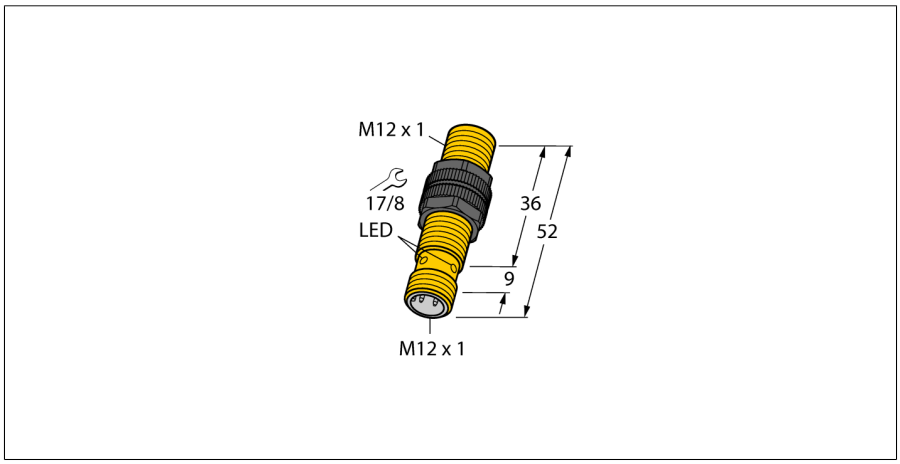
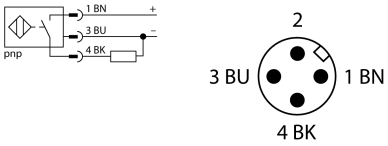
# Inductive sensor
# BI3U-S12-AP6X-H1141

Industrial Automation




- **Threaded barrel, M12 x 1**
- **Plastic, PBT-GF30**
- **Factor 1 for all metals**
- **Protection class IP68**
- **Resistant to magnetic fields**
- **Extended temperature range**
- **High switching frequency**
- **DC 3-wire, 10…30 VDC**
- **NO contact, PNP output**
- **M12 x 1 male connector**

### Wiring Diagram




| | |
|---|---|
| **Type designation** | BI3U-S12-AP6X-H1141 |
| Ident-No. | 1634600 |
| **Rated switching distance Sn** | 3 mm |
| Mounting conditions | Flush |
| Secured operating distance | ≤ (0,81 x Sn) mm |
| Repeat accuracy | ≤ 2 % of full scale |
| Temperature drift | ≤ ± 10 % |
| | ≤ ± 15 %, ≤ -25 °C v ≥ +70 °C |
| Hysteresis | 3…15 % |
| Ambient temperature | -30…+85 °C |
| **Operating voltage** | 10…30 VDC |
| Residual ripple | ≤ 10 % $U_{ss}$ |
| DC rated operational current | ≤ 200 mA |
| No-load current $I_0$ | ≤ 20 mA |
| Residual current | ≤ 0.1 mA |
| Isolation test voltage | ≤ 0.5 kV |
| Short-circuit protection | yes/ Cyclic |
| Voltage drop at $I_e$ | ≤ 1.8 V |
| Wire breakage/Reverse polarity protection | yes/ Complete |
| Output function | 3-wire, NO contact, PNP |
| Protection class | ⧈ |
| Switching frequency | 2 kHz |
| **Design** | Threaded barrel,M12 × 1 |
| Dimensions | 52 mm |
| Housing material | Plastic, PBT-GF30 |
| Active area material | Plastic, PA12-GF30 |
| Max. tightening torque housing nut | 1 Nm |
| Electrical connection | Connector, M12 × 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 |
| **Switching state** | LED,Yellow |

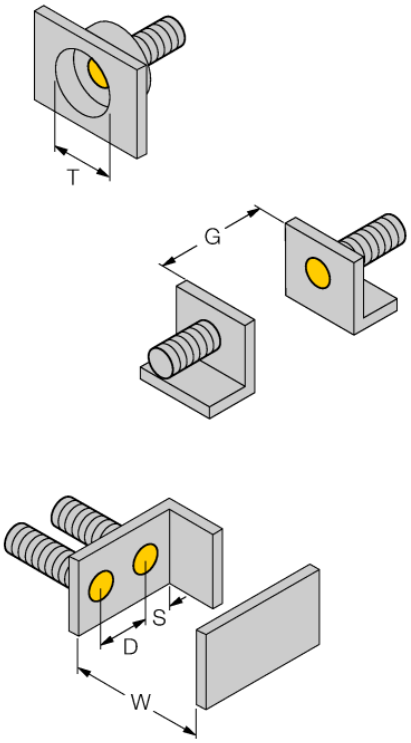
### Functional principle

Inductive sensors detect metal objects contactless and wear-free. *uprox*® Factor 1 sensors have significant advantages due to their patented ferrite-coreless multicoil system. They detect all metals at the same large switching distance and are resistant to magnetic fields.

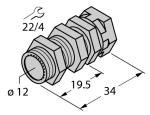
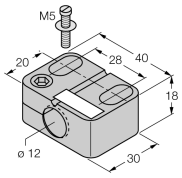
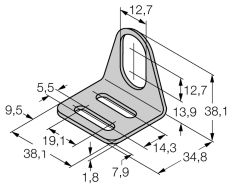
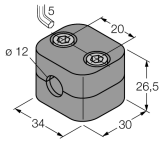
Edition • 2018-04-19T18:25:20+02:00

| | |
|---|---|
| **Distance D** | 2 x B |
| 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 |



## Accessories

| Type code | Ident-No. | Description | |
|---|---|---|---|
| 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 |  |

## Wiring accessories

| Type code | Ident-No. | Description | |
|---|---|---|---|
| RKC4T-2/TEL | 6625010 | Connection cable, female M12, straight, 3-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com |  |

Edition • 2018-04-19T18:25:20+02:00