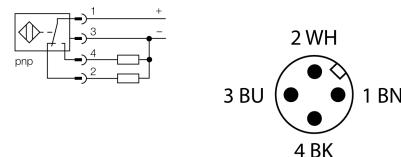
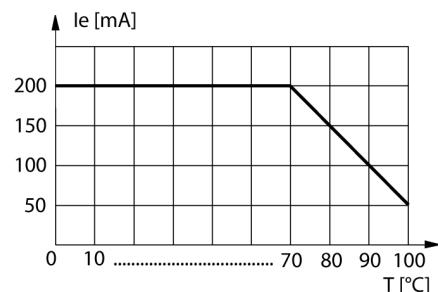


- Threaded barrel, M12 x 1
- Stainless steel, 1.4404
- Front cap made of liquid crystal polymer
- Factor 1 for all metals
- Resistant to magnetic fields
- Temperatures -40 °C ... +100 °C
- High protection class IP69K, for harsh environments
- Special double-lip seal
- Protection against all common acid 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



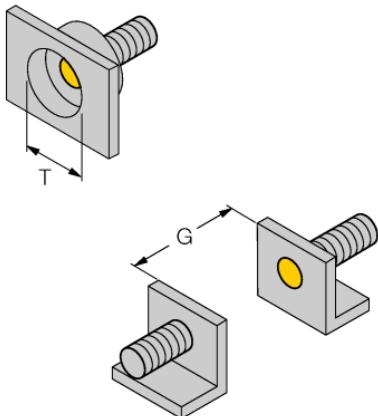
#### Derating Curve



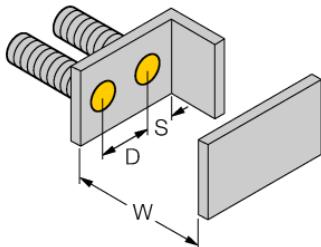
|   |   |
|---|---|
| Type designation                          | BI4U-EM12EWD-VP6X-H1141                   |
| Ident-No.                                 | 1635012                                   |
| Rated switching distance Sn               | 4 mm                                      |
| Mounting conditions                       | Flush                                     |
| Secured operating distance                | ≤ (0,81 x Sn) mm                          |
| Repeat accuracy                           | ≤ 2 % of full scale                       |
| Temperature drift                         | ≤ ± 10 %                                  |
| Hysteresis                                | ≤ ± 20 %, ≤ -25 °C, ≥ +70 °C              |
| Ambient temperature                       | 3...15 %<br>-40...+100 °C                 |
| Operating voltage                         | 10...30 VDC                               |
| Residual ripple                           | ≤ 10 % U <sub>ss</sub>                    |
| DC rated operational current              | ≤ 200 mA                                  |
| No-load current I <sub>o</sub>            | ≤ 20 mA                                   |
| Residual current                          | ≤ 0.1 mA                                  |
| Isolation test voltage                    | ≤ 0.5 kV                                  |
| Short-circuit protection                  | yes/ Cyclic                               |
| Voltage drop at I <sub>o</sub>            | ≤ 1.8 V                                   |
| Wire breakage/Reverse polarity protection | yes/ Complete                             |
| Output function                           | 4-wire, Complementary contact, PNP        |
| Insulation class                          | □   |
| Switching frequency                       | 2 kHz                                     |
| Design                                    | Threaded barrel, M12 x 1                  |
| Dimensions                                | 62 mm                                     |
| Housing material                          | Stainless steel, V4A (1.4404)             |
| Active area material                      | Plastic, LCP                              |
| Connector housing                         | Plastic, PP                               |
| Admissible pressure on front cap          | ≤ 20 bar                                  |
| Max. tightening torque housing nut        | 10 Nm                                     |
| Electrical connection                     | Connector, M12 x 1                        |
| 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 |
| Packaging unit                            | 1   |
| Switching state                           | LED, Yellow                               |

|            |         |
|------------|---------|
| Distance D | 24 mm   |
| Distance W | 3 x Sn  |
| Distance T | 3 x B   |
| Distance S | 1.5 x B |
| Distance G | 6 x Sn  |

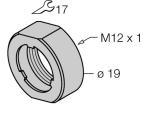
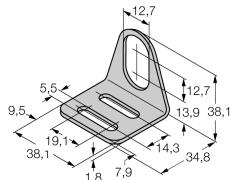
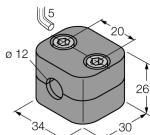
Diameter active area B      Ø 12 mm



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**

| Type code | Ident-No. | Description   |   |
|-----------|-----------|---|---|
| PN-M12    | 6905309   | Impact protection nut for M12x1 threaded barrel devices; material: Stainless steel A2 1.4305 (AISI 303) |    |
| MW-12     | 6945003   | Mounting bracket for threaded barrel devices; material: Stainless steel A2 1.4301 (AISI 304)            |    |
| BSS-12    | 6901321   | Mounting bracket for smooth and threaded barrel devices; material: Polypropylene                        |  |