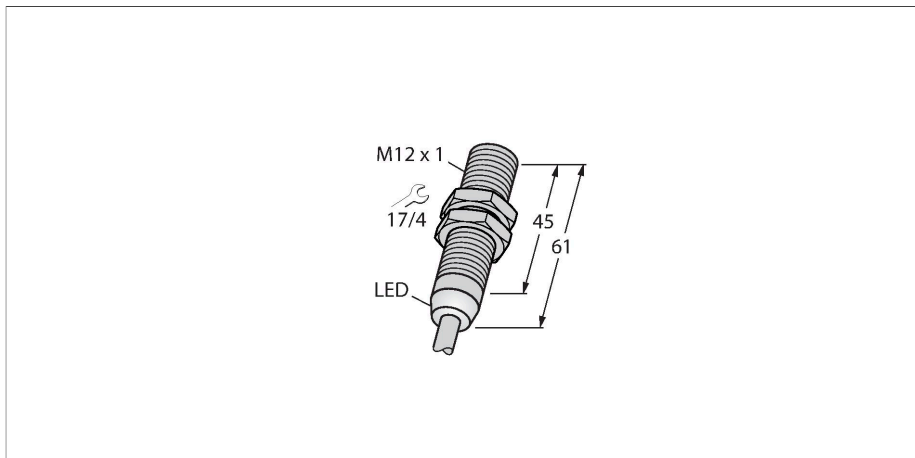


# BI2-M12-AP6X/S120

## Inductive Sensor – With Increased Temperature Range



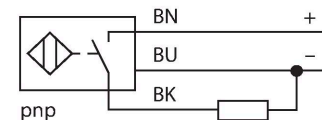
### Technical data

Type	BI2-M12-AP6X/S120
ID	4614652
<b>General data</b>	
Rated switching distance	2 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeat accuracy	$\leq 2$ % of full scale
Temperature drift	$\leq \pm 10$ % $\leq \pm 20$ %, $\geq +70$ °C
Hysteresis	3...15 %
<b>Electrical data</b>	
Operating voltage	10...30 VDC
Residual ripple	$\leq 10$ % $U_{ss}$
DC rated operational current	$\leq 200$ mA
No-load current	15 mA
Residual current	$\leq 0.1$ mA
Isolation test voltage	$\leq 0.5$ kV
Short-circuit protection	yes / Cyclic
Voltage drop at $I_e$	$\leq 1.8$ V
Wire breakage/Reverse polarity protection	yes / Complete
Output function	3-wire, NO contact, PNP
Switching frequency	0.1 kHz
<b>Mechanical data</b>	
Design	Threaded barrel, M12 × 1
Dimensions	61 mm

### Features

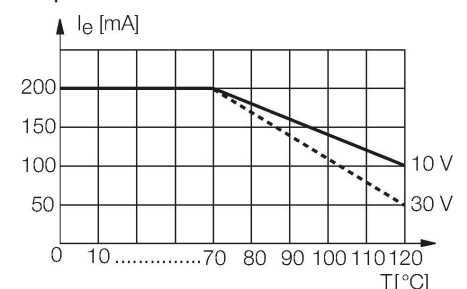
- M12 × 1 threaded barrel
- Chrome-plated brass
- Temperatures up to +120 °C
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- Cable connection

### Wiring diagram



### Functional principle

Inductive sensors detect metal objects contactless and wear-free. For this 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. Special versions are available for ambient temperatures between -60°C and +250°C.

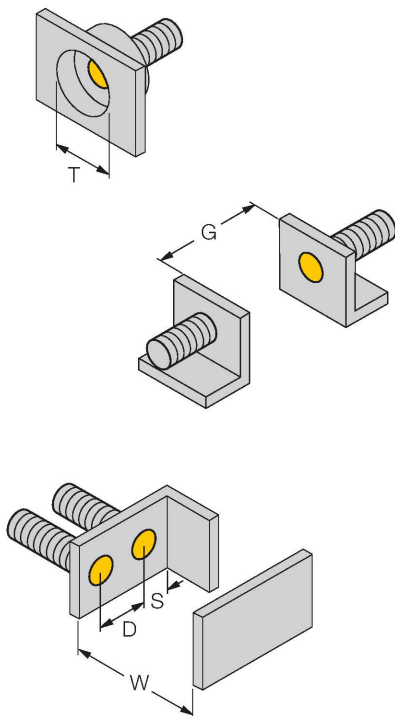


## Technical data

Housing material	Metal, CuZn, Chrome-plated
Active area material	Plastic, PBT
Max. tightening torque of housing nut	10 Nm
Electrical connection	Cable
Cable quality	Ø 5.2 mm, SiHSi, Silicone, 2 m
Core cross-section	3 x 0.5 mm <sup>2</sup>
<b>Environmental conditions</b>	
Ambient temperature	-25...+120 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
Switching state	LED, Red

## Mounting instructions

### Mounting instructions/Description

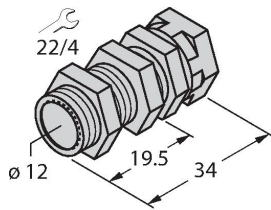


Distance D	24 mm
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn
Diameter active area B	Ø 12 mm

## Accessories

QM-12

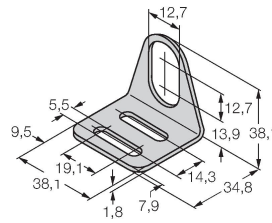
6945101



Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M16 × 1. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

MW-12

6945003



Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)