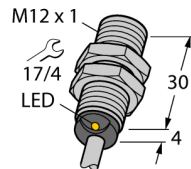


# Inductive sensor BI2-G12K-AP6X

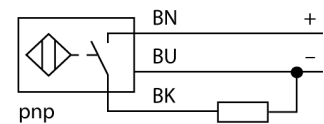
**TURCK**

Industrial  
Automation



- Threaded barrel, M12x1
- Chrome-plated brass
- 3-wire DC, 10...30 VDC
- NO contact, PNP output
- Cable connection

### Wiring diagram



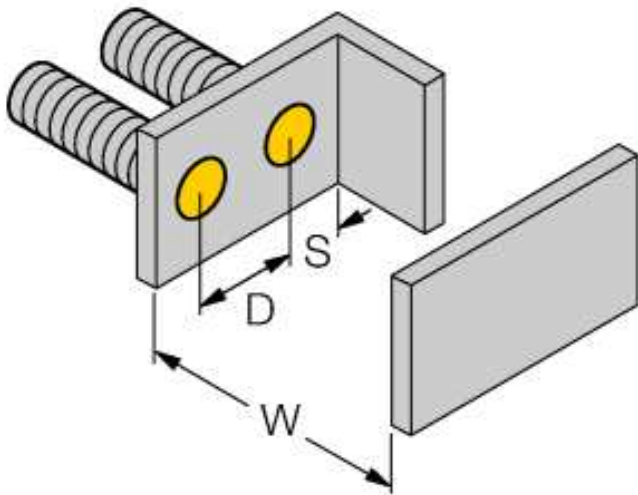
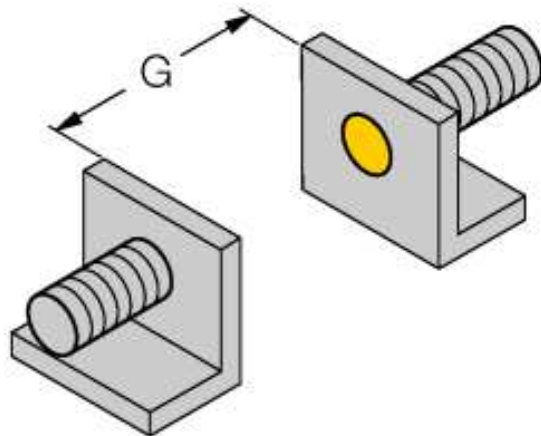
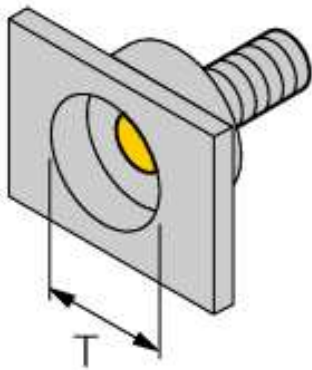
### Functional principle

Inductive sensors detect metal objects contactless and wear-free. For this purpose they use a high-frequency electromagnetic AC field that interacts with the target. The sensors hosting a ferrite core coil generate the AC field through an LC resonant circuit.

<b>Type code</b>	BI2-G12K-AP6X
Ident no.	46702
<b>Rated operating distance Sn</b>	2 mm
Mounting condition	flush
Assured sensing range	$\leq (0,81 \times S_n)$ mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeatability	$\leq 2\%$ of full scale
Temperaturdrift	10 %
Hysteresis	3...15 %
Ambient temperature	-25...+70 °C
<b>Operating voltage</b>	10...30VDC
Residual ripple	$\leq 10\% U_{ss}$
DC rated operational current	$\leq 200$ mA
No-load current $I_0$	$\leq 15$ mA
Residual current	$\leq 0.1$ mA
Rated insulation voltage	$\leq 0.5$ kV
Short-circuit protection	yes/ cyclic
Voltage drop at $I_0$	$\leq 1.8$ V
Wire breakage / Reverse polarity protection	yes/ complete
Output function	3-wire, NO contact, PNP
Switching frequency	2 kHz
<b>Design</b>	threaded barrel, M12 x 1
Dimensions	34 mm
Housing material	Metal, CuZn, chrome-plated
Material active face	Plastic, PA
Max. tightening torque housing nut	10 Nm
Connection	cable
Cable quality	5.2 mm, LifYY, PVC, 2 m
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>	● yellow

**Inductive sensor  
BI2-G12K-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
<hr/>	
Diameter of the active area B	Ø 12 mm



**Accessories**

Type code	Ident no.	Description	Dimension drawing
BST-12B	6947212	Fixing clamp for threaded barrel devices, with dead-stop; material: PA6	
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.	
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	