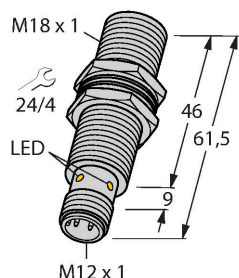


BI8U-EM18MWD-VP6X-H1141

Inductive Sensor – For the Food Industry



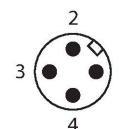
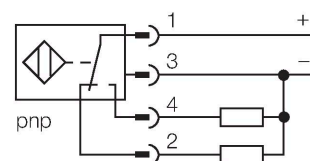
Features

- Threaded barrel, M18 x 1
- Stainless steel, 1.4404
- Front cap made of liquid crystal polymer
- Factor 1 for all metals
- Resistant to magnetic fields
- For temperatures of -40 °C...+100 °C
- High protection class IP69K for harsh environments
- Special double-lip seal
- Protection against all common acidic and alkaline cleaning agents
- Laser engraved label, permanently legible
- DC 4-wire, 10...30 VDC
- Changeover contact, PNP output
- M12 x 1 male connector

Technical data

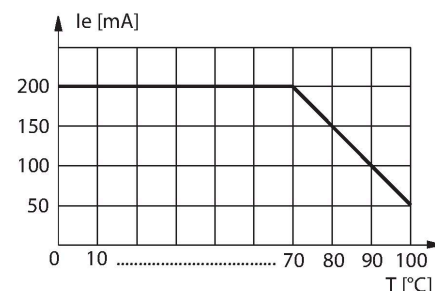
| | |
|--|--|
| Type | BI8U-EM18MWD-VP6X-H1141 |
| ID | 100000635 |
| General data | |
| Rated switching distance | 8 mm |
| Mounting conditions | Flush |
| Secured operating distance | $\leq (0.81 \times S_n)$ mm |
| Repeat accuracy | $\leq 2 \%$ of full scale |
| Temperature drift | $\leq \pm 10 \%$ $\leq \pm 20 \%, \leq -25 \text{ °C}, \geq +70 \text{ °C}$ |
| Hysteresis | 3...15 % |
| Electrical data | |
| Operating voltage U_B | 10...30 VDC |
| Ripple U_{ss} | $\leq 10 \%$ U_{Bmax} |
| DC rated operating current I_o | ≤ 200 mA |
| No-load current | ≤ 25 mA |
| Residual current | ≤ 0.1 mA |
| Isolation test voltage | 0.5 kV |
| Short-circuit protection | yes/Cyclic |
| Voltage drop at I_o | ≤ 1.8 V |
| Wire break/reverse polarity protection | yes/Complete |
| Output function | 4-wire, Complementary contact, PNP |
| DC field stability | 300 mT |
| AC field stability | 300 mT _{ss} |
| Switching frequency | 1.5 kHz |
| Mechanical data | |
| Design | Threaded barrel, M18 x 1 |
| Dimensions | 61.5 mm |

Wiring diagram



Functional principle

The inductive sensors for the food industry are absolutely tight and resistant to cleaning agents and disinfectants. The requirements of the protection classes IP68 and IP69K are well exceeded by our uprox®+ sensors. The sensors are entirely protected by the LCP front cap and the stainless steel housing.



Technical data

| | |
|---------------------------------------|---|
| Housing material | Stainless steel, 1.4404 (AISI 316L) |
| Active area material | Plastic, LCP |
| Connector housing | plastic, PP |
| Admissible pressure on front cap | ≤ 15 bar |
| Max. tightening torque of housing nut | 25 Nm |
| Electrical connection | Connector, M12 × 1 |
| Environmental conditions | |
| Ambient temperature | -40...+100 °C |
| Vibration resistance | 55 Hz (1 mm) |
| Shock resistance | 30 g (11 ms) |
| Protection class | IP68 IP69K |
| MTTF | 874 years acc. to SN 29500 (Ed. 99) 40 °C |
| Switching state | LED, Yellow |

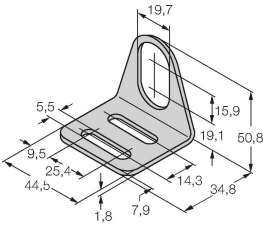
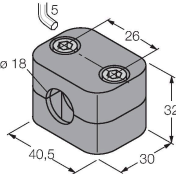
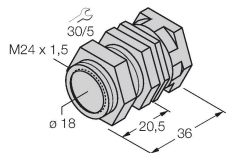
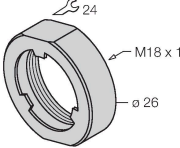
Mounting instructions

Mounting instructions/Description

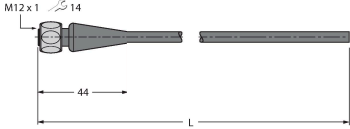
| | |
|------------------------|---------|
| Distance D | 36 mm |
| Distance W | 3 x Sn |
| Distance T | 3 x B |
| Distance S | 1.5 x B |
| Distance G | 6 x Sn |
| Diameter active area B | Ø 18 mm |

All flush mountable uprox+ threaded barrel types are also recessed mountable. Safe operation is ensured if the sensor is screwed in by half a turn.

Accessories

| | | | | | | | |
|-------|---------|---|--|--------|---------|--|---|
| MW18 | 6945004 |  | Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304) | BSS-18 | 6901320 |  | Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene |
| QM-18 | 6945102 |  | Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M24 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets. | PN-M18 | 6905310 |  | Protective nut for M18 x 1 threaded barrels; material: Stainless steel A2 1.4305 (AISI 303) |

Accessories

| Dimension drawing | Type | ID | |
|---|--------------|---------|--|
|  | RKH4.4-2/TFE | 6934473 | Connection cable, M12 female connector, straight, 4-pin, stainless steel coupling nut, cable length: 2 m, jacket material: PVC, gray; temperature range: -25...+80 °C |
|  | RKH4.4-2/TFG | 6933086 | Connection cable, M12 female connector, straight, 4-pin, stainless steel coupling nut, cable length: 2 m, jacket material: TPE, gray; temperature range: -40...+105 °C |