.

Probe length [mm]	Temperature water [°C]	Temperature oil [°C]	Order no.
2 switching outputs, 1 x temperature, 1 x level or 2 x level depending on damping (e.g. water/oil)			
132	-10...85	-10...85	**LI5131**
273	-10...85	-10...85	**LI5132**
481	-10...85	-10...85	**LI5133**
737	-10...85	-10...85	**LI5134**

For adapters see pages 32 - 33



Probe length [mm]	Temperature water [°C]	Temperature oil [°C]	Order no.
1 switching output, normally closed			
Overflow prevention to WHG			
132	0...35	0...65	**LI2141**
273	0...35	0...65	**LI2142**
481	0...35	0...65	**LI2143**
Leakage sensor to WHG			
132	0...35	0...65	**LI2241**
273	0...35	0...65	**LI2242**
481	0...35	0...65	**LI2243**

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Capacitive.
For detection through non-metallic tank walls.

User-friendly:
Many functions such as binary switching output, timer functions as output, damping function as well as normally closed / normally open and window function.

Communicative:
Process values, parameter setting data and diagnostic information can be transferred and evaluated via IO-Link.

Simple:
Parameter setting via IO-Link before installation, as an alternative also via pushbuttons on the sensor.

Repeatable:
Simple parameter setting of many sensors via "copy & paste" in the LR DEVICE software or via a memory plug.

Perfect:
Ingeniously simple switch point setting thanks to the LED display.

KG / KI type point level sensors

Capacitive sensors in cylindrical M18 or M30 housing.

Protection rating IP 65 to IP 69K.

High medium temperature up to 110 °C.

EMC resistance up to 30,000 V.

12-digit display for optimum switch point setting (KG / KI6000).

Sensing range [mm]	Connection	Setting	Order no.	Order no.	Order no.
DC PNP			normally closed	normally open	programmable
M18 housing, plastic					
0.5...40 nf	M12 connector	signal display			**KG6000**
8 nf	cable	teach button			**KG5069**[1]
12 nf	M12 connector	teach button			**KG5066**
0.5...30 nf	cable	potentiometer	**KG5301**	**KG5303**	
0.5...30 nf	M12 connector	potentiometer	**KG5307**	**KG5309**	
M30 housing, plastic					
0.5...40 nf	M12 connector	signal display			**KI6000**
20 nf	M12 connector	teach button			**KI5083**
0.5...40 nf	cable	potentiometer	**KI5301**	**KI5303**	
0.5...40 nf	M12 connector	potentiometer	**KI5307**	**KI5309**	
M30 housing, metal					
8 f	M12 connector	teach button			**KI5085**
15 nf	M12 connector	teach button			**KI5087**

[1] Housing white PP
f: flush installation nf: non-flush installation

Easy empty and full teach on bypasses

Are suited for bypass installation for easy empty and full teach without value fluctuations or interruption of the process.

Installation with and without contact with the medium

Can operate in and outside the medium.

Detection of bulk material and liquids.

Are suited, in contrast to other measuring principles, for liquids and bulk material.

Trouble-free use.

Look through non-metallic walls.

Suppress deposits.

Versions for potentially explosive atmospheres (ATEX).

IO-Link

IP 65
IP 67

12-digit display for optimum switch point setting (KG / KI6000).

KQ type point level sensor

Capacitive sensors in small rectangular plastic housing.

Simple installation with installation adapters and fastening straps.

Condition-based maintenance through detection of deposits and soiling.

Identification of different media allows for use in applications such as mixing tasks in tanks.

Sensing range [mm]	Connection	Order no.
DC PNP		
12 nf	cable 2 m	**KQ6002**
12 nf	M8 plug	**KQ6004**
12 nf	M12 plug	**KQ6005**
12 nf	cable 2 m	**KQ5100**
12 nf	M12 plug	**KQ5101**
12 nf	M8 plug	**KQ5102**

Capacitive.
For continuous detection through non-metallic tank walls.

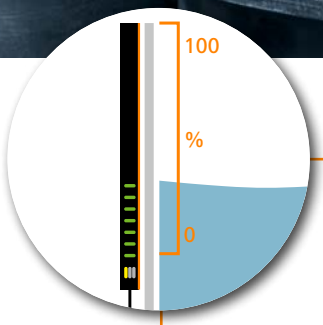
Permanently in view:
Continuous range monitoring of levels.

Easy installation:
"See" through non-conductive tank walls without contact and maintenance.

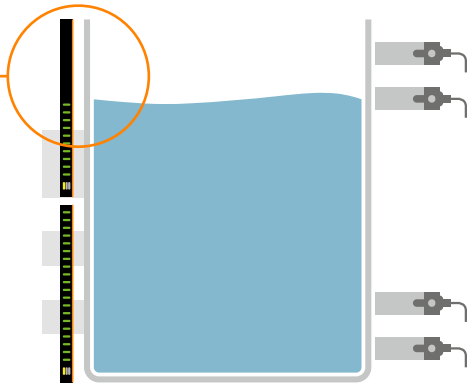
Three switch points in one:
Reduce the number of sensors – monitor three point levels with only one sensor.

Quick set up:
Configure switch points easily via IO-Link.

No incorrect switching:
For reliable switching.
Build-up and tank walls can be suppressed by means of offset.



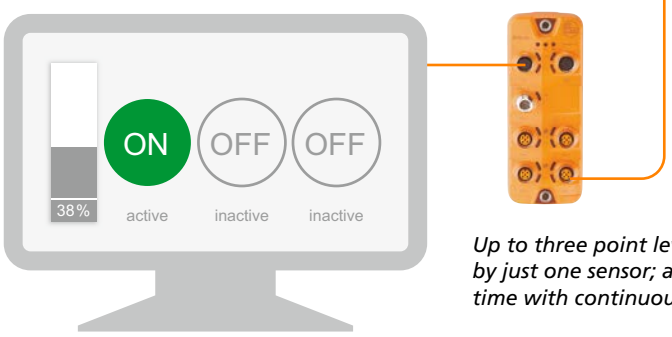
For condition-based maintenance: Continuous display of the level via IO-Link of 0 - 100 %.



By combining several sensors the detection range can be increased correspondingly.

Conventional limit monitoring requires two or three sensors per range.

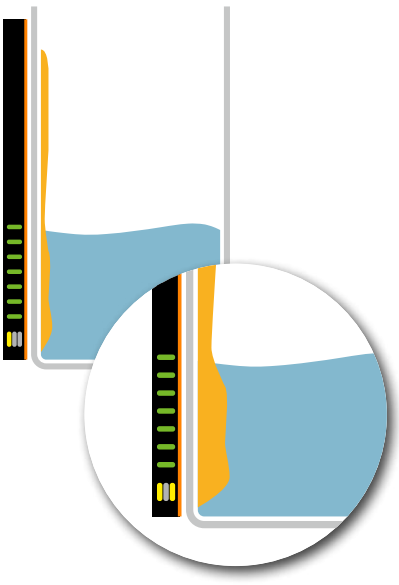
IO-Link master



Up to three point levels can be monitored by just one sensor; and this at the same time with continuous range monitoring.

Determine the point level via bypass

With conductive tank walls, the sensor is installed on a non-conductive bypass pipe. To ensure reliable level detection in a thin bypass pipe, liquids can be detected as from a pipe diameter of 10 mm by means of the pipe adapter.



Suppress and monitor deposits.

KQ10 type point level sensors

Process values of 0...100 % can continuously be transferred via IO-Link in ranges of 250 mm without dead band.

Setting of switch points and other functions, such as normally closed/ normally open, hysteresis, or the orientation and the sensing face of the sensor via IO-Link.

Housing [mm]	Connection	Order no.
DC · 3 switching outputs, NO/NC programmable / maintenance		
Rectangular design plastic 250 x 28 x 16.7	cable 2 m, 5 pins	**KQ1000**
	cable 0.1 m, M12 connector, 5 pins	**KQ1001**

Accessories	Order no.
Adapter for flat mounting	**E12675**
Pipe adapter	**E12676**
Surface-mount tape	**E12677**
Cable tie	**E10880**
IO-Link interface	**E30390**
IO-Link master / PROFINET	**AL1100**
Connection cable	**EVC058**

Capacitive. For applications on hydraulic and coolant tanks.

Professional:
For industrial applications in water-based or oil-based media.

Variety:
Versions with 2 or 4 switching outputs or analogue output 4...20 mA / 0...10 V)

Safe:
Type LK12 with approval as overflow protection.

Combined:
Type LT for level and temperature monitoring.

Flexible:
Variable insertion depths thanks to clamp fitting.

LK level sensors

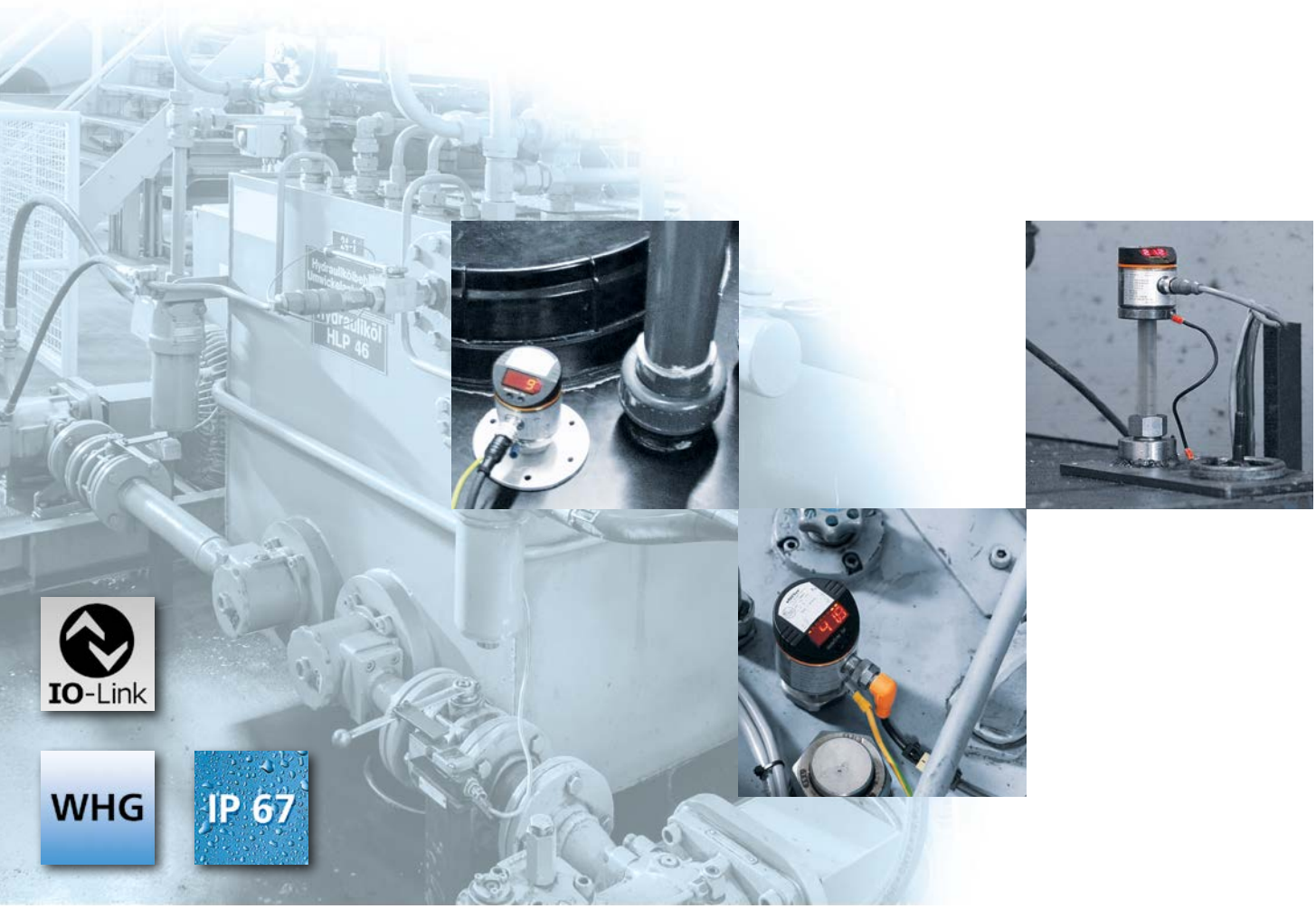
Display and handling directly on the unit or via IO-Link.

As an option with analogue output or up to four switching outputs.

Suitable for oil temperatures up to 70 °C.

Versions complying with the German Federal Water Act selectable.

Probe length [mm]	Description	Order no.
2 switching outputs		
264		**LK1022**
472		**LK1023**
728		**LK1024**
264	Automatic medium detection	**LK7022**
472		**LK7023**
728		**LK7024**
264	WHG	**LK1222**
472		**LK1223**
728		**LK1224**
1 switching output and 1 analogue output 4...20 mA / 0...10 V		
264		**LK3122**
472		**LK3123**
728		**LK3124**
4 switching outputs		
264		**LK8122**
472		**LK8123**
728		**LK8124**



LT type level sensors

Display and handling directly on the unit or via IO-Link.

Suitable for water-based or oil-based media.

Suitable for oil temperatures up to 70 °C.

For level and temperature.

Probe length [mm]	Description	Order no.
4 switching outputs for level and temperature		
264	2 switching outputs for level	**LT8022**
472	2 switching outputs for temperature	**LT8023**
728		**LT8024**
1 analogue output, 1 switching output		
264	1 analogue output for level[1)]	**LT3022**
472	1 switching output for temperature[1)]	**LT3023**
728		**LT3024**

[1)] Level / temperature selectable

For adapters see pages 32 - 33

Contactless radar. For non-contact level measurement in tanks up to 10m.

Simple:
Quick set-up, only one parameter required.

Hygienic design
Robust high-grade stainless steel housing and approvals tailored to hygienic requirements. For CIP / SIP applications.

IO-Link:
Remote maintenance, an advantage especially for high tanks.

Precise:
Accurate and continuous level measurement for liquids in the food sector.

LW27 type hygienic level sensor

Measuring range 0.01…10m

Medium temperature -40...150 °C

Pressure-resistant up to 8 bar.

Easily adjustable via IO-Link.

Process connection	Order no.
2 switching outputs or 1 switching output and 1 analogue output 4...20 mA	
Aseptoflex Vario G1	**LW2720**

For adapters see pages 32 - 33

Mixing tanks with agitators

The non-contact radar measuring principle prevents malfunctions or failures of the sensor caused by the adhesion of viscous media or collisions with agitators.

CIP process

The sensor is designed for use in hygienic areas, so that even CIP and SIP processes or the use of spray balls do not cause any problems.

Storage tanks

With the LW2720 level sensor, levels of liquid media in tanks with a height of up to 10 metres can be monitored precisely and without blind areas.

Process tanks

Optimisation of the batch filling process thanks to independence from temperature changes and density changes of the media.

Guided wave radar. For industrial and hygienic applications.

Versatile:
Modular sensor concept, flexible in use.

Variable:
Rods can be cut to size as required.

Reliable:
Measuring principle independent of temperature influences.

Optional outputs:
Versions with two or four switching outputs or analogue output 4...20 mA / 0...10 V.

Selectable:
Designs with and without display.

LR type level sensors

Display and handling on the unit or via IO-Link.

As an option with analogue output or up to four switching outputs.

Rod lengths freely selectable between 10...200 cm.

Versions to the German Federal Water Act available.

Process connection	Order no.
2 switching outputs or 1 switching output and 1 analogue output 4...20 mA	
G 3/4 male	**LR2050**
3/4" NPT	**LR2350**
1 switching output and 1 analogue output 4...20 mA or 0...10 V	
G 3/4 male	**LR3000**
3/4" NPT	**LR3300**
2 switching outputs	
G 3/4 male	**LR7000**
3/4" NPT	**LR7300**
4 switching outputs	
G 3/4 male	**LR8000**
3/4" NPT	**LR8300**
4 switching outputs / WHG	
G 3/4 male	**LR8010**[1)]

[1)] Only in connection with rod and coaxial pipe, see page 18

LR type level transmitters

For industrial use.

As an option with analogue output or up to four switching outputs.

Protection rating IP 69K.

Easily adjustable via IO-Link.

Rod lengths freely selectable between 10...200 cm.

Process connection	Order no.
1 switching output and 1 analogue output 4...20 mA or 0...10 V	
G 3/4 male	**LR3020**
3/4" NPT	**LR3320**
2 switching outputs	
G 3/4 male	**LR7020**
3/4" NPT	**LR7320**
4 switching outputs	
G 3/4 male	**LR8020**
3/4" NPT	**LR8320**

LR27 hygienic level sensor

Display and handling on the unit or via IO-Link.

Medium temperature -40...150 °C.

Pressure-resistant up to 40 bar.

Rod lengths of 15...200 cm selectable.

Process connection	Order no.
2 switching outputs or 1 switching output and 1 analogue output 4...20 mA	
Aseptoflex Vario G1	**LR2750**

For rods and coaxial pipes see pages 18 - 19

For adapters see pages 32 - 33

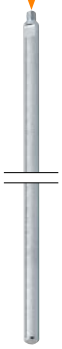
Guided wave radar.
Rods and coaxial pipes.

Level sensor
3/4" NPT
Type LR3300
Type LR7300
Type LR8300
Type LR2350
Type LR3320
Type LR7320
Type LR8320

Level sensor
G 3/4 male
Type LR2050
Type LR3000
Type LR7000
Type LR8000
Type LR8010[1)]
Type LR3020
Type LR7020
Type LR8020

Rods for LR level sensors with 3/4" NPT or G 3/4 male, industrial applications

Material: high-grade stainless steel (1.4404 / 316L)



[1)] only in connection with rod and coaxial pipe

Length [mm]	Order no.
150	**E43225**
210	**E43351**
240	**E43203**
265	**E43352**
300	**E43226**
450	**E43204**
500	**E43227**

Welding adapter G 3/4 male
E43379

Coaxial pipes for LR level sensors with G 3/4 male, industrial applications

Material: stainless steel (1.4301 / 304)

Process connection	Length [mm]	Order no.
G 3/4	150	**E43230**
	210	**E43354**
	240	**E43211**
	265	**E43355**
	300	**E43228**
	450	**E43212**
	500	**E43229**
	700	**E43213**
	800	**E43336**
	1000	**E43214**
	1200	**E43244**
	1200	**E43215**
	1400	**E43216**
	1600	**E43217**
	2000	**E43356[3)]**
	450, without holes	**E43320**
	1000, without holes	**E43245**
G 3/4	700, slotted	**E43333**
	1200, slotted	**E43334**

[3)] only for sensor type LR2050, LR3020, LR7020, LR8020

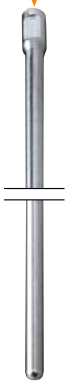
Hygienic level sensor Type LR2750

Length [mm]	Order no.
700	**E43205**
800	**E43337**
1000	**E43207**
1200	**E43208**
1400	**E43209**
1600	**E43210**
2000	**E43353**[3)]

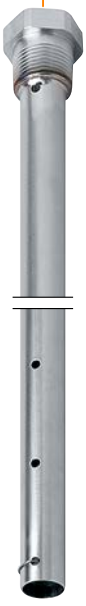
[3)] only for sensor type LR2050, LR3020, LR7020, LR8020

Rods for level sensor LR2750, hygienic

Material: high-grade stainless steel (1.4404 / 316L)



Length [mm]	Order no.
150	**E43345**
300	**E43346**
500	**E43340**
700	**E43347**
1000	**E43341**
1500	**E43348**
2000	**E43342**



Process connection	Length [mm]	Order no.
3/4" NPT	240	**E43377**
	450	**E43218**
	700	**E43219**
	1000	**E43220**
	1200	**E43223**
	1400	**E43224**
	1600	**E43221**
	2000	**E43378**[3)]

[3)] only for sensor type LR2050, LR3020, LR7020, LR8020

For a wide selection of other accessories visit ifm.com

For adapters see pages 32 - 33

Hydrostatic.
For industrial applications on tanks and in free-flowing waterways.

Robust:
Overload-protected measuring principles with a good long-term stability.

Compact:
Pressure transmitters without display and with analogue output.

Precise:
Ceramic-capacitive and piezoresistive measuring cells.

PA type pressure sensor

2-wire pressure transmitter.

Ceramic-capacitive measuring cell.

Process connection	Measuring range relative pressure [mbar]	Order no.
Analogue output 4...20 mA		
G 1/4 female	0...1000	**PA3027**
G 1/4 female	0...250	**PA3028**
G 1/4 male	0...250	**PA3528**
G 1/4 male	0...100	**PA3589**
Analogue output 0...10 V		
G 1/4 female	0...1000	**PA9027**
G 1/4 female	0...250	**PA9028**

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PS type submersible pressure transmitters

PUR or FEP cable for high resistance to media.

Version with ATEX approval for group I, category M1 and group II, category 1G and 1D.

Pressure compensation via internally vented cable.

Measuring range relative pressure [mbar]	Cable [m]	Order no.
For standard applications, CE approval		
0...1000	PUR, 30	**PS3617**
0...1000	PUR, 15	**PS3417**
0...600	PUR, 30	**PS3607**
0...600	PUR, 15	**PS3427**
0...600	PUR, 10	**PS3407**
0...250	PUR, 5	**PS3208**
For high resistance to media, CE approval		
0...1000	FEP, 30	**PS4607**
0...1000	FEP, 15	**PS4417**
0...600	FEP, 20	**PS4506**
0...600	FEP, 10	**PS4407**
0...250	FEP, 10	**PS4408**
0...250	FEP, 5	**PS4208**
For hazardous areas, CE, Ex, GL approvals		
0...1000	FEP, 15	**PS317A**
0...600	FEP, 10	**PS307A**
0...250	FEP, 5	**PS308A**

For adapters see pages 32 - 33

Hydrostatic.
For industrial applications on tanks.

Robust:
Overload-protected measuring principles with a good long-term stability.

Quick setting:
Easy to use to VDMA standard via 3 pushbuttons (PN type).

Unambiguous:
Large pointer display with LED ring (type PG).

Precise:
Ceramic-capacitive and piezoresistive measuring cells.

PN type pressure sensor

Programmable 2-colour display, clearly visible switch-point LEDs.

Rotatable process connection.

3 pushbutton operation with raised buttons.

IO-Link.

PE type pressure sensor

EPDM seal.

Process connection	Factory setting Measuring range Relative pressure [mbar]	Order no.	Factory setting Measuring range Relative pressure [mbar]	Order no.
2 switching outputs			**1 switching output and 1 analogue output 4...20 mA / 0...10 V**	
G 1/4 female	0...1000	**PN7097**	0...1000	**PN3097**
G 1/4 male	0...1000	**PN7597**	0...1000	**PN3597**
2 switching outputs or 1 switching output and 1 analogue output 4...20 mA / 0...10 V, scalable				
G 1/4 female	0...1000	**PN2097**	0...250	**PN2098**
G 1/4 male	0...1000	**PN2597**	0...250	**PN2598**
G 1/4 female	-500...500	**PN2169**		
G 1/4 male	-500...500	**PN2569**		
2 switching outputs or 1 switching output and 1 analogue output 4...20 mA / 0...10 V, scalable				
G 1/4 female	-1000...1000	**PE2099**		
G 1/4 male	-1000...1000	**PE2599**		

PG type pressure sensor

Optimum legibility due to the electronic pointer display.

Rotatable display.

Display of the trend or of the minimum and maximum values.

Process connection	Factory setting Measuring range Relative pressure [mbar]	Order no.
1 switching output and 1 analogue output 4...20 mA / 20...4 mA, scalable		
G 1/2 male	0...1000	**PG2457**
G 1/2 male	0...250	**PG2458**
G 1/2 male	0...100	**PG2489**

For adapters see pages 32 - 33

Hydrostatic.
For hygienic applications on large tanks.

Hygienic:
Ingress resistance, materials and approvals comply with hygienic requirements.

Robust:
Overload-resistant ceramic-capacitive measuring cells with long-term stability.

Versatile:
Variable process connections.

Precise:
High overall accuracy (0.2%).

Suitable for CIP/SIP:
High temperature resistance and electronic temperature compensation.

Well documented:
Free factory certificate for download.

PG type pressure sensor

Optimum legibility due to the electronic pointer display.

Rotatable display.

Display of the trend or of the minimum and maximum values.

Factory setting Measuring range Relative pressure [mbar]	Process connection	
	Aseptoflex Vario G1 male Order no.	Sealing cone G1 male Order no.
1 switching output and 1 analogue output 4...20 mA / 20...4 mA, scalable		
0...100	**PG2789**	**PG2889**
0...250	**PG2798**	**PG2898**
0...1000	**PG2797**	**PG2897**
-1000...1000	**PG2799**	**PG2899**

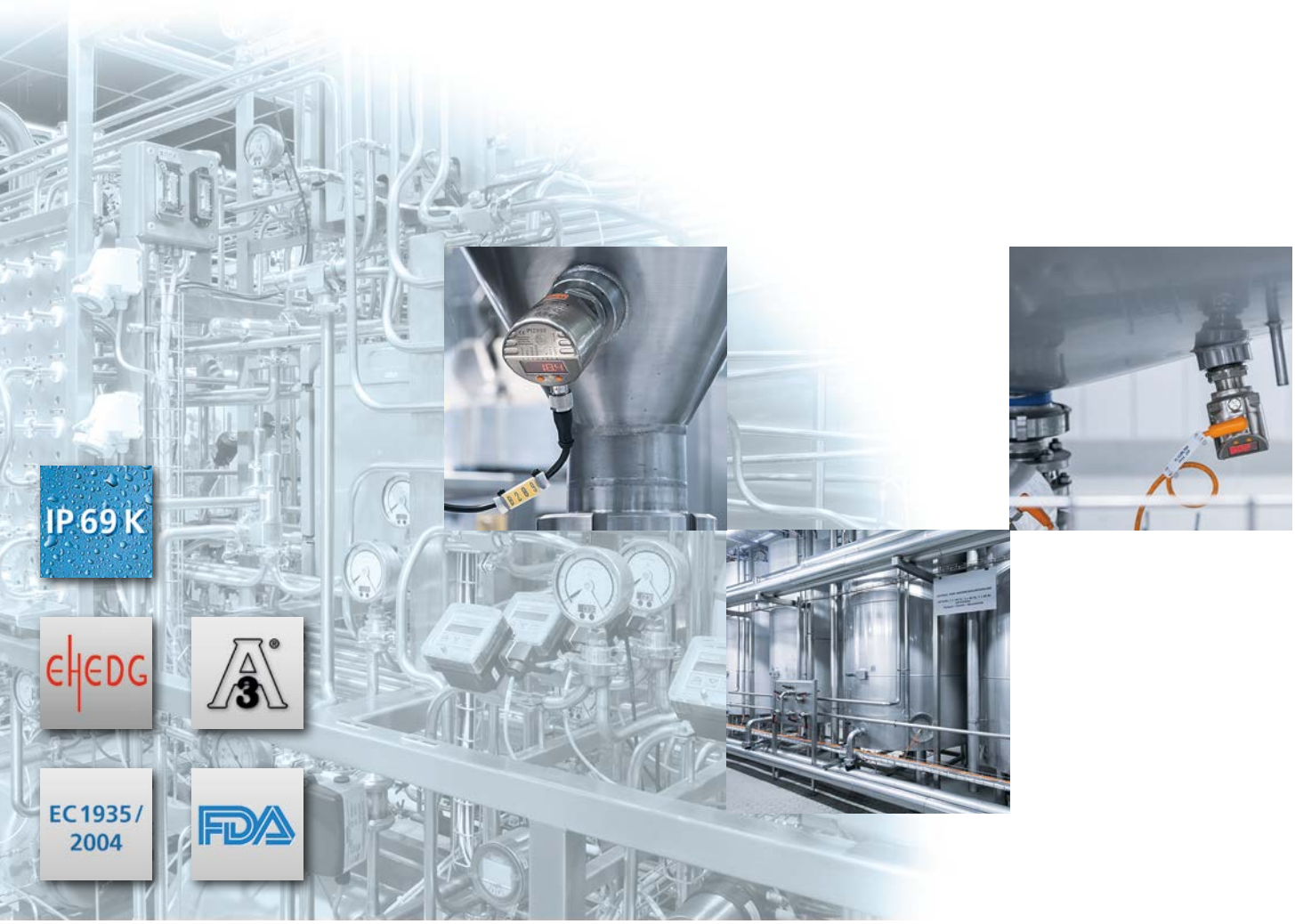
PM type pressure transmitter

Programmable analogue output

Accuracy 0.2 %.

IO-Link.

Factory setting Measuring range Relative pressure [mbar]	Process connection	
	Aseptoflex Vario G1 male Order no.	Sealing cone G1 male Order no.
Analogue output 4...20 mA, scalable		
0...1600	**PM1717**	**PM1617**
-1000...1000	**PM1709**	**PM1609**
0...1000	**PM1707**	**PM1607**
0...250	**PM1708**	**PM1608**
0...100	**PM1789**	**PM1689**
0...400	**PM1718**	**PM1618**



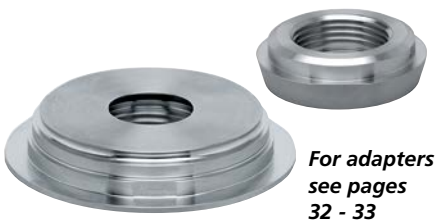
PI type pressure sensor

Programmable analogue output in 2-wire operation.

Additional switching output in 3/4-wire operation.

IO-Link.

Factory setting Measuring range Relative pressure [mbar]	Process connection	
	Aseptoflex Vario G1 male Order no.	Sealing cone G1 male Order no.
1 switching output and 1 analogue output 4...20 mA / 20...4 mA		
0...100	**PI2789**	**PI2889**
0...250	**PI2798**	**PI2898**
0...1000	**PI2797**	**PI2897**
-1000...1000	**PI2799**	**PI2899**
0...1600	**PI2717**	**PI2817**



For adapters see pages 32 - 33

Ultrasonic.
For long distances and difficult surfaces.

Precise:
Precise and continuous level measurement, e.g. of bulk materials.

Robust:
High-grade stainless steel housing for demanding applications.

Simple:
Setting via teach button, wire teach or IO-Link.

Flexible:
Normally closed / normally open programmable.

Variety:
Versions with two switching outputs or switching and analogue outputs 4...20 mA / 0...10 V.

Flexible:
Adjustable sound beam.

Certified:
ECOLAB

UGT Cube type ultrasonic sensors

UGT type

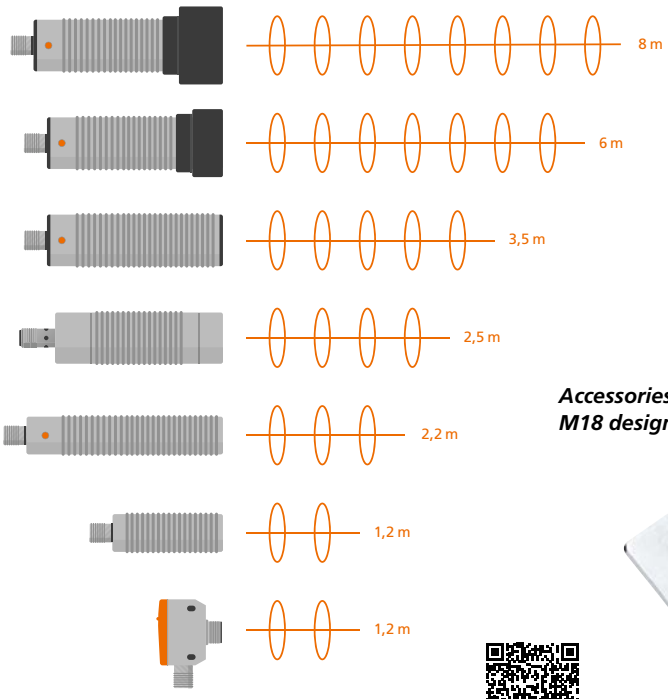
UIT5xx type

UIT3xx type

Design	Output[1)]	Order no.	Order no.	Order no.
Max. range [mm]		**40...300**	**60...900**	**80...1200**
M18 Cube	PNP, IO-Link	**UGT592**	**UGT593**	**UGT594**
M18 short	PNP, IO-Link	**UGT524**	**UGT525**	**UGT526**
M18 short	2 x PNP, IO-Link	**UGT528**	**UGT527**	**UGT529**
Max. range [mm]		**150...1600**	**200...2200**	
M18 long	2 x PNP, IO-Link	**UGT509**	**UGT512**	
M18 long	PNP, 4...20 mA, IO-Link	**UGT510**	**UGT513**	
M18 long	PNP, 0...10 V, IO-Link	**UGT511**	**UGT514**	
Max. range [mm]		**200...3500**	**300...6000**	**600...8000**
M30	2 x PNP, IO-Link	**UIT500**	**UIT503**	**UIT506**
M30	PNP, 4...20 mA, IO-Link	**UIT501**	**UIT504**	**UIT507**
M30	PNP, 0...10 V, IO-Link	**UIT502**	**UIT505**	**UIT508**
Max. range [mm]		**250...2500**		
M30	2 x PNP, IO-Link	**UIT300**		
M30	PNP, 4...20 mA, IO-Link	**UIT301**		
M30	PNP, 0...10 V, IO-Link	**UIT302**		

[1)] for versions without IO-Link or for digital/analogue mixed unit versions see ifm.com

Ultrasonic sensors also detect shiny and irregular surfaces of any colour.



Versions in plastic at ifm.com

Accessories for M18 design

Description	Order no.
Sound tube for producing a smaller sound beam	**E23000**
Sound deflector for installation in small spaces or in dusty environments for ranges up to 1.2 m	**E23001**
Sound deflector for installation in small spaces or in dusty environments for ranges up to 2.2 m	**E23002**
Sound tube M30	**E23007**
Deflection angle M30	**E23008**

Photoelectric.
For long distances: angle-independent measurement with focussed light spot.

Longest distance:
Photoelectric level detection of bulk materials and non-transparent liquids. Long ranges up to 9.8 m for large tanks and vessels.

User-friendly:
Scalable detection range with window function.

Reliable detection:
Can be used in applications requiring background suppression.
Angle independent detection for easiest adjustment.

Flexible mounting.
Extensive range of fixing components.

Independent:
Shape, colour or structure of the surface to be detected do not matter.

Photoelectric distance sensor with time-of-flight measurement, type O1D

Resistant to extraneous light up to 100,000 lux.

2 switching outputs, one output can be configured as analogue output.

4-digit alphanumeric display.

Measurement range [m]	Connection	Light spot diameter [mm]	Order no.
2 switching outputs or 1 switching output and 1 analogue output 4...20 mA / 0...10 V, scalable			
0.2...9.8	M12 connector	< 15 x 15	**O1D300**

Order now in the ifm webshop?
ifm.com

Non-contact level measurement on storage tanks.

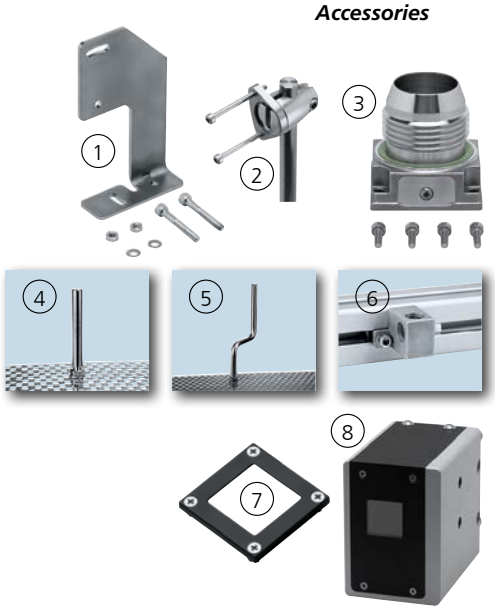
Level detection measurement in sugar cane delivery.

Level detection on a hopper.

IO-Link

PMD Technology

Accessories



no.	Description	Order no.
	Mounting accessories	
1	Mounting bracket high-grade stainless steel (1.4404 / 316 L)	**E21120**
2	Clamp mounting set for rod mount Ø 12 mm	**E2D101**
3	Mounting adapter with process connection G1 male	**E21224**
4	Mounting rod, 100 mm, Ø 12 mm, M10 thread, stainless steel	**E20938**
5	Mounting rod, 200 mm, Ø 12 mm, M10 thread, stainless steel	**E20940**
6	Cube for mounting on an aluminium profile, M10 thread, stainless steel	**E20951**
	Device protection	
7	Protective cover, glass	**E21171**
	Protective cover, PMMA	**E21133**
8	Cooling box	**E21248**

Photoelectric 3D. For bulk materials and completeness monitoring.

Award winning:
The first industrial 3D sensor that detects objects and scenes in three dimensions at a glance. The sensor operates on the time of flight principle.

Independent:
Illumination, time of flight measurement and evaluation in an industrially compatible housing.

Far-sighted:
Non-contact detection of opaque media for levels of up to 10 m, resistant to extraneous light and irrespective of the colour.

Flexible:
The measuring segment can be adapted to the shape of the respective tank.

Informative:
Feedback via LED display.

Everything under control:
Even in case of conical heaps and funnelling.

O3D type photoelectric 3D sensors with time of flight measurement

Switching outputs and analogue outputs for the simple integration into the control environment.

Continuous measurement of uneven surfaces.

Determines min, max or mean values.

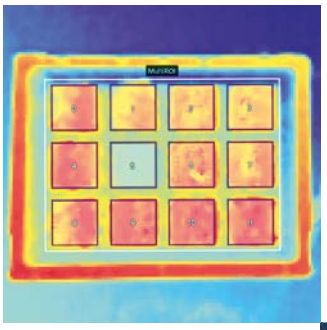
Teaching of different tank shapes.

Interfering structures are suppressed.

Housing material	Angle of aperture [°]	Max. field of view size [m]		Order no.
2 digital inputs, 3 digital outputs, 1 analogue output				
aluminium	40 x 30	2.61 x 3.47	IP 65, IP 67	**O3D300**
aluminium	60 x 45	3.75 x 5.00	IP 65, IP 67	**O3D302**
aluminium	70 x 51	4.70 x 5.00	IP 65, IP 67	**O3D304**
stainless steel	40 x 30	2.61 x 3.47	IP 65, IP 67, IP 69K	**O3D310**
stainless steel	60 x 45	3.75 x 5.00	IP 65, IP 67, IP 69K	**O3D312**
stainless steel	70 x 51	4.70 x 5.00	IP 65, IP 67, IP 69K	**O3D314**

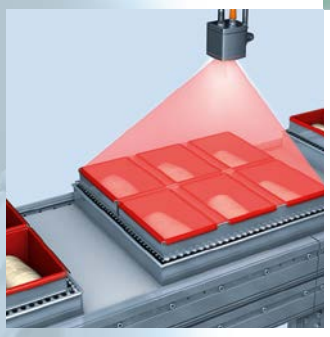
3D sensor accessories

Description	Order no.
Connection cable straight, M12 / RJ45, 2 m MPPE halogen-free	**EVF551**
Connection cable angled, M12, 3 m PVC	**E12456**
Mounting set for 3D sensors, stainless steel	**E3D301**



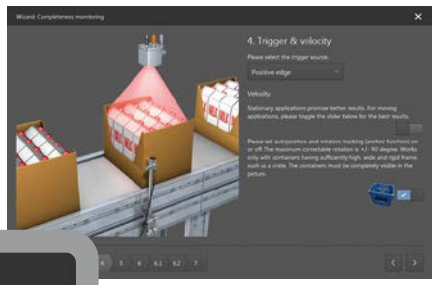
The patented multi ROI allows for having several measuring segments incorporated into one result and, in addition, for providing the individual measured values as well.

Full crate check – Automatic position and orientation adjustment guarantees a stable function even with a variable object position.



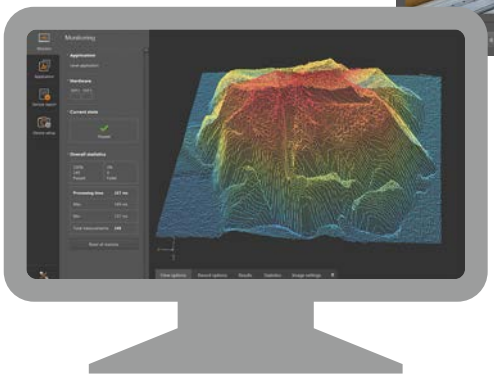
Continuous level measurement of non-transparent solids and bulk materials in tanks, silos, hoppers or in heaps.
Data output is provided either in m or m^3 .

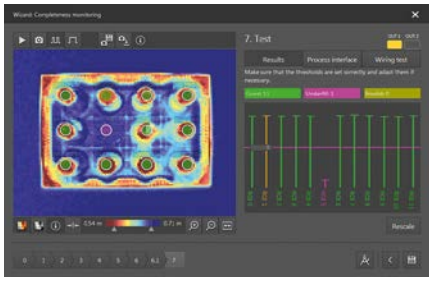
Level monitoring



User-friendly.

Continuous exchange with users and extensive handling tests have led to an extremely simple usability and ease of integration of the sensor - from ordering to replacement.





Completeness control

Accessories.
Adapters for level sensors in industrial and hygienic applications.

Adapter G 1/2 for LMT type

no.	Process connection	Order no.	Order no. with leakage port
	Mounting adapters for industrial and hygienic applications		
1	Clamp 1 - 1.5"	**E33401**	**E43311**
	Clamp 2"	**E33402**	**E43312**
2	Hygienic pipe fitting, DN25	**E43304**	–
	Hygienic pipe fitting DN40	**E43305**	–
3	Varivent type F DN25, D = 50	**E43306**	–
	Varivent type N DN40...150, D = 68	**E43307**	–
4	Screw-in adapter G 3/4	**E43302**	–
	Adapters G 1	**E43303**	–
4	Adapter 3/4" NPT	**E43313**	–
5	Pipe fitting DN25 SMS	**E33430**	–
	Pipe fitting DN50 SMS	–	**E33444**
	Sealing plug G 1/2	**E43308**	–
6	Adapter M30 x 1.5	**E43325**	–
7	Adapter DN50 SMS	**E43344**	–
8	Adapter Aseptoflex Vario	**E43358**	–
	Welding adapters for industrial and hygienic applications		
9	Collar G 1/2 Ø 45 mm	**E30056**	**E43315**
10	Ball G 1/2 Ø 35 mm	**E30055**	–
11	For tanks G 1/2 Ø 30 mm	**E43300**	**E43309**
11	For pipes G 1/2 Ø 29 mm	**E43301**	**E43310**
12	Long version G 1/2 Ø 50 mm	**E43319**	–
13	Welding mandrel G 1/2	**E43314**	–
	T-pieces for industrial and hygienic applications		
14	T-piece DN25	**E43316**	–
	T-piece DN40	**E43317**	–
	T-piece DN50	**E43318**	–
	Variable clamp adapters		
15	Clamp adapter for type LMT104 1)	**E43349**	–
	Clamp adapter for type LMT105 1)	**E43322**	–

[1] only in connection with G 1/2 I adapter

Adapter G 1/2 for LMC type

no.	Description	Order no.
	Welding adapter	
29	G 1/2 for type LMC	**E43375**
	G 3/4 for type LR	**E43379**
30	Welding mandrel for type LMC4x0	**E43382**

You are looking for the suitable connector?
ifm.com

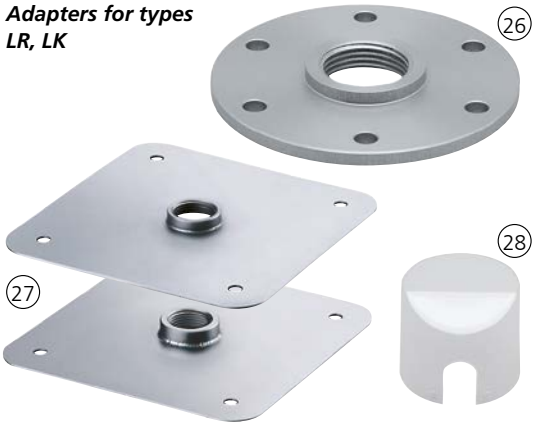
Adapters for G1 male / Aseptoflex Vario PG, PI, LR, PM

no.	Process connection	Order no.	Order no. with leakage port
	Mounting adapters for industrial and hygienic applications		
16	Clamp 1 - 1.5"	**E33201**	**E33208**
	Clamp 2"	**E33202**	**E33209**
17	Hygienic pipe fitting DN32	**E33211**	–
	Hygienic pipe fitting DN40	**E33212**	–
	Hygienic pipe fitting DN50	**E33213**	–
	Universal process adapter Rd52	**E33340**	–
	Pipe fitting DIN 11864-1 A-BS	–	**E33304**
18	Varivent type F DN25, D = 50	**E33221**	**E33228**
	Varivent type N DN40...150, D = 68	**E33222**	**E33229**
19	Flange DRD, D = 65	**E33242**	–
	Welding adapters for industrial and hygienic applications		
20	Welding adapter Ø 50 mm	**E30122**	**E30130**
21	Welding adapter Ø 65 mm	–	**E30157**

Adapters for types LI, LK, LT

no.	Description	Order no.
	Mounting adapter	
22	Mounting clamp Ø 16 mm	**E43000**
23	Welding adapter Ø 50 mm	**E43002**
24	Mounting adapter, G 3/4,	**E43003**
	Mounting adapter G 1	**E43004**
	Mounting adapter, 3/4" NPT,	**E43012**
	Protective brackets	
25	Climatic tube, 132 mm long	**E43103**
	Climatic tube, 264 mm long	**E43100**
	Climatic tube, 472 mm long	**E43101**
	Climatic tube, 728 mm long	**E43102**

Adapters for types LR, LK



no.	Description	Order no.
	Mounting adapter	
26	Flange plate 73 - 90 / G 3/4	**E43201**
	Flange plate 65 - 80 / G 3/4	**E43202**
27	Launching plate G 3/4 for type LR for installation in plastic tanks	**E43380**
	Launching plate 3/4" NPT for type LR for installation in plastic tanks	**E43381**
	Protective brackets	
28	Protective cover	**E43910**

Who says we can only do hardware?

moneo. The all-you-want software for industrial evolution.

One thing is clear: proper industrial digitisation begins with the sensor and extends into the IT structure. If you are already using IO-Link in your plant, you have taken the first important step towards more efficiency and less unplanned downtime. And you are ready for the second step. You are ready to get even more out of your plant with the help of simple and ingenious software.

Turning values into added value

With moneo, you can easily access the entire IO-Link network. And, thanks to the logical tree structure, you will have quick and efficient access to each individual sensor at any time. As soon as your IO-Link network is integrated into moneo, values will no longer be just separate pieces of information.
moneo makes values useful and transforms them into added value. You can, for example, combine the level values of all tanks into one overall stock figure. This overall stock figure can then be clearly displayed along with other relevant information in the cockpit. This gives you a continuous overview of all the important values in your plant or process.

If things become critical in your absence, for example because the level is running low or the vibration on a fan rotor is dangerously increasing, moneo will immediately alert and inform you by e-mail. This allows you to schedule maintenance in good time or initiate manual refill processes to keep things moving. In short: moneo will optimise your processes and ensure that they will be trouble-free.

A new kind of flexibility thanks to moneo

As you have seen, moneo leaves nothing to be desired. It is a great piece of software to begin with, but its actual extent will always depend on your specific requirements. You can, for example, simply begin with parameter setting and the cockpit function for one part of your plant and explore the possibilities of real-time maintenance later, when you are ready for the next step.
To put it in a nutshell: moneo offers the flexibility to simply grow with your requirements. The days of unmanageable, oversized and confusing software are over. It is time for simplicity, user-friendliness and ingenuity.
It is time for moneo!

We love it when a plan comes together.

moneo|RTM: level monitoring in tanks with 2-component casting resin.

In order to protect the electronics of the sensors from shock, vibration and moisture, potting processes are an essential part of sensor production. For a smooth production process, but also for a constantly high product quality, the permanent availability of casting resin and casting hardener in the storage tank containers is essential. The level monitoring application implemented at ifm prover gmbh thus contributes to a reliable logistics organisation of temperature-critical media in the production process.

moneo|RTM: Optimisation of the level monitoring in a calibration plant.

Flow sensors are calibrated in the calibration plant at ifm prover gmbh.
To ensure maximum measuring accuracy, both hot and cold water is sent through the sensors. The measured values are used for calibration.

www.moneo.ifm

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ifm article no. 78004125 · We reserve the right to make technical alterations without prior notice. · Printed in Germany on non-chlorine bleached paper.11/21