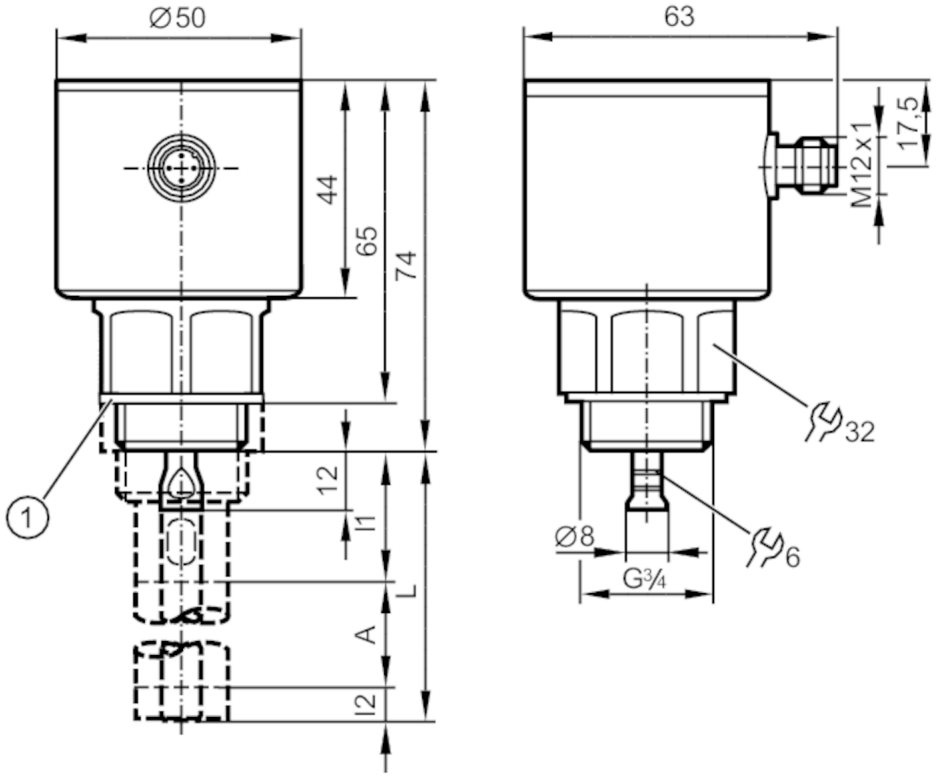
LR9020

Continuous level sensor (guided wave radar)

LR0000--BR34A1DKG/US



1 Sealing
A active range
I1 / I2 inactive ranges

Product characteristics		
Number of inputs and outputs		Number of analogue outputs: 1
Probe length L	[mm]	100...1600
Process connection		G 3/4 external thread
Application		
Special feature		Gold-plated contacts
Media		hydrous coolants; oils; oil-based media; water; media similar to water
Dielectric constant of the medium		≥ 2; (for media with a dielectric constant of 2...20 (e.g. oils), a coaxial pipe is needed for operation)
Conditionally suitable for		See the operating instructions, chapter "Function and features".
Medium temperature	[°C]	0...80; (90 < 1 h)
Tank pressure	[bar]	-1...16
MAWP (for applications according to CRN)	[bar]	25

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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
Inputs / outputs		
Number of inputs and outputs		Number of analogue outputs: 1
Outputs		
Total number of outputs		1
Output signal		analogue signal; IO-Link
Number of analogue outputs		1
Analogue current output	[mA]	4...20
Max. load	[Ω]	500
Analogue voltage output	[V]	0...10
Min. load resistance	[Ω]	2000
Overload protection		yes
Measuring/setting range		
Probe length L	[mm]	100...1600
Active range A	[mm]	L-40 (L-60); (when set to oil and oil based media)
Inactive range I1 / I2	[mm]	30 / 10 (30); (when set to oil and oil based media)
Accuracy / deviations		
Repeatability	[mm]	± 5
Switch point accuracy	[mm]	± (15 + 0,5 %); (% of the final value of the measuring range: L - 30 mm)
Characteristics deviation		± 10
Offset error	[mm]	10
Measuring sensitivity		16 mA ÷ MEW 10 V ÷ MEW
Resolution	[mm]	0.5 (L < 300 mm) 0.2% MEW (L > 300 mm)
Zero signal (voltage)	[V]	0...0.2
Zero signal (current)	[mA]	3.95...4.0
Full signal (voltage)	[V]	10...10.1
Full signal (current)	[mA]	20...20.2

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Interfaces			
Communication interface		IO-Link	
Transmission type		COM2 (38,4 kBaud)	
IO-Link revision		1.1	
SDCI standard		IEC 61131-9 CDV	
IO-Link device ID		0x000242	
Profiles		no profile	
SIO mode		no	
Required master port type		A	
Process data analogue		1	
Min. process cycle time	[ms]	2.3	
Operating conditions			
Ambient temperature	[°C]	0...60	
Storage temperature	[°C]	-25...80	
Protection		IP 68; IP 69K	
Tests / approvals			
EMC		EN 61000-6-2	
		EN 61000-6-3	in a metal tank
		EN 61000-6-4	in a plastic tank
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]	239	
Mechanical data			
Weight	[g]	430	
Materials		stainless steel (1.4301 / 304); stainless steel (1.4404 / 316L); FKM; PEI	
Materials (wetted parts)		stainless steel (1.4305 / 303); probe connection: stainless steel (1.4435 / 316L); PTFE; FKM; Sealing: NBR reinforced fibre	
Process connection		G 3/4 external thread	
Remarks			
Pack quantity		1 pcs.	

Electrical connection

Connector: 1 x M12; Contacts: gold-plated

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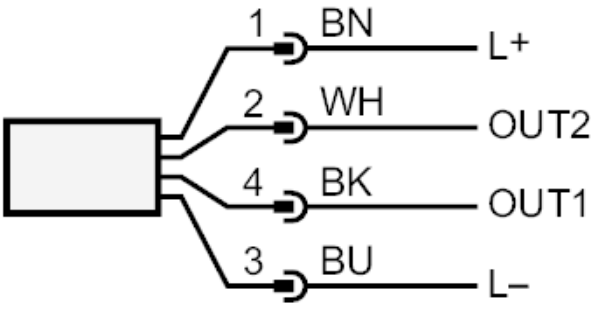
Connection



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