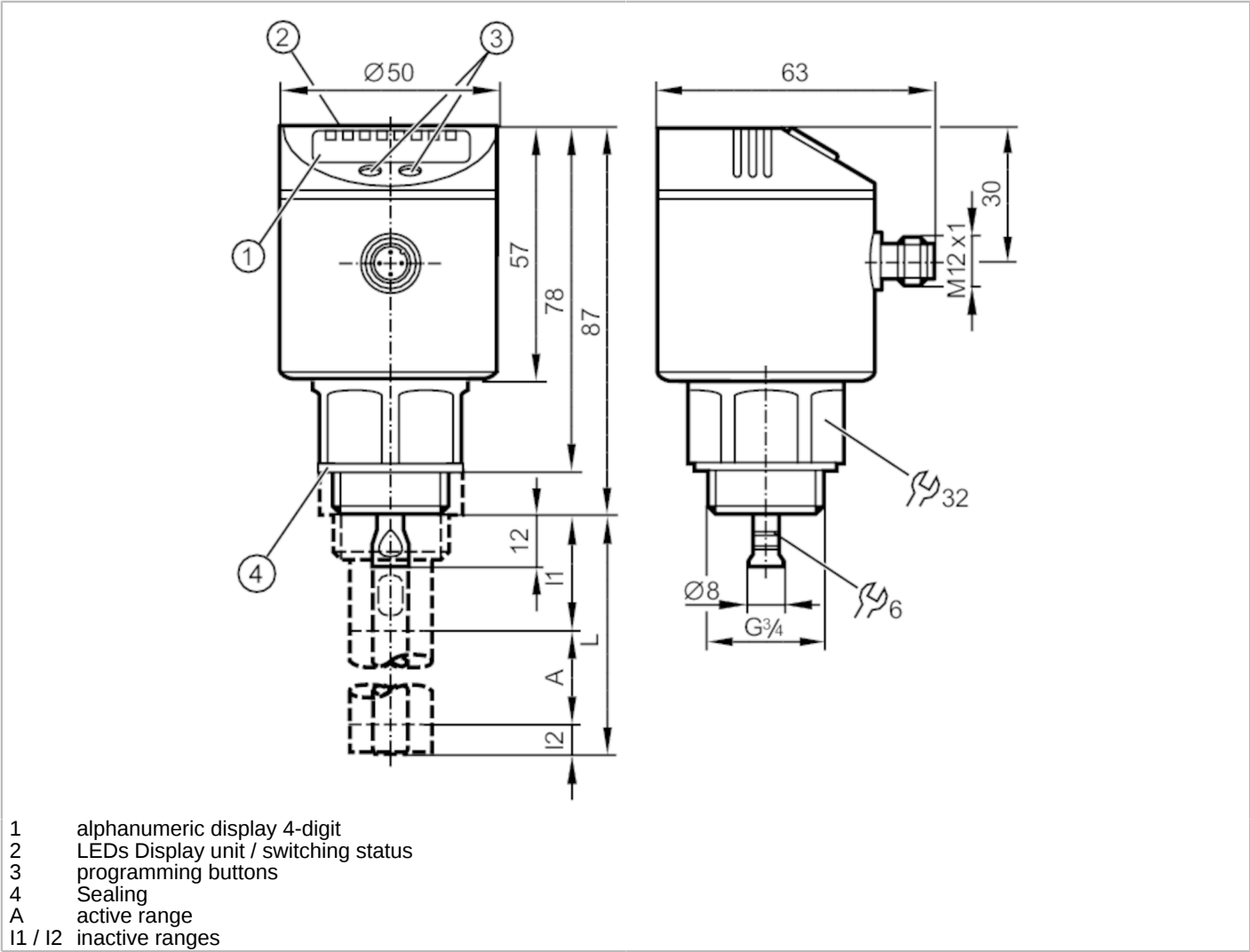




Continuous level sensor (guided wave radar)

LR0000B-BR34AMPKG/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 range
- I1 / I2 inactive ranges



Product characteristics	
Number of inputs and outputs	Number of digital outputs: 1; Number of analogue outputs: 1
Probe length L [mm]	100...1600
Process connection	threaded connection G 3/4 external thread
Application	
Special feature	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; hydrous 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	[bar]	16
Vacuum resistance	[mbar]	-1000
MAWP (for applications according to CRN)	[bar]	16
<b>Electrical data</b>		
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
<b>Inputs / outputs</b>		
Number of inputs and outputs		Number of digital outputs: 1; Number of analogue outputs: 1
<b>Outputs</b>		
Total number of outputs		2
Output signal		switching signal; analogue signal; IO-Link
Electrical design		PNP
Number of digital outputs		1
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
Number of analogue outputs		1
Analogue current output	[mA]	4...20, invertible; (scalable)
Max. load	[Ω]	500
Analogue voltage output	[V]	0...10, invertible; (scalable)
Min. load resistance	[Ω]	2000
Short-circuit protection		yes
Type of short-circuit protection		thermal, pulsed
Overload protection		yes
<b>Measuring/setting range</b>		
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
<b>Setting range</b>		
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

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Accuracy / deviations		
Repeatability	[mm]	± 5
Measuring error	[mm]	± 7
Offset error	[mm]	5
Resolution	[mm]	1
Zero signal (voltage)	[V]	0
Zero signal (current)	[mA]	4.0
Full signal (voltage)	[V]	10
Full signal (current)	[mA]	20
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 type	A	
Process data analogue	1	
Process data binary	1	
Min. process cycle time	[ms]	2.3
Supported DeviceIDs	Type of operation	DeviceID
	default	344
Operating conditions		
Ambient temperature	[°C]	-25...60
Storage temperature	[°C]	-40...80
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	[ANN]	196
UL approval	UL Approval no.	H006
	File number UL	E174191
Mechanical data		
Weight	[g]	378.4
Materials	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 reinforced fibre	
Process connection	threaded connection G 3/4 external thread	

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Displays / operating elements

Display	Display unit	3 x LED, green
	switching status	1 x LED, yellow
	level	alphanumeric display, 4-digit
	parameter setting	alphanumeric display, 4-digit

Remarks

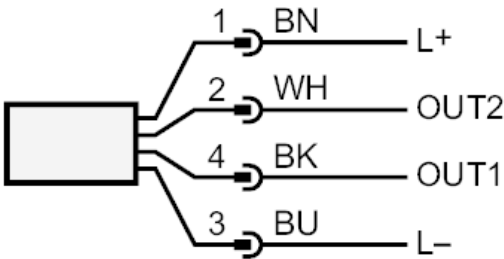
Notes	Please see the technical note under "Downloads"; For high process temperatures: The temperature at the process connection is decisive. The actual medium temperature may be higher.
Pack quantity	1 pcs.

Electrical connection

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



Connection



OUT1: switching output or IO-Link  
OUT2: analogue output  
colours to DIN EN 60947-5-2  
Core colours :

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

