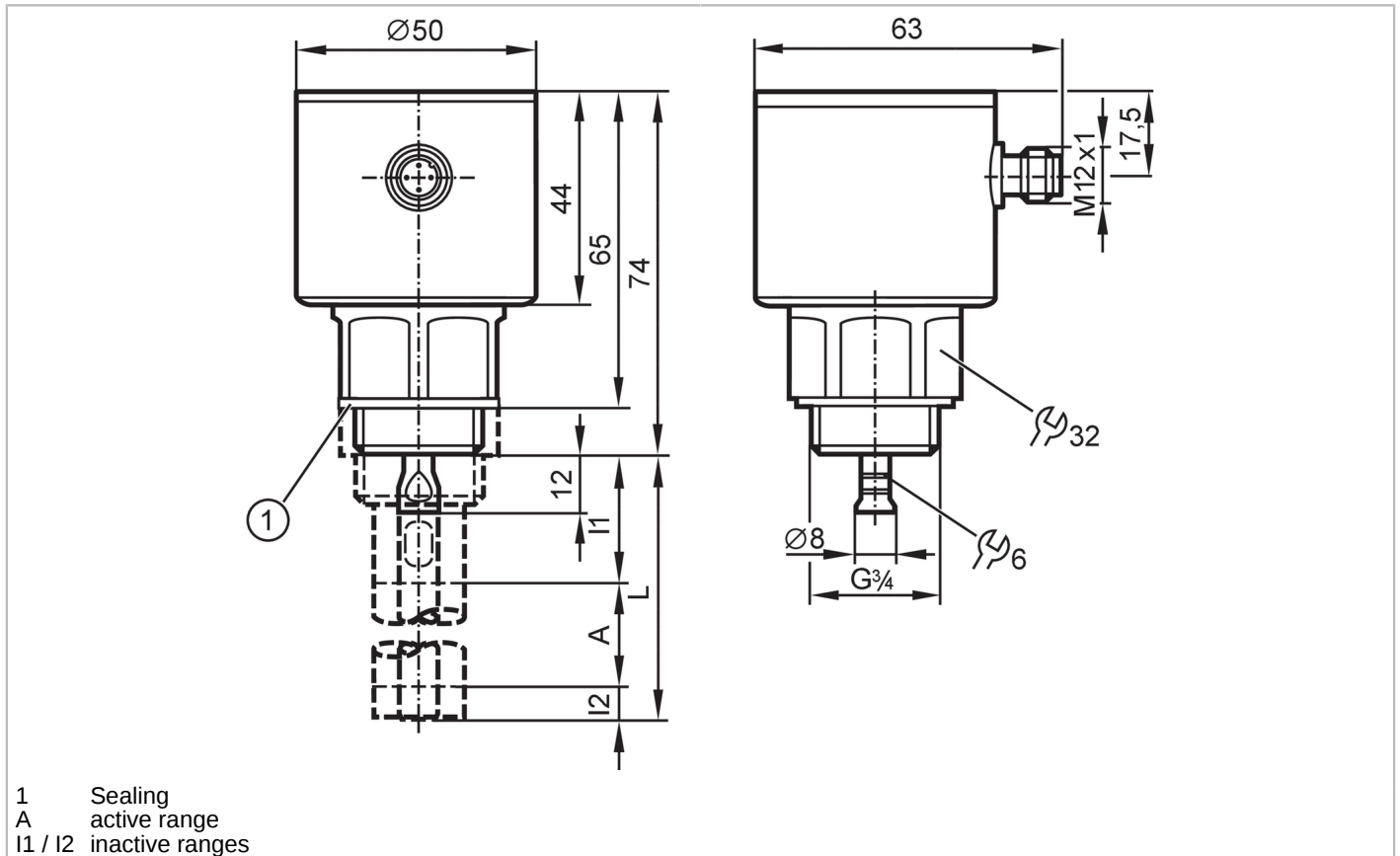


LR9020



Continuous level sensor (guided wave radar)

LR0000--BR34A1DKG/US



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	-1...16 bar -0.1...1.6 MPa
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



Continuous level sensor (guided wave radar)

LR0000--BR34A1DKG/US

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)
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
Characteristics deviation		± 10
Interfaces		
Communication interface		IO-Link
Transmission type		COM2 (38,4 kBaud)
IO-Link revision		1.1
SDCI standard		IEC 61131-9 CDV
SIO mode		no
Required master port type		A
Process data analogue		1
Min. process cycle time	[ms]	2.3
Supported DeviceIDs	Type of operation	DeviceID
	default	578
Operating conditions		
Ambient temperature	[°C]	0...60
Storage temperature	[°C]	-25...80
Protection		IP 68; IP 69K

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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] 470.9
Dimensions	[mm] Ø 50 / L = 86
Materials	stainless steel (304/1.4301); stainless steel (316L/1.4404); FKM; PEI
Materials (wetted parts)	stainless steel (303/1.4305); probe connection: stainless steel (316L/1.4435); PTFE; FKM; Sealing: NBR reinforced fibre
Process connection	G 3/4 external thread

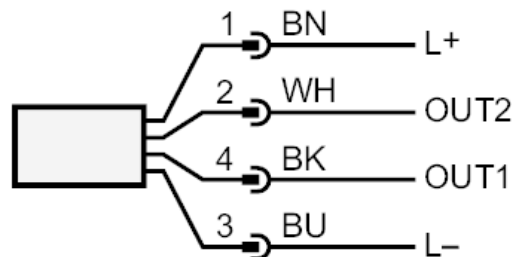
Remarks	
Pack quantity	1 pcs.

Electrical connection

Connector: 1 x M12; coding: A; Contacts: 4, gold-plated



Connection



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