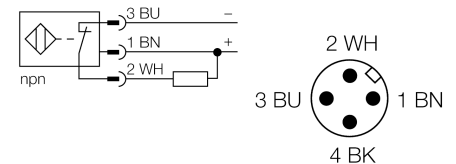


- Threaded barrel, M12 x 1
- Chrome-plated brass
- Factor 1 for all metals
- Protection class IP68
- Magnetic field immune
- High switching distance
- Recessed mounting possible
- DC 3-wire, 10...30 VDC
- NC contact, NPN output
- M12 x 1 connector

**Wiring diagram**



**Functional principle**

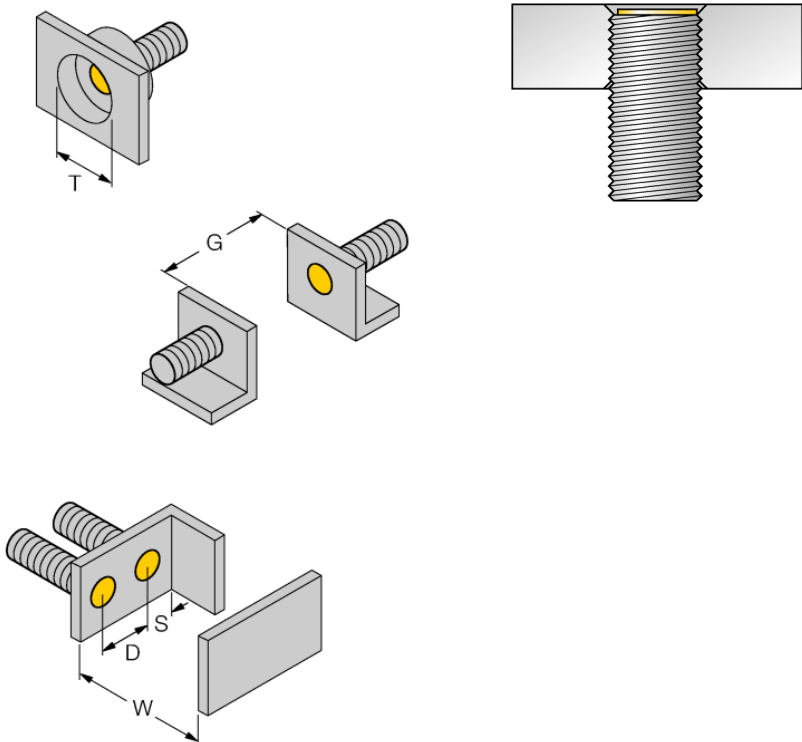
Inductive sensors detect metal objects contactless and wear-free. Due to a patented ferrite-less air-coil systems, *Uprox*®+ sensors have distinct advantages compared to conventional sensors. They excel in highest switching distances, maximum flexibility and operational reliability as well as efficient standardization.

|   |                               |
|---|-------------------------------|
| <b>Type</b>                                 | BI4U-M12-RN6X-H1141           |
| Ident-No.                                   | 1635200                       |
| <b>Rated operating distance Sn</b>          | 4 mm                          |
| Mounting condition                          | flush                         |
| Assured sensing range                       | ≤ (0,81 x Sn) mm              |
| Repeatability                               | ≤ 2 %                         |
| Temperature drift                           | ≤ ± 10 %                      |
| Hysteresis                                  | ≤ ± 15 %, ≤ -25 °C v ≥ +70 °C |
| Ambient temperature                         | 3...15<br>-30...+85°C         |
| <b>Operating voltage</b>                    | 10...30                       |
| Residual ripple                             | ≤ 10 % U <sub>SS</sub>        |
| DC rated operational current                | ≤ 200 mA                      |
| No-load current I <sub>0</sub>              | ≤ 15 mA                       |
| Residual current                            | ≤ 0.1 mA                      |
| Rated insulation voltage                    | ≤ 0.5 kV                      |
| Short-circuit protection                    | yes/ cyclic                   |
| Voltage drop at I <sub>e</sub>              | ≤ 1.8 V                       |
| Wire breakage / Reverse polarity protection | yes/ complete                 |
| Output function                             | 3-wire, NC contact, NPN       |
| Protection class                            | ☐                             |
| Switching frequency                         | ≤ 2 kHz                       |
| <b>Design</b>                               | threaded barrel, M12 x 1      |
| Dimensions                                  | 52                            |
| Housing material                            | Metal, CuZn, chrome-plated    |
| Material active face                        | Plastic, LCP-GF30             |
| Tightening torque of housing nut            | 10 Nm                         |
| Connection                                  | connector, M12 x 1            |
| Vibration resistance                        | 55 Hz (1 mm)                  |
| Shock resistance                            | 30 g (11 ms)                  |
| Protection class                            | IP68                          |
| <b>Switching state</b>                      | LED yellow                    |

| Mounting instructions | minimum distances |
|-----------------------|-------------------|
| Distance D            | 24 mm             |
| Distance W            | 12 mm             |
| Distance T            | 36 mm             |
| Distance S            | 18 mm             |
| Distance G            | 24 mm             |

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**Diameter of the active area B**                      Ø 12 mm



Flush and recessed mounting of all *uprox<sup>+</sup>* threaded barrel sensors. Safe operation is ensured if the sensor is screwed in by half a turn.

### Accessories

| Type code | Ident-No. | Short text   | Dimension drawing |
|-----------|-----------|--|-------------------|
| QM-12     | 6945101   | Quick-mount bracket with dead-stop; material: Chrome-plated brass Male thread M16 x 1. Note: The switching distance of proximity switches can be reduced by the use of quick-mount brackets. |                   |
| BST-12B   | 6947212   | Fixing clamp with dead-stop; material: PA6   |                   |
| MW-12     | 6945003   | Mounting bracket; material: Stainless steel A2 1.4301 (AISI 304)   |                   |
| BSS-12    | 6901321   | Fixing clamp; material: Polypropylene  |                   |
| PN-M12    | 6905309   | Stoßschutzmutter für M12x1 Gewinderohrgeräte; Werkstoff: Edelstahl A2 1.4305 (AISI 303)  |                   |