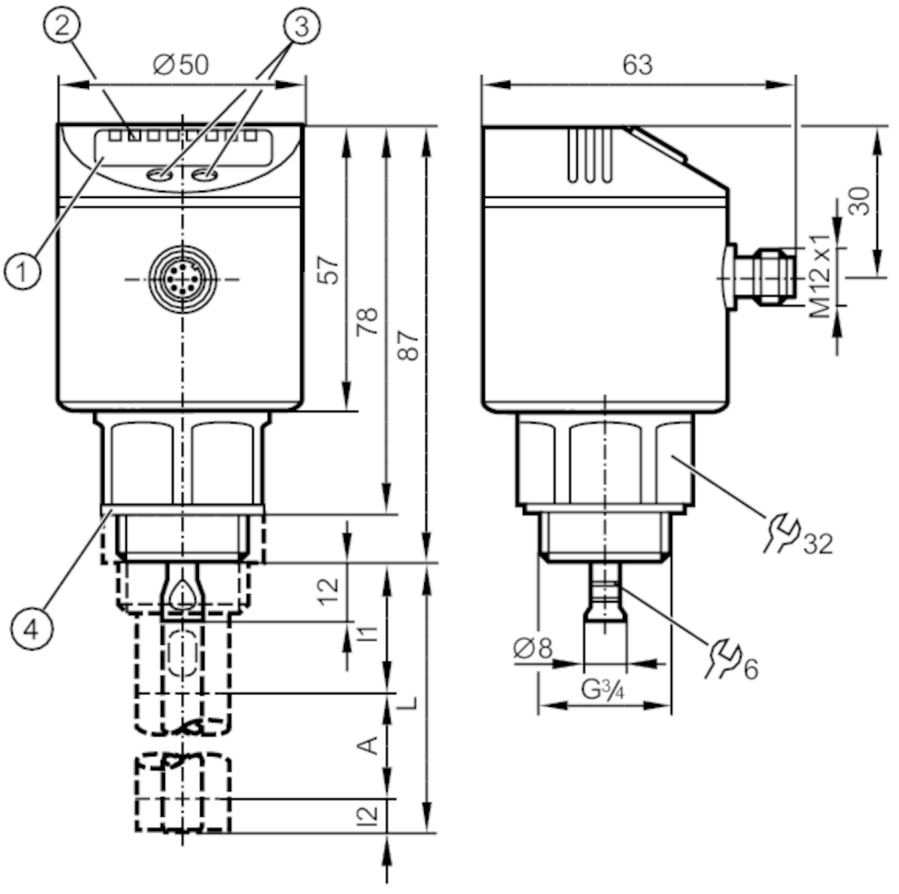
LR8000

Continuous level sensor (guided wave radar)

LR0000B-BR34ASPKG/US

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

For 8-wire cordsets the core colors are not standardized.
Please note the wiring of the sensor and the cordsets (see data sheet).
Please see the technical note under "Downloads"



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: 4
Probe length L	[mm]	100...1600
Process connection		G 3/4 external thread

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Application		
System		gold-plated contacts
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".
Process temperature	[°C]	-25...80; (90 < 1 h ; see note under remarks)
Pressure rating	[bar]	16
Vacuum resistance	[mbar]	-1000
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: 4
Outputs		
Total number of outputs		4
Output signal		switching signal; IO-Link
Electrical design		PNP
Number of digital outputs		4
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

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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	
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	
Profiles		no profile	
SIO mode		yes	
Required master port class		A	
Process data analog		1	
Process data binary		4	
Min. process cycle time	[ms]	2.3	
Supported DeviceIDs		Type of operation	DeviceID
		default	10
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]	205	
UL approval		UL approval number	H008
		File number UL	E174191

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Mechanical data		
Weight [g]	380.45	
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	G 3/4 external thread	

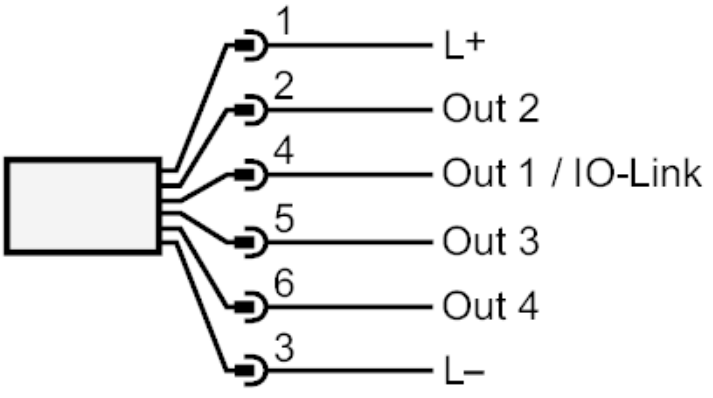
Displays / operating elements		
Display	Display unit	3 x LED, green
	Switching status	4 x LED, yellow
	Level	alphanumeric display, 4-digit
	Parameter setting	alphanumeric display, 4-digit

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

Electrical connection

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

Connection



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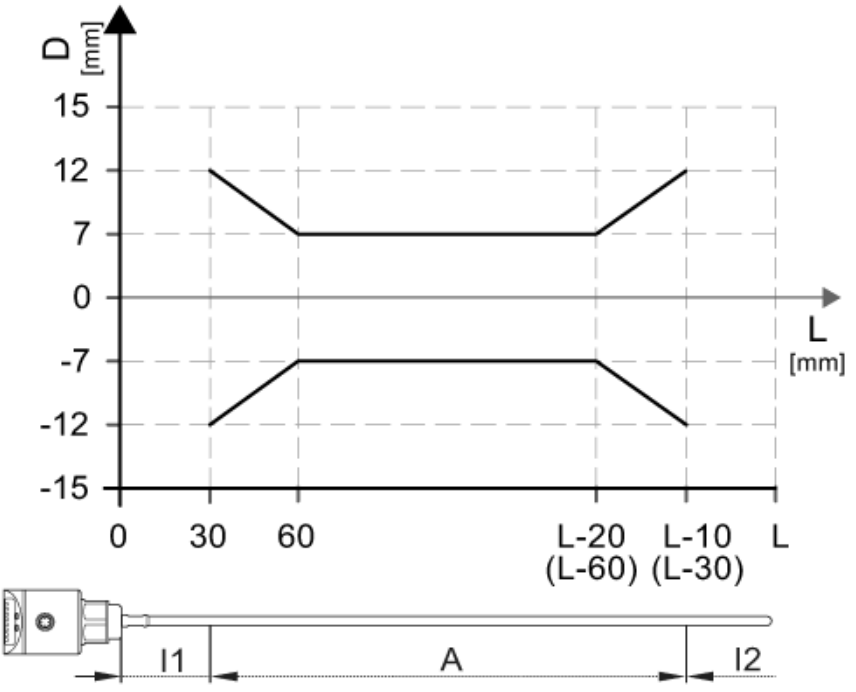
Diagrams and graphs



Measurement deviation D at the limits of the active rod range