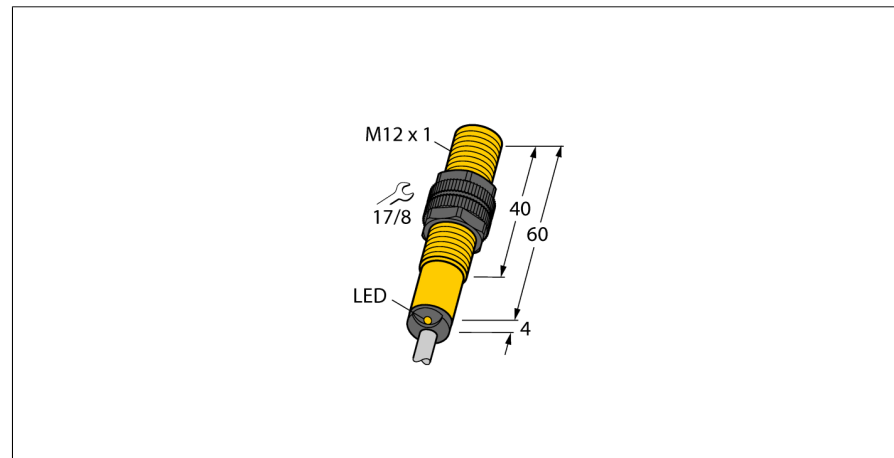
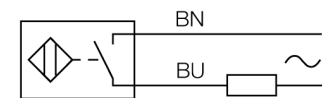


**Inductive sensor
with extended temperature range
BI2-S12-AZ31X/S97**



- Threaded barrel, M12 x 1
- Plastic, PA12-GF30
- For temperatures up to -40 °C
- AC 2-wire, 20...250 VAC
- 2-wire DC, 10...300 VDC
- NO contact
- Cable connection

Wiring diagram



Type code	BI2-S12-AZ31X/S97
Ident no.	1302002
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 %, ≤ -25 °C
Hysteresis	3...15 %
Ambient temperature	-40...+70 °C
Operating voltage	20...250 VAC
Operating voltage	10...300VDC
AC rated operational current	≤ 100 mA
DC rated operational current	≤ 100 mA
Frequency	≥ 50...≤ 60 Hz
Residual current	≤ 1.7 mA
Rated insulation voltage	≤ 1.5 kV
Surge current	≤ 1 A (≤ 10 ms max. 5 Hz)
Voltage drop at I _n	≤ 6 V
Output function	2-wire, NO contact
Smallest operating current I _n	≤ 3 mA
Switching frequency	0.02 kHz
Design	threaded barrel, M12 x 1
Dimensions	60 mm
Housing material	plastic, PA
Material active area	Plastic, PA
End cap	Plastic, EPTR
Max. tightening torque housing nut	1 Nm
Connection	cable
Cable quality	5.2 mm, SiHSi, Silicone, 2 m
Cable cross section	2 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 red

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.

**Inductive sensor
with extended temperature range
BI2-S12-AZ31X/S97**

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



**Inductive sensor
with extended temperature range
BI2-S12-AZ31X/S97**

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	