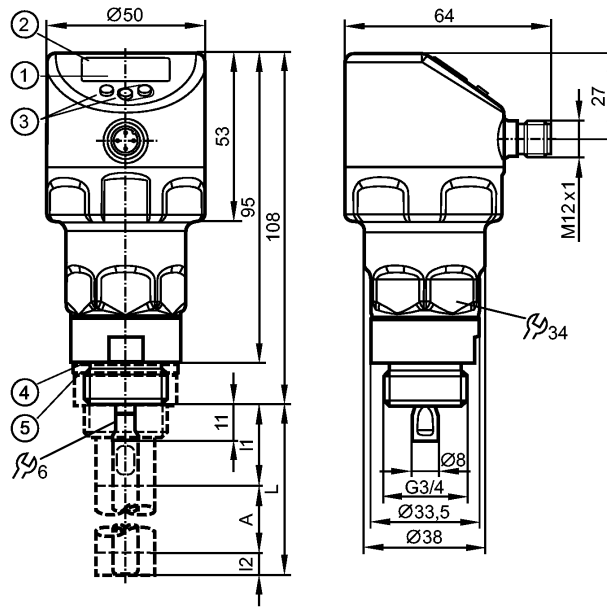


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Level sensors



- 1: 4-digit alphanumeric display
- 2: LEDs (display unit / switching status)
- 3: Programming buttons
- 4: sealing
- 5: Additional sealing for use with coaxial pipe
- A: Active zone
- I1 / I2: Inactive ranges



Product characteristics

Electronic level sensor
Quick disconnect
Process connection: G ¾ A
Guided wave radar
Communication interface: IO-Link 1.1
Probe length: L = 150...2000 mm
2 switching outputs or 1 switching output and 1 analogue output 4...20 mA
4-digit alphanumeric display

Application

Application	liquids, oil-based media, water-based media
Recommended media	water, water-based media, oils, oil-based media
Dielectric constant medium	≥ 1.8 for media with a dielectric constant 1.8...5 (e.g. oils) a coaxial pipe is required for operation (see below: accessories (optional))
Medium temperature [°C]	-20...100

Electrical data

Electrical design	DC PNP/NPN
Operating voltage [V]	18...30 DC
Current consumption [mA]	< 50
Protection class	III
Reverse polarity protection	yes

Outputs

Output	2 switching outputs or 1 switching output and 1 analogue output 4...20 mA
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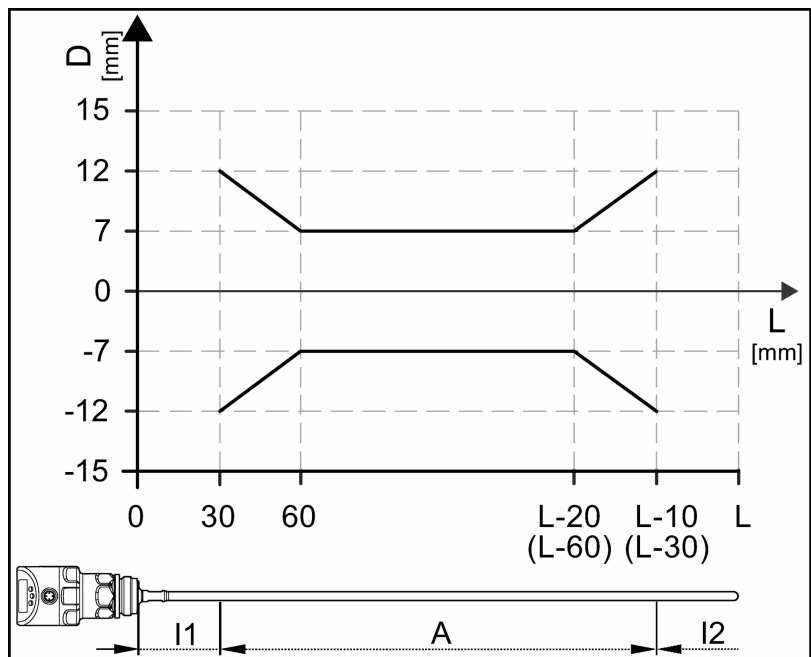
Level sensors

Output function		OUT1: normally open / closed programmable / IO-Link OUT2: normally open / closed programmable or analog (4...20 mA scaleable, invertable)
Current rating	[mA]	150; 200 (...60 °C)
Voltage drop	[V]	< 2.5
Short-circuit protection		yes (non-latching)
Overload protection		yes
Analog output		4...20 mA / 20...4 mA
Max. load	[Ω]	max. 500

Measuring / setting range		
Probe length L	[mm]	150...2000
Active range A	[mm]	L-40 / (L-60)*
Inactive range I1 / I2	[mm]	30 / 10 (30)*
Setting range		
Set point, SP	[mm]	≥ 15 (35)* / ≤ L-30
Reset point, rP	[mm]	≥ 10 (30)* / ≤ L-35
in steps of	[mm]	1
Hysteresis	[mm]	≥ 5

Accuracy / deviations		
Offset error	[mm]	± 5
Temperature coefficient		± 0.2 % per 10 K
Resolution	[mm]	1
Measuring error		± 7 mm
Zero signal [mA] / [V]		4.0 mA
Vollsignal[mA] / [V]		20 mA

Measurement deviation D at the limits of the active rod range



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Level sensors

Reaction times		
Power-on delay time	[s]	≤ 3
Sampling rate	[1/s]	4
Interfaces		
IO-Link Device		
Transfer type		COM2 (38.4 kBaud)
IO-Link revision		1.1
SDCI standard		IEC 61131-9
IO-Link Device ID		0x0001DF
Profiles		Smart Sensor: Process Data Variable; Device Identification, Device Diagnosis
SIO mode		yes
Required master port class		A
Process data analogue		1
Process data binary		2
Min. process cycle time	[ms]	2.3
Environment		
Ambient temperature	[°C]	-40...80
Storage temperature	[°C]	-40...100
Maximum vessel pressure	[bar]	-1...16
Protection		IP 68 / IP 69K
Seitliche Belastbarkeit	[Nm]	10
Tests / approvals		
EMC		DIN EN 61000-6-2 DIN EN 61000-6-3 : in a metal tank DIN EN 61000-6-4 : in a plastic tank
Shock resistance		DIN EN 60068-2-27 50 g (11 ms) / 20 g (6 ms) with reference rod 0.5 m
Vibration resistance		DIN EN 60068-2-6 20 g (10...2000 Hz) / 1 g (5...200 Hz) with reference rod 0.5 m
MTTF	[Years]	150
Mechanical data		
Process connection		G ¾ A
Materials (wetted parts)		stainless steel (316L / 1.4404); 1.4435 (V4A / 316L); PTFE; FKM
Housing materials		stainless steel (316L / 1.4404); PEI; PFA; PBT; FKM
Weight	[kg]	0.436
Displays / operating elements		
Display		Display unit 3 x LED green Switching status 2 x LED yellow Level 4-digit alphanumeric display Programming 4-digit alphanumeric display

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Level sensors

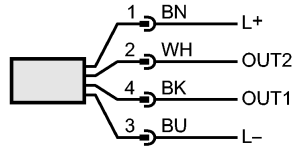
Electrical connection

Connection M12 connector (according to EN 61076-2-101); gold-plated contacts

Wiring

Core colors

- BK black
- BN brown
- BU blue
- WH white



OUT1: switching output or IO-Link
 OUT2: switching output / 4...20 mA
 Colours to DIN EN 60947-5-2

Accessories

Accessories (optional) Matching accessories online next to the Datasheet → Accessories

Remarks

Remarks *) when set to oil and oil based media

Pack quantity [piece] 1