

LR8300

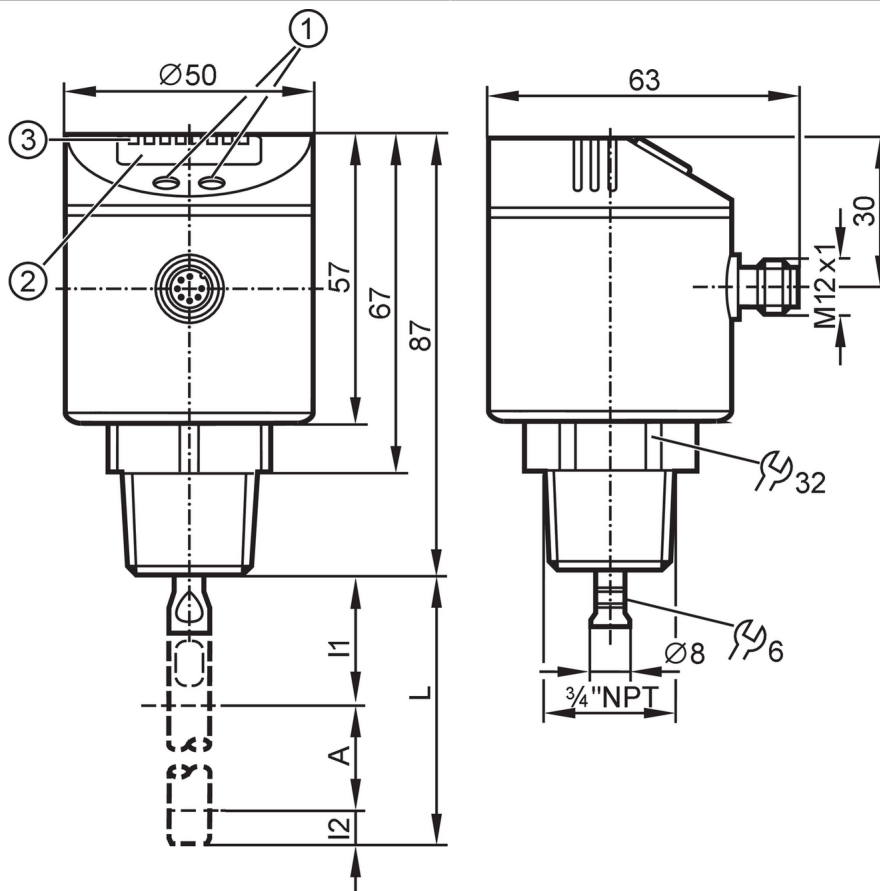


Continuous level sensor (guided wave radar)

LR0000B-BN34ASPKG/US

For high process temperatures: The temperature at the process connection is decisive. The actual medium temperature may be higher.

For 8-wire cordsets the core colors are not standardized.
Please note the wiring of the sensor and the cordsets (see data sheet).
Please see the technical note under "Downloads"



- 1 alphanumeric display 4-digit
- 2 LEDs Display unit / Switching status
- 3 Programming buttons
- A Active zone
- I1 / I2 Inactive ranges



Product characteristics

| | |
|------------------------------|--|
| Number of inputs and outputs | Number of digital outputs: 4 |
| Probe length L [mm] | 100...1600 |
| Process connection | threaded connection 3/4" NPT external thread |

Application

| | |
|-----------------------------------|-----------------------------|
| Special feature | gold-plated contacts |
| Application | for industrial applications |
| Media | Liquids |
| Dielectric constant of the medium | ≥ 5 |
| Recommended media | water; water-based media |

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| | | |
|--|--|----------|
| Cannot be used for | See the operating instructions, chapter "Function and features". | |
| Process temperature [°C] | -25...80; (90 < 1 h ; see note under remarks) | |
| Pressure rating | 16 bar | 1.6 MPa |
| Vacuum resistance | -1000 mbar | -0.1 MPa |
| MAWP (for applications according to CRN) [bar] | 16 | |

Electrical data

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

Inputs / outputs

| | | |
|------------------------------|------------------------------|--|
| Number of inputs and outputs | Number of digital outputs: 4 | |
|------------------------------|------------------------------|--|

Outputs

| | | |
|--|--|--|
| Total number of outputs | 4 | |
| Output signal | switching signal; IO-Link | |
| Electrical design | PNP | |
| Number of digital outputs | 4 | |
| Output function | normally open / closed; (configurable) | |
| Max. voltage drop switching output DC [V] | 2.5 | |
| Permanent current rating of switching output DC [mA] | 200 | |
| Short-circuit protection | yes | |
| Type of short-circuit protection | thermal, pulsed | |
| Overload protection | yes | |

Measuring/setting range

| | | |
|-----------------------------|------------|--|
| Probe length L [mm] | 100...1600 | |
| Active range A [mm] | L-40 | |
| Inactive range I1 / I2 [mm] | 30 / 10 | |
| Sampling rate [Hz] | 4 | |

Setting range

| | | |
|---------------------|------------|--|
| Set point SP [mm] | 15...L-30 | |
| Reset point rP [mm] | 10... L-35 | |
| In steps of [mm] | 5 | |
| Hysteresis [mm] | > 5 | |

Accuracy / deviations

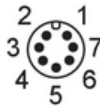
| | | |
|----------------------------|---------|--|
| Repeatability [mm] | ± 5 | |
| Measuring error [mm] | ± 7 | |
| Offset error [mm] | 5 | |
| Resolution [mm] | 1 | |
| Temperature drift per 10 K | ± 0.2 % | |

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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 | |
| SIO mode | yes | |
| Required master port class | A | |
| Process data analog | 1 | |
| Process data binary | 4 | |
| Min. process cycle time [ms] | 2.3 | |
| Supported DeviceIDs | Type of operation | DeviceID |
| | default | 11 |
| Operating conditions | | |
| Ambient temperature [°C] | -25...60 | |
| Storage temperature [°C] | -40...85 | |
| 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 [years] | 205 | |
| Mechanical data | | |
| Weight [g] | 351.5 | |
| Material | 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 | |
| Process connection | threaded connection 3/4" NPT external thread | |
| Displays / operating elements | | |
| Display | Display unit | 3 x LED, green |
| | Switching status | 4 x LED, yellow |
| | Level | alphanumeric display, 4-digit |
| | Parameter setting | alphanumeric display, 4-digit |
| Remarks | | |
| Notes | 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 | | |
|  | | |

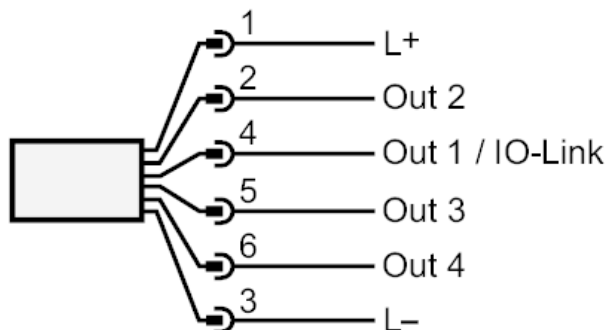
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Connection



Diagrams and graphs

Measurement deviation D at the limits of the active rod range

