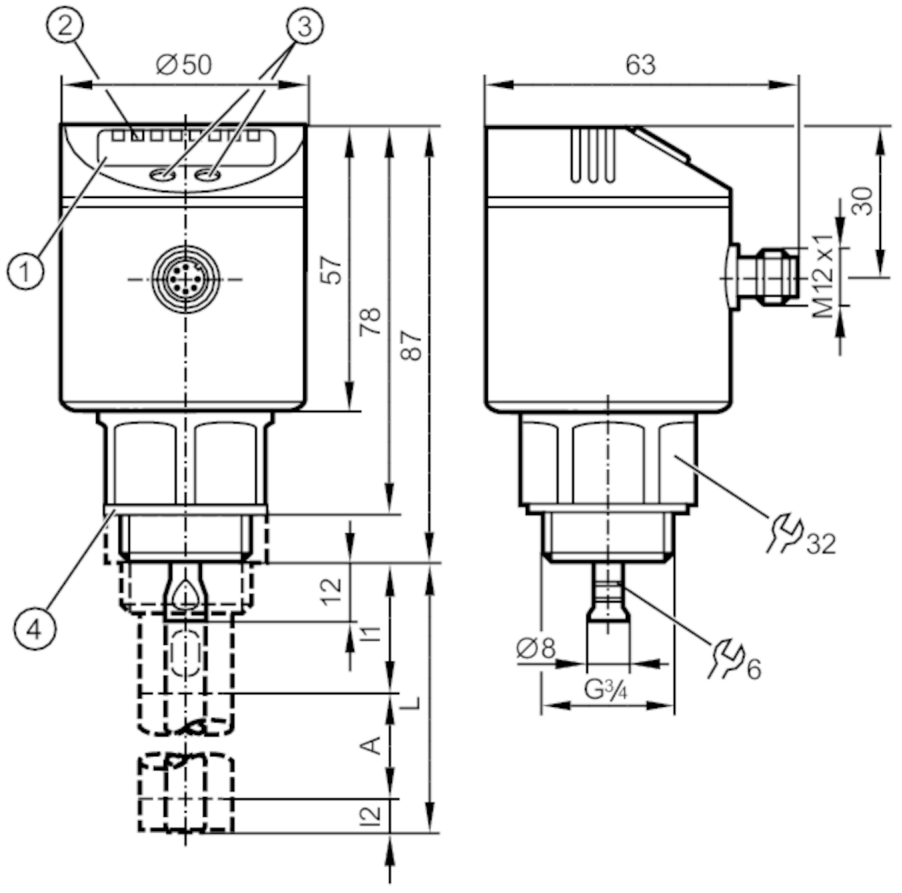
LR8000

Continuous level sensor (guided wave radar)

LR0000B-BR34ASPKG/US

For 8-pole sockets the core colours are not standardised.
Please note the wiring of the sensor and the sockets (see data sheet).



1 alphanumeric display 4-digit
2 LEDs Display unit / switching status
3 programming buttons
4 Sealing
A active range
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
Application		
Special feature		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; hydrous media; oils; oil-based media
Cannot be used for		See the operating instructions, chapter "Function and features".
Medium temperature	[°C]	-25...80; (90 < 1 h)
Tank pressure	[bar]	-1...16

LR8000

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LR0000B-BR34ASPKG/US

MAWP (for applications according to CRN)	[bar]	25
Electrical data		
Operating voltage	[V]	18...30 DC
Current consumption	[mA]	< 80
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 / normally closed; (parameterisable)
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
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
In steps of	[mm]	5
Hysteresis	[mm]	> 5
Accuracy / deviations		
Repeatability	[mm]	± 5
Measuring error	[mm]	± 7
Offset error	[mm]	5
Resolution	[mm]	1
Interfaces		
Communication interface		IO-Link
Transmission type		COM2 (38,4 kBaud)
IO-Link revision		1.1

LR8000

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LR0000B-BR34ASPKG/US

SDCI standard		IEC 61131-9 CDV	
Profiles		no profile	
SIO mode		yes	
Required master port type		A	
Process data analogue		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		IEC 60947-1	
Shock resistance		DIN IEC 68-2-27	50 g (11 ms)
Vibration resistance		DIN IEC 68-2-6	5 g (10...2000 Hz)
MTTF	[years]	205	

Mechanical data			
Weight	[g]	380.45	
Materials		stainless steel (1.4301 / 304); FKM; PBT; PC; PEI; TPE-V; PTFE	
Materials (wetted parts)		stainless steel (1.4305 / 303); probe connection: stainless steel (1.4435 / 316L); PTFE; FKM; Sealing: NBR-PPTA 20	
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

Accessories	
Accessories (optional)	Probe:, E43203...E43205 / E43207...E43210
	Coaxial pipe:, E43211...E43221, E43223, E43224

Remarks	
Pack quantity	1 pcs.

Electrical connection

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

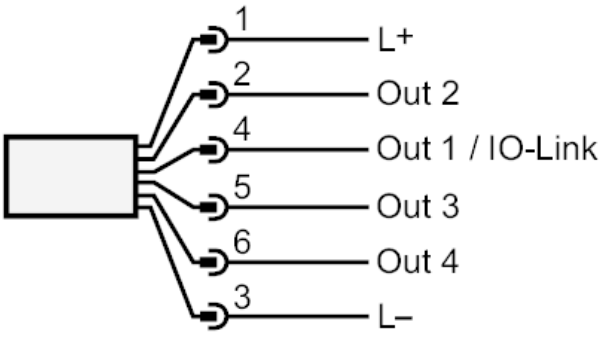


LR8000

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LR0000B-BR34ASPKG/US

Connection



Diagrams and graphs

Measurement deviation D at the limits of the active rod range

