

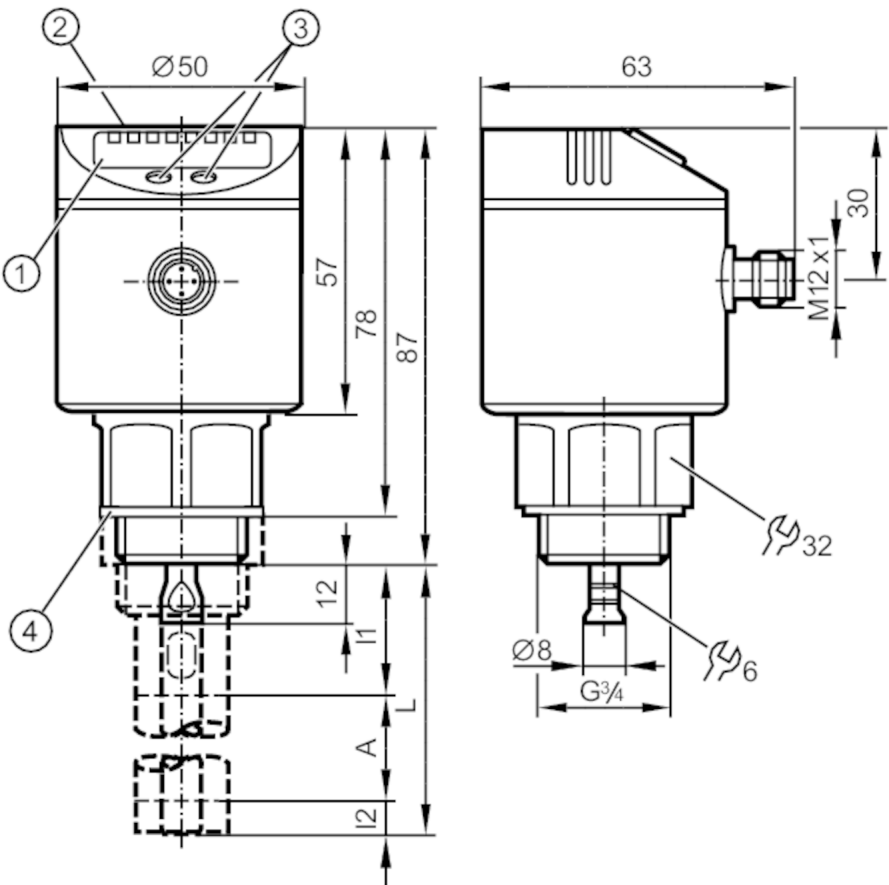
LR7000



Continuous level sensor (guided wave radar)

LR0000B-BR34AQPKG/US

Please see the technical note under "Downloads"
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
- 4 sealing
- A Active zone
- I1 / I2 Inactive ranges



Product characteristics	
Number of inputs and outputs	Number of digital outputs: 2
Probe length L [mm]	100...1600
Process connection	threaded connection G 3/4 external thread
Application	
System	gold-plated contacts
Application	for industrial applications
Media	Liquids
Dielectric constant of the medium	≥ 1,8; (for media with a dielectric constant of 1.8...5 (e.g. oils), a coaxial pipe is needed for operation)
Recommended media	water; water-based media; oils; oil-based media
Cannot be used for	See the operating instructions, chapter "Function and features".

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Process temperature	[°C]	-25...80; (90 < 1 h ; 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]	< 30
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: 2
Outputs		
Total number of outputs		2
Output signal		switching signal; IO-Link
Electrical design		PNP
Number of digital outputs		2
Output function		normally open / closed; (configurable)
Max. voltage drop switching output DC	[V]	2.5
Permanent current rating of switching output DC	[mA]	200
Short-circuit protection		yes
Type of short-circuit protection		thermal, pulsed
Overload protection		yes
Measuring/setting range		
Probe length L	[mm]	100...1600
Active range A	[mm]	L-40; (when set to oil and oil based media: L-60)
Inactive range I1 / I2	[mm]	30 / 10; (when set to oil and oil based media: 30 / 30)
Sampling rate	[Hz]	4
Setting range		
Set point SP	[mm]	15...L-30
Note on setpoint SP		when set to oil and oil based media: 35...L-30
Reset point rP	[mm]	10... L-35
Note on reset point rP		when set to oil and oil based media: 30...L-35
In steps of	[mm]	5
Hysteresis	[mm]	> 5
Accuracy / deviations		
Repeatability	[mm]	± 5
Measuring error	[mm]	± 7
Offset error	[mm]	5
Resolution	[mm]	1

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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 CDV	
SIO mode		yes	
Required master port class		A	
Process data analog		1	
Process data binary		2	
Min. process cycle time [ms]		2.3	
Supported DeviceIDs		Type of operation	DeviceID
		default	8
Operating conditions			
Ambient temperature [°C]		-25...60	
Storage temperature [°C]		-40...85	
Protection		IP 67	
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) / 25 g (6 ms) with reference rod 0.5 m
Vibration resistance		DIN EN 60068-2-6	5 g (10...2000 Hz) / 1 g (5...200 Hz) with reference rod 0.5 m
MTTF [years]		233	
UL approval		UL approval number	H007
		File number UL	E174191
Mechanical data			
Weight [g]		381.7	
Dimensions [mm]		Ø 50 / L = 99	
Material		stainless steel (1.4301 / 304); stainless steel (1.4404 / 316L); FKM; PBT; PC; PEI; TPE-V	
Materials (wetted parts)		stainless steel (1.4305 / 303); probe connection: stainless steel (1.4435 / 316L); PTFE; FKM; sealing: NBR fiber-reinforced	
Process connection		threaded connection G 3/4 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
Remarks			
Notes		Please see the technical note under "Downloads"; For high process temperatures: The temperature at the process connection is decisive. The actual medium temperature may be higher.	
Pack quantity		1 pcs.	

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Electrical connection

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



Connection



OUT1: switching output or IO-Link
OUT2: Switching output
Colors to DIN EN 60947-5-2
Core colors :

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

