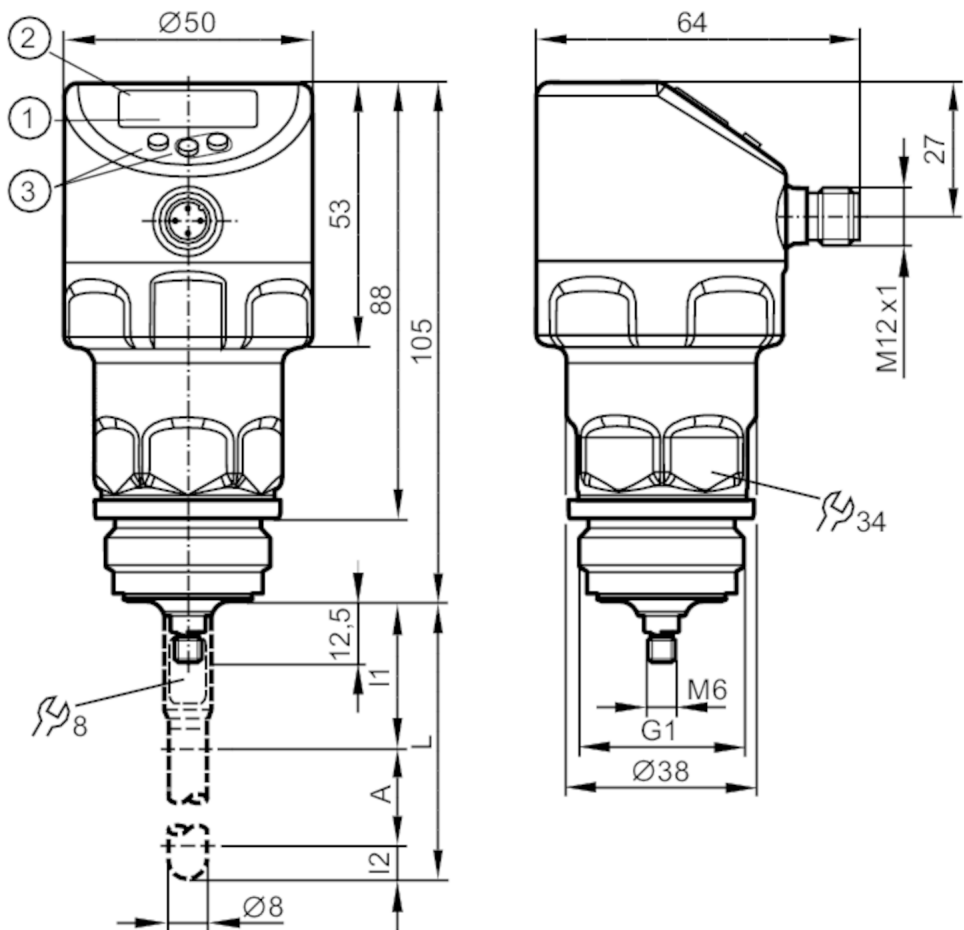




Continuous level sensor (guided wave radar)

LR0000B-EA01AKSKG/US

For high process temperatures: The temperature at the process connection is decisive. The actual medium temperature may be higher.
For 3-A applications, the medium temperature is limited to 121 °C and COP cleaning is required.



- 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 G 1 external thread Aseptoflex Vario
Application	
Special feature	Gold-plated contacts
Application	hygienic systems
Media	Liquids
Dielectric constant of the medium	> 5
Recommended media	water; hydrous media



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Process temperature	[°C]	-40...150; (see note under remarks)
Pressure rating	40 bar	4 MPa
Vacuum resistance	-1000 mbar	-0.1 MPa

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
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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
Factory setting	Electrical design: NPN
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
Resolution	[mm] 1



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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: Process Data Variable; Device Identification, 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	643

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]	396.5
Materials	stainless steel (316L/1.4404); PEI; PFA; PBT; FKM	
Materials (wetted parts)	stainless steel (316L/1.4404); PEEK; EPDM	
Process connection	threaded connection G 1 external thread Aseptoflex Vario	
Surface characteristics Ra/Rz of the wetted parts	< 0.8	

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

Remarks	
Notes	For high process temperatures: The temperature at the process connection is decisive. The actual medium temperature may be higher.; For 3-A applications, the medium temperature is limited to 121 °C and COP cleaning is required.
Pack quantity	1 pcs.

LR2759



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Electrical connection

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

