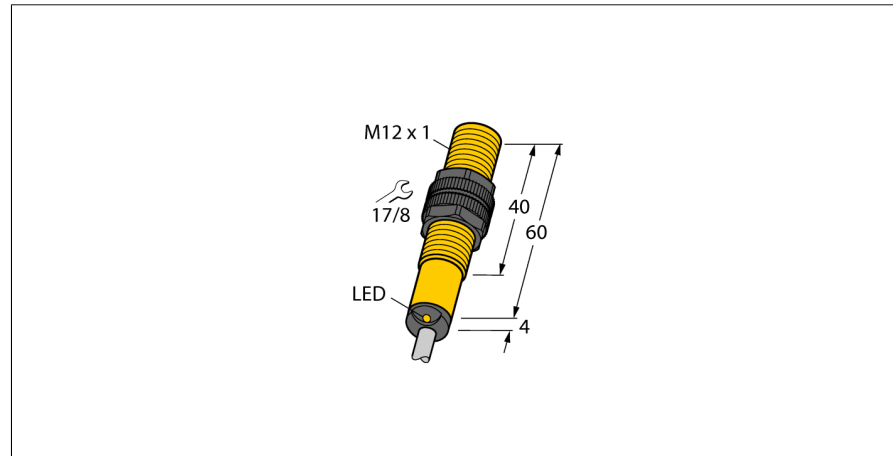
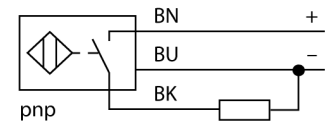


**Inductive sensor  
BI2-S12-AP6X**



- Threaded barrel, M12 x 1
- Plastic, PA12-GF30
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- Cable connection

**Wiring Diagram**



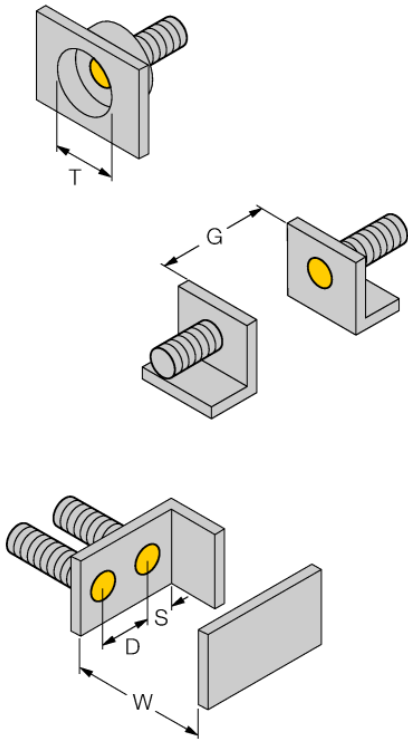
**Functional principle**

Inductive sensors detect metal objects contactless and wear-free. For this, they use a high-frequency electromagnetic AC field that interacts with the target. Inductive sensors generate this field via an RLC circuit with a ferrite coil.

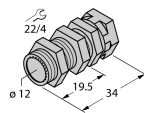
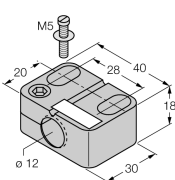
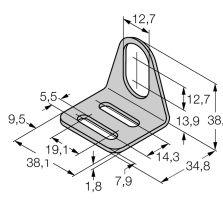
<b>Type designation</b>	BI2-S12-AP6X
Ident no.	46530
<b>Rated switching distance Sn</b>	2 mm
Mounting conditions	Flush
Secured operating distance	≤ (0,81 x Sn) mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeat accuracy	≤ 2 % of full scale
Temperature drift	≤ ± 10 %
Hysteresis	3...15 %
Ambient temperature	-25...+70 °C
<b>Operating voltage</b>	10...30 VDC
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
Isolation test 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
Reverse polarity protection	Complete
Switching frequency	2 kHz
<b>Design</b>	Threaded barrel, M12 × 1
Dimensions	60 mm
Housing material	Plastic, PA12-GF30
Active area material	Plastic, PA12-GF30
End cap	Plastic, EPTR
Max. tightening torque housing nut	1 Nm
Electrical connection	Cable
Cable quality	5.2 mm, LifYY, PVC, 2m
Cable cross section	3 x 0.34 mm <sup>2</sup>
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
MTTF	2283 years acc. to SN 29500 (Ed. 99) 40 °C
<b>Switching state</b>	LED yellow

**Inductive sensor  
BI2-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
<b>Diameter active area B</b>	<b>Ø 12 mm</b>



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	