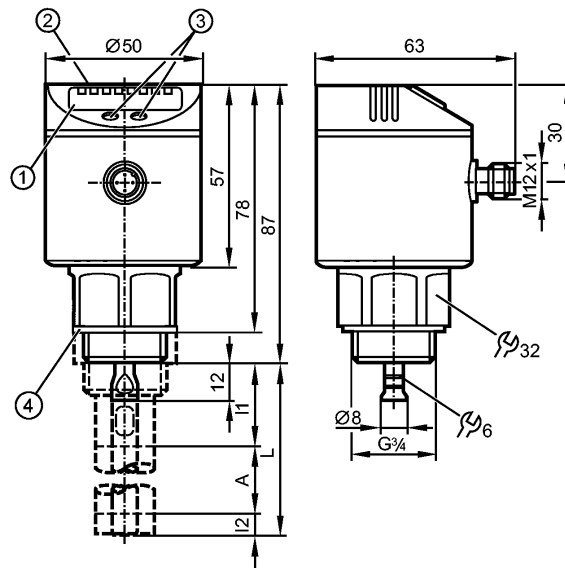


**LR3000**

LR0000B-BR34AMPKG/US

Level sensors



- 1: 4-digit alphanumeric display
- 2: LEDs (display unit / switching status)
- 3: Programming buttons
- 4: sealing
- A: Active zone
- I1 / I2: Inactive ranges



**Product characteristics**

Electronic level sensor
Quick disconnect
Process connection: G 3/4 A
Guided wave radar
Freely rotatable housing 360°
Probe length: L = 100...1600 mm
2 Output OUT1 = Switching output OUT2 = Analog output
4-digit alphanumeric display

**Application**

Application	Hydrous coolants, oils, oil-based media, water, media similar to water
Cannot be used for:	fats, granulates, bulk materials, acids, alkalis; hygienic and electroplating applications; heavily foaming media
Medium temperature [°C]	0...80 (90 < 1 h)
Maximum speed of the change of level [mm/s]	100
Dielectric constant medium	≥ 2 for media with a dielectric constant 2...20 (e.g. oils) a coaxial pipe is required for operation (see below: accessories (optional))

**Electrical data**

Electrical design	DC PNP
Operating voltage [V]	18...30 DC
Current consumption [mA]	< 80
Protection class	III
Reverse polarity protection	yes

**LR3000**

LR0000B-BR34AMPKG/US

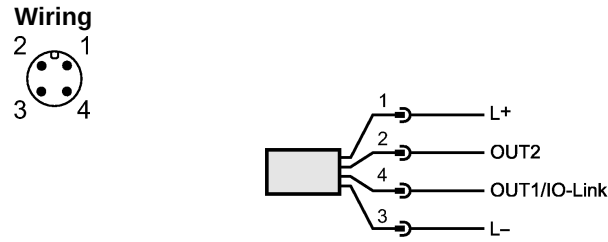
**Level sensors**

Outputs	
Output	2 Output OUT1 = Switching output OUT2 = Analog output
Output function	normally open / closed programmable; 4...20 mA or 0...10 V
Current rating [mA]	200
Voltage drop [V]	< 2.5
Short-circuit protection	thermal, pulsed
Overload protection	yes
Analog output	I: 4...20 mA / U: 0...10 V
Max. load [Ω]	I: 500
Min. load [Ω]	U: 2000
Measuring / setting range	
Probe length L [mm]	100...1600
Active range A [mm]	L-40 (L-60)*
Inactive range I1 / I2 [mm]	30 / 10 (30)*
Setting range	
Set point, SP [mm]	≥ 15 (35)* / ≤ L-30
Reset point, rP [mm]	≥ 10 (30)* / ≤ L-35
in steps of [mm]	5
Hysteresis [mm]	≥ 5
Accuracy / deviations	
Deviations (in mm)	
Switch point accuracy	± (15 + 0.5 % MEW**)
Repeatability	± 5
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 [mA] / [V]	3.6...4.0 / 0...0.2
Full signal [mA] / [V]	20...20.8 / 10.0...10.3
Reaction times	
Power-on delay time [s]	≤ 3
Interfaces	
IO-Link Device	
Transfer type	COM2 (38.4 kBaud)
IO-Link revision	1.1
SDCI standard	IEC 61131-9 CDV
IO-Link Device ID	344 d / 00 01 58 h
Profiles	no profile
SIO mode	yes
Required master port class	A
Process data analogue	1
Process data binary	1
Min. process cycle time [ms]	2.3

## LR3000

LR0000B-BR34AMPKG/US

Level sensors

Environment	
Ambient temperature [°C]	0...60
Storage temperature [°C]	-25...80
Maximum vessel pressure [bar]	-1...16
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]	174.71
Mechanical data	
Process connection	G ¾ A
Materials (wetted parts)	stainless steel (303S22); probe connection: stainless steel 316L / 1.4435; PTFE; FKM; sealing: Tesnit
Housing materials	stainless steel (304S15); FKM; PBT; PC; PEI; TPE / V; PTFE
Weight [kg]	0.388
Displays / operating elements	
Display	Display unit 3 x LED green Switching status 1 x LED yellow Level 4-digit alphanumeric display Programming 4-digit alphanumeric display
Electrical connection	
Connection	M12 connector (according to EN 61076-2-101); gold-plated contacts
<b>Wiring</b>	 <p>Programming of the switching outputs:                      Hno = hysteresis / NO                      Hnc = hysteresis / NC                      Fno = window / NO                      Fnc = window / NC</p>
Accessories	
Accessories (optional)	Probe, part no. E43203...E43205 / E43207...E43210; Coaxial tube, part no. E43211...E43221, E43223, E43224; Matching accessories online next to the Datasheet → Accessories
Remarks	
Remarks	*) when set to oil and oil based media **) MEW = final value of the measuring range in mm; MEW = L - 30 mm
Pack quantity [piece]	1