

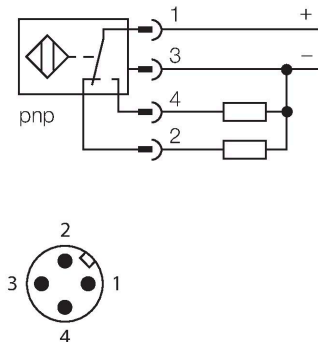
# BI8U-EM18MWD-VP6X-H1141

## Inductive Sensor – For the Food Industry

### Features

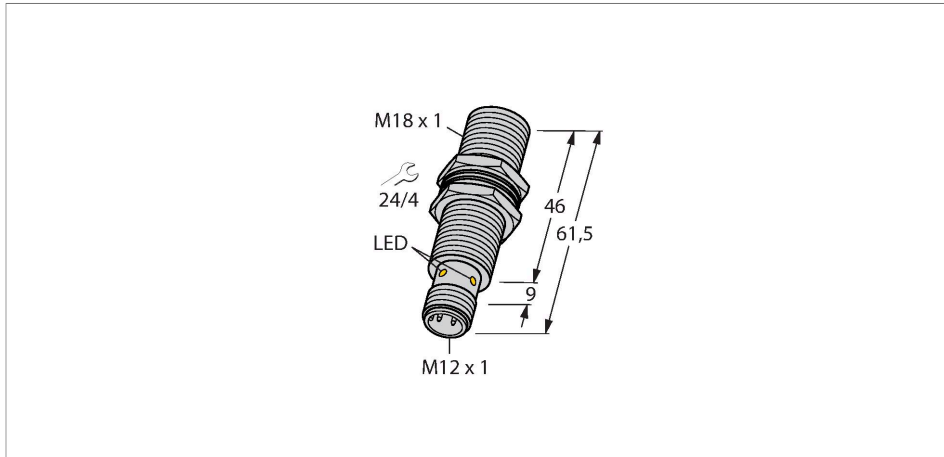
- Threaded barrel, M18 x 1
- Stainless steel, 1.4404
- Front cap made of liquid crystal polymer
- Factor 1 for all metals
- Resistant to magnetic fields
- For temperatures of -40 °C...+100 °C
- High protection class IP69K for harsh environments
- Special double-lip seal
- Protection against all common 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

### 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.

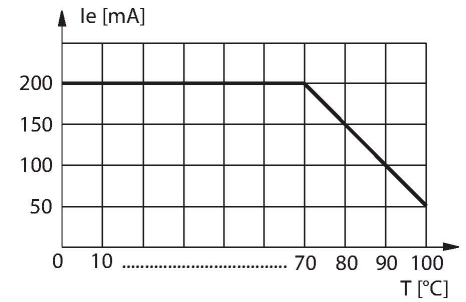


### Technical data

|   |  |
|---|--|
| Type                                      | BI8U-EM18MWD-VP6X-H1141  |
| ID  | 100000635  |
| <b>General data</b>                       |  |
| 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                         | $\leq \pm 10 \%$<br>$\leq \pm 20 \%$ , $\leq -25 \text{ °C}$ , $\geq +70 \text{ °C}$ |
| Hysteresis                                | 3...15 %   |
| <b>Electrical data</b>                    |  |
| Operating voltage                         | 10...30 VDC  |
| Residual ripple                           | $\leq 10 \%$ $U_{ss}$  |
| DC rated operational current              | $\leq 200$ mA  |
| No-load current                           | 25 mA  |
| Residual current                          | $\leq 0.1$ mA  |
| Isolation test voltage                    | $\leq 0.5$ kV  |
| Short-circuit protection                  | yes / Cyclic   |
| Voltage drop at $I_o$                     | $\leq 1.8$ V   |
| Wire breakage/Reverse polarity protection | yes / Complete   |
| Output function                           | 4-wire, Complementary contact, PNP   |
| DC field stability                        | 300 mT   |
| AC field stability                        | 300 mT <sub>ss</sub>   |
| Switching frequency                       | 1.5 kHz  |

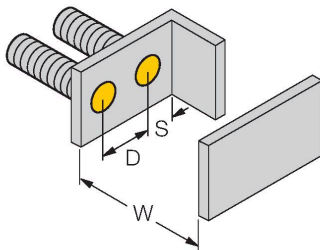
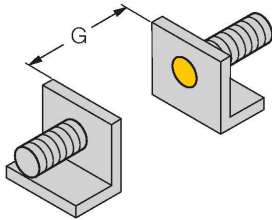
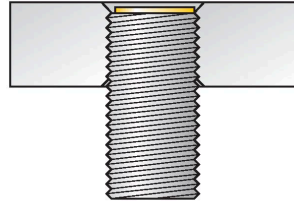
## Technical data

| Mechanical data                       |   |
|---------------------------------------|---|
| Design                                | Threaded barrel, M18 x 1                  |
| Dimensions                            | 61.5 mm                                   |
| 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<br>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 Ø 18 mm  
area B

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

MW-18

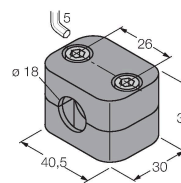
6945004



Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)

BSS-18

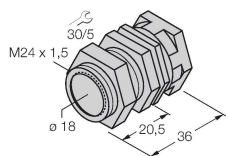
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Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene

QM-18

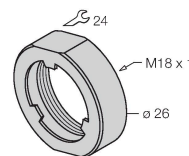
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Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M24 x 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

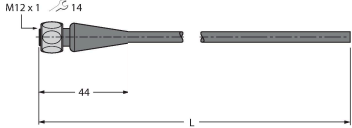
PN-M18

6905310



Protective nut for M18 x 1 threaded barrels; material: Stainless steel A2 1.4305 (AISI 303)

## Wiring 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 |