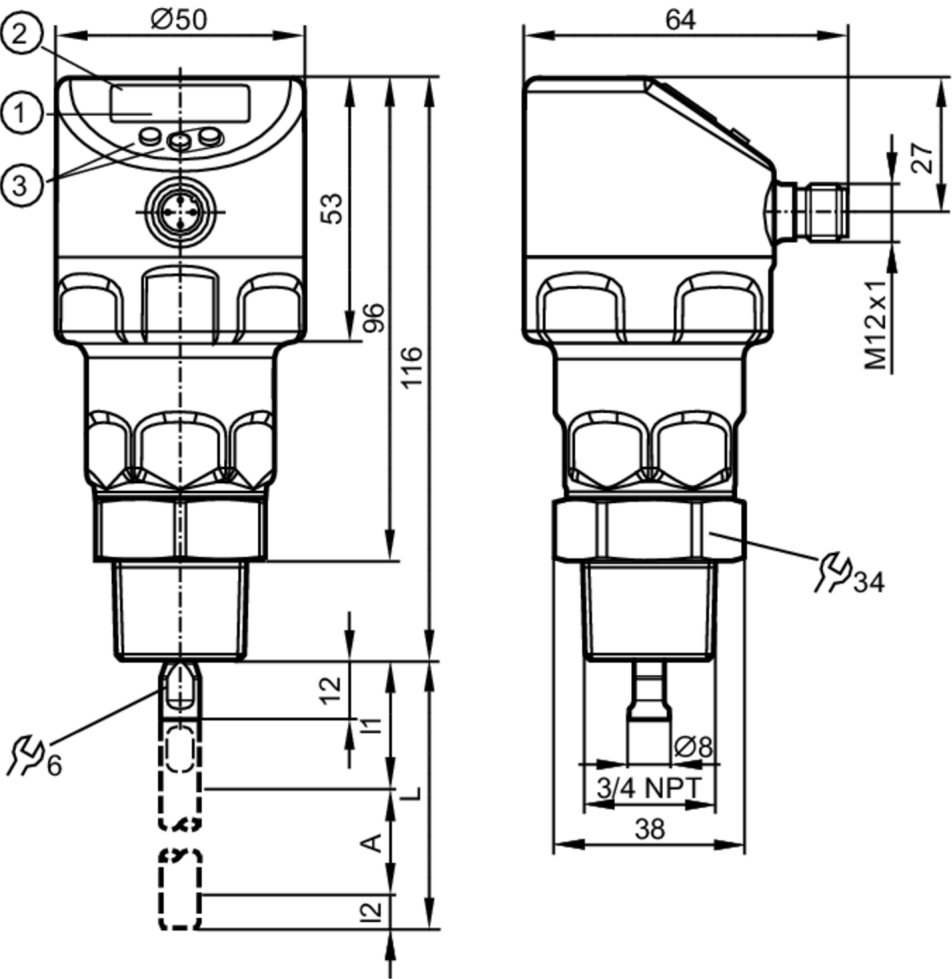




Continuous level sensor (guided wave radar)

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For high process temperatures: The temperature at the process connection is decisive. The actual medium temperature may be higher.



- 1 alphanumeric display 4-digit
- 2 LEDs Display unit / switching status
- 3 programming buttons
- A active range
- I1 / I2 inactive ranges



Product characteristics	
Number of inputs and outputs	Number of digital outputs: 1; Number of analogue outputs: 1
Probe length L [mm]	150...2000
Process connection	threaded connection 3/4" NPT external thread
Application	
Special feature	Gold-plated contacts
Application	for industrial applications
Media	Liquids
Dielectric constant of the medium	> 5



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Recommended media	water; hydrous media	
Process temperature [°C]	-20...100; (see note under remarks)	
Pressure rating	16 bar	1.6 MPa
Vacuum resistance	-1000 mbar	-0.1 MPa
MAWP for applications according to CRN [bar]	16	

Electrical data		
Operating voltage [V]	18...30 DC	
Current consumption [mA]	< 50	
Protection class	III	
Reverse polarity protection	yes	
Power-on delay time [s]	< 3	
Measuring principle	guided wave radar	

Inputs / outputs	
Number of inputs and outputs	Number of digital outputs: 1; Number of analogue outputs: 1

Outputs	
Total number of outputs	2
Output signal	switching signal; analogue signal; IO-Link
Electrical design	PNP/NPN
Number of digital outputs	1
Output function	normally open / normally closed; (parameterisable)
Max. voltage drop switching output DC [V]	2.5
Permanent current rating of switching output DC [mA]	150; (200 (...60 °C))
Number of analogue outputs	1
Analogue current output [mA]	4...20, invertible; (scalable)
Max. load [Ω]	500
Short-circuit protection	yes
Type of short-circuit protection	pulsed
Overload protection	yes

Measuring/setting range	
Probe length L [mm]	150...2000
Active range A [mm]	L-40
Inactive range I1 / I2 [mm]	30 / 10
Sampling rate [Hz]	4
Setting range	
Set point SP [mm]	15...L-30
Reset point rP [mm]	10... L-35
In steps of [mm]	1
Hysteresis [mm]	> 5

Accuracy / deviations	
Measuring error [mm]	± 7
Offset error [mm]	5



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Resolution	[mm]	1
Zero signal (current)	[mA]	4.0
Full signal (current)	[mA]	20
Temperature drift per 10 K		± 0.2 %

Interfaces

Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9	
Profiles	Smart Sensor - SSP 0	Generic Profiled Sensor
	Function	Device identification
	Function	Process data variable
	Function	Device diagnosis
SIO mode	yes	
Required master port type	A	
Process data analogue	1	
Process data binary	2	
Min. process cycle time	[ms]	2.3
Supported DeviceIDs	Type of operation	DeviceID
	default	730

Operating conditions

Ambient temperature	[°C]	-40...80
Storage temperature	[°C]	-40...100
Protection		IP 68; IP 69K

Tests / approvals

EMC	DIN EN 61000-6-2	
	DIN EN 61000-6-3	: in a closed metal tank
	DIN EN 61000-6-4	: in plastic or open metal tanks
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]	216

Mechanical data

Weight	[g]	383.5
Dimensions	[mm]	Ø 50 / L = 128
Materials	stainless steel (316L/1.4404); PEI; PFA; PBT; FKM	
Materials (wetted parts)	stainless steel (316L/1.4404); stainless steel (316L/1.4435); PTFE; FKM	
Process connection	threaded connection 3/4" NPT external thread	

Displays / operating elements

Display	Display unit	3 x LED, green
	switching status	2 x LED, yellow
	level	alphanumeric display, 4-digit
	parameter setting	alphanumeric display, 4-digit

LR2350



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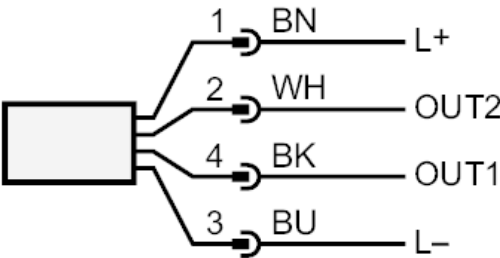
Remarks	
Notes	For high process temperatures: The temperature at the process connection is decisive. The actual medium temperature may be higher.
Pack quantity	1 pcs.

Electrical connection - plug

Connector: 1 x M12; coding: A; Contacts: gold-plated



Connection



OUT1: switching output IO-Link
OUT2: switching output analogue output
colours to DIN EN 60947-5-2
Core colours :
BK = black
BN = brown
BU = blue
WH = white

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Diagrams and graphs

Measurement deviation D at the limits of the active rod range

