

# Inductive sensor

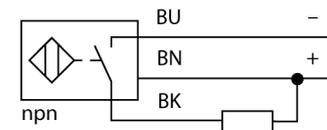
## With increased switching distance

### BI4-G12K-AN6X



- Threaded barrel, M12 x 1
- Chrome-plated brass
- Large sensing range
- DC 3-wire, 10...30 VDC
- NO contact, NPN 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>	BI4-G12K-AN6X
Ident-No.	4670251
Ident-No (TUSA)	T4670251
<b>Rated switching distance Sn</b>	4 mm
Mounting conditions	flush
Assured switching distance	$\leq (0,81 \times S_n)$ mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeatability	$\leq 2\%$ of full scale
Temperature drift	$\leq \pm 10\%$
Hysteresis	3...15 %
Ambient temperature	-25...+70 °C
<b>Operating voltage</b>	10... 30VDC
Residual ripple	$\leq 10\% U_{in}$
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, NPN
Switching frequency	2 kHz
<b>Construction</b>	Threaded barrel, M12 x 1
Dimensions	34 mm
Housing material	Metal, CuZn, chrome-plated
Active area material	Plastic, PA12-GF30
Max. tightening torque housing nut	10 Nm
Electrical connection	cable
Cable quality	5.2 mm, LifYY, PVC, 2m
Cable cross section	$3 \times 0.34$ 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

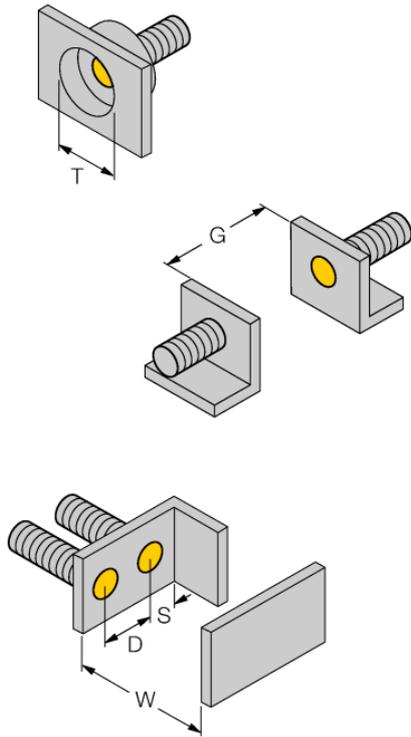
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Distance D	2 x B
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn

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Diameter of the active area B                     $\varnothing$  12 mm



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**Accessories**

Type code	Ident-No.	Description	
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	