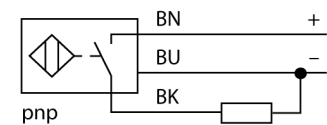


- Threaded barrel, M12 x 1
- Plastic, PBT-GF30-V0
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Extended temperature range
- High switching frequency
- 3-wire DC, 10...30 VDC
- NO contact, PNP output
- Cable connection

Wiring diagram



Functional principle

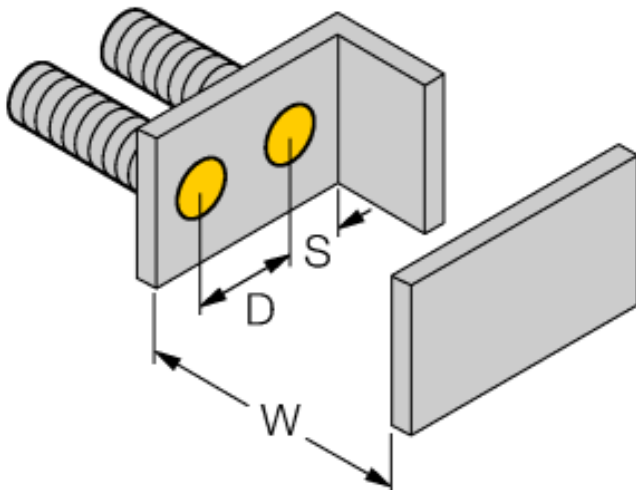
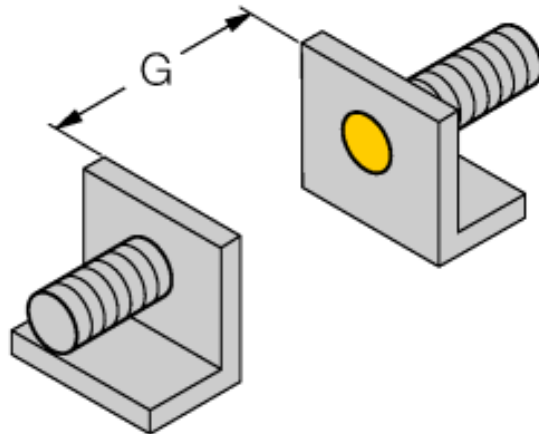
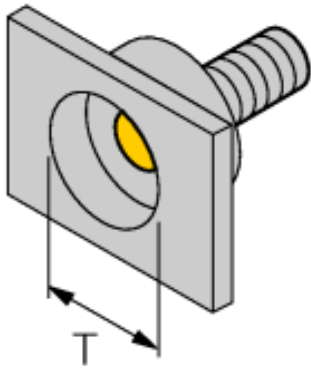
Inductive sensors detect metal objects contactless and wear-free. Due to the patented multicoil system, uprox®+ sensors have distinct advantages over conventional sensors. They detect all metals at the same large switching distance and are resistant to magnetic fields.

Type code	BI3U-S12-AP6X
Ident no.	1634500
Rated operating distance Sn	3 mm
Mounting condition	flush
Assured sensing range	≤ (0,81 x Sn) mm
Repeatability	≤ 2 % of full scale
Temperature drift	10 %
	≤ ± 15 %, ≤ -25 °C v ≥ +70 °C
Hysteresis	3...15 %
Ambient temperature	-30...+85 °C
Operating voltage	10...30VDC
Residual ripple	≤ 10 % U _{ss}
DC rated operational current	≤ 200 mA
No-load current I ₀	≤ 15 mA
Residual current	≤ 0.1 mA
Rated insulation voltage	≤ 0.5 kV
Short-circuit protection	yes/ cyclic
Voltage drop at I ₀	≤ 1.8 V
Wire breakage / Reverse polarity protection	yes/ complete
Output function	3-wire, NO contact, PNP
Protection class	☐
Switching frequency	3 kHz
Design	threaded barrel, M12 x 1
Dimensions	54 mm
Housing material	plastic, PBT
Material active area	Plastic, PBT
End cap	Plastic, EPTR
Max. tightening torque housing nut	1 Nm
Connection	cable
Cable quality	5.2 mm, LifYY, PVC, 2 m
Cable cross section	3 x 0.34 mm ²
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

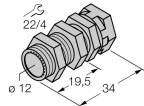
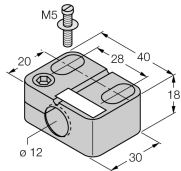
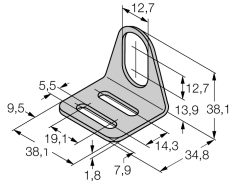
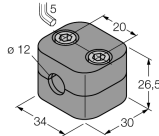
**Inductive sensor
BI3U-S12-AP6X**

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 of the active area B \varnothing 12 mm



Accessories

Type code	Ident no.	Description	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.	 <p>Technical drawing of a quick-mount bracket. It shows a cylindrical component with a male thread on one end. Dimensions are: diameter $\varnothing 12$, length 19.5, and total length 34. A detail shows a thread of 22/4.</p>
BST-12B	6947212	Fixing clamp for threaded barrel devices, with dead-stop; material: PA6	 <p>Technical drawing of a rectangular fixing clamp. Dimensions are: width 20, depth 18, total width 40, and total depth 30. A hole with diameter $\varnothing 12$ is shown. An M5 screw is shown for mounting.</p>
MW-12	6945003	Mounting bracket for threaded barrel devices; material: Stainless steel A2 1.4301 (AISI 304)	 <p>Technical drawing of a U-shaped mounting bracket. Dimensions are: width 38.1, depth 14.3, and total width 34.8. Other dimensions include 12.7, 13.9, 19.1, 5.5, 9.5, 1.8, and 7.9.</p>
BSS-12	6901321	Mounting bracket for smooth and threaded barrel devices; material: Polypropylene	 <p>Technical drawing of a cylindrical mounting bracket. Dimensions are: diameter $\varnothing 12$, height 26.5, and total width 34. A hole with diameter 5 is shown.</p>