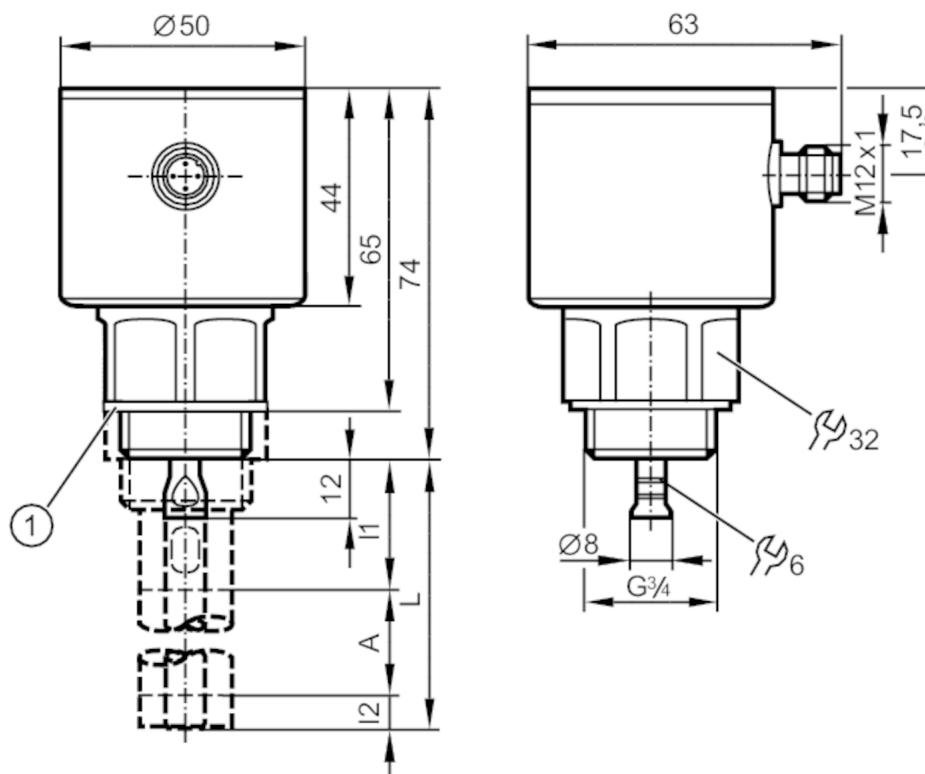


Continuous level sensor (guided wave radar)

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 |

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 |



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| | | |
|------------------------------|---|-----------------|
| Measuring principle | guided wave radar | |
| 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 | |
| Profiles | no profile | |
| SIO mode | no | |
| Required master port type | A | |
| Process data analogue | 1 | |
| Min. process cycle time [ms] | 2.3 | |
| Supported DeviceIDs | Type of operation default | DeviceID 578 |
| Operating conditions | | |
| Ambient temperature [°C] | 0...60 | |
| Storage temperature [°C] | -25...80 | |

LR9020



Continuous level sensor (guided wave radar)

LR0000--BR34A1DKG/US

| | |
|------------|---------------|
| 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

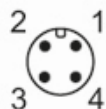
| | |
|--------------------------|---|
| Weight [g] | 470.9 |
| Dimensions [mm] | Ø 50 / L = 86 |
| Materials | stainless steel (304/1.4301); stainless steel (316L/1.4404); FKM; PEI |
| Materials (wetted parts) | stainless steel (303/1.4305); probe connection: stainless steel (316L/1.4435); PTFE; FKM;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

Remarks

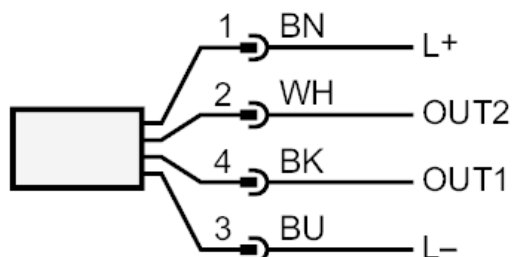
| | |
|---------------|--------|
| Pack quantity | 1 pcs. |
|---------------|--------|

Electrical connection

Connector: 1 x M12; coding: A; Contacts: 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