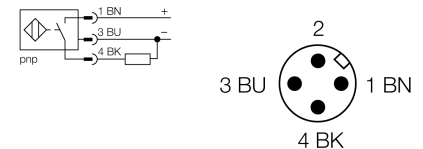


- Threaded barrel, M12 x 1
- Plastic, PBT-GF30-V0
- Factor 1 for all metals
- Protection class IP68
- Magnetic field immune
- Extended temperature range
- High switching frequency
- Predamping protection through self-compensation
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M12 x 1 connector

|                                             |                                           |
|---------------------------------------------|-------------------------------------------|
| <b>Type</b>                                 | NI8U-S12-AP6X-H1141                       |
| Ident-No.                                   | 1644600                                   |
| <b>Rated operating distance Sn</b>          | 8 mm                                      |
| Mounting condition                          | non-flush, partially embeddable           |
| Assured sensing range                       | ≤ (0,81 x Sn) mm                          |
| Repeatability                               | ≤ 2 %                                     |
| Temperaturdrift                             | 10 %                                      |
|                                             | ≤ ± 20 %, ≤ -25 °C v ≥ +70 °C             |
| Hysteresis                                  | 3...15 %                                  |
| Ambient temperature                         | -30...+85 °C                              |
| <b>Operating voltage</b>                    | 10...30VDC                                |
| 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>0</sub>              | ≤ 1.8 V                                   |
| Wire breakage / Reverse polarity protection | yes/ complete                             |
| Output function                             | 3-wire, NO contact, PNP                   |
| Protection class                            | ☐                                         |
| Switching frequency                         | 2 kHz                                     |
| <b>Design</b>                               | threaded barrel, M12 x 1                  |
| Dimensions                                  | 52 mm                                     |
| Housing material                            | Plastic, PBT-GF20-V0                      |
| Material active face                        | Plastic, PBT-GF20-V0                      |
| Max. tightening torque housing nut          | 1 Nm                                      |
| Connection                                  | male, M12 x 1                             |
| Vibration resistance                        | 55 Hz (1 mm)                              |
| Shock resistance                            | 30 g (11 ms)                              |
| Protection class                            | IP68                                      |
| MTTF                                        | 874 years acc. to SN 29500 (Ed. 99) 40 °C |
| <b>Switching state</b>                      | LED yellow                                |

**Wiring diagram**



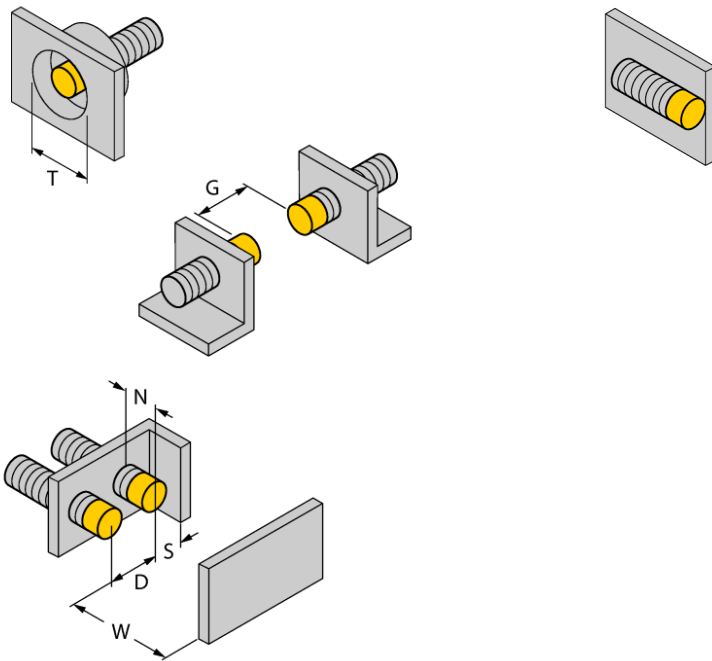
**Functional principle**

Inductive sensors detect metal objects contactless and wear-free. Due to the patented ferrite-less 3-coil system, uprox® factor 1 sensors have distinct advantages compared to conventional sensors. They detect all metals at the same switching distance, are magnetic field immune and feature large switching distances.

| Mounting instructions | minimum distances |
|-----------------------|-------------------|
| Distance D            | 3 x B             |
| Distance W            | 3 x Sn            |
| Distance T            | 45 mm             |
| Distance S            | 0.5 x B           |
| Distance G            | 6 x Sn            |
| Distance N            | 2 x Sn            |

---

|                                      |         |
|--------------------------------------|---------|
| <b>Diameter of the active area B</b> | Ø 12 mm |
|--------------------------------------|---------|



1-side flush mounting possible:  
1-side flush mounting: Sr = 6 mm

**Accessories**

| Type code | Ident-No. |                                                                                                                                                                                              | 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 for threaded barrel devices, with dead-stop; material: PA6                                                                                                                      |                   |
| 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                                                                                                             |                   |