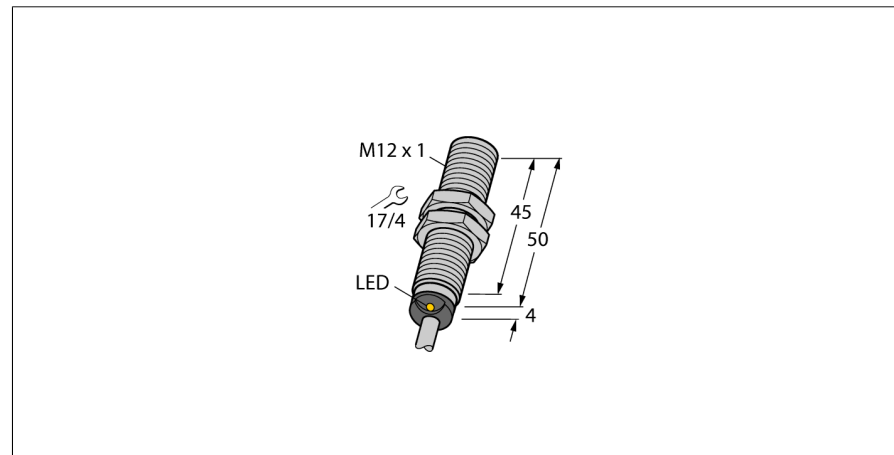


**Inductive sensor
with extended temperature range
BI2-M12-AP6X/S100**



- Threaded barrel, M12 x 1
- Chrome-plated brass
- For temperatures up to +100 °C
- 3-wire DC, 10...30 VDC
- NO contact, PNP output
- Cable connection

Wiring diagram

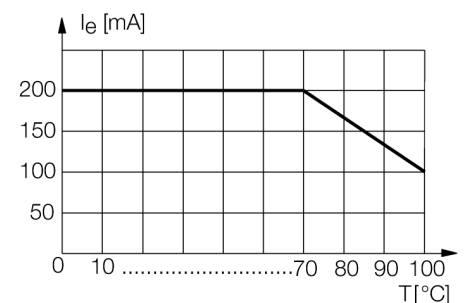


Functional principle

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.

Special versions are available for ambient temperatures between -60°C and +250°C.

derating curve



Type code	BI2-M12-AP6X/S100
Ident no.	4605003
Rated operating distance Sn	2 mm
Mounting condition	flush
Assured sensing range	≤ (0,81 x Sn) mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeatability	≤ 2 % of full scale
Temperature drift	10 %
	≤ ± 20 %, ≥ +70 °C
Hysteresis	3...15 %
Ambient temperature	-25...+100 °C
Operating voltage	10...30VDC
Residual ripple	≤ 10 % U _{in}
DC rated operational current	≤ 200 mA
Rated operational current	see derating curve
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 _e	≤ 1.8 V
Wire breakage / Reverse polarity protection	yes/ complete
Output function	3-wire, NO contact, PNP
Switching frequency	2 kHz
Design	threaded barrel, M12 x 1
Dimensions	54 mm
Housing material	metal, CuZn, chrome-plated
Material active area	Plastic, PA
End cap	Plastic, EPTR
Max. tightening torque housing nut	10 Nm
Connection	cable
Cable quality	5.2 mm, LifYY-T105, PVC, 2 m
Cable cross section	3 x 0.5 mm ²
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
Switching state	LED yellow

**Inductive sensor
with extended temperature range
BI2-M12-AP6X/S100**

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



**Inductive sensor
with extended temperature range
BI2-M12-AP6X/S100**

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.	
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	