

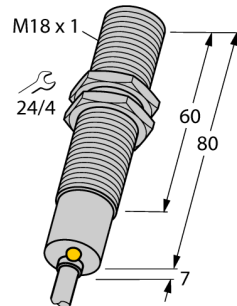
Inductive sensor

With extended temperature range

BI5-M18-AZ3X/S120

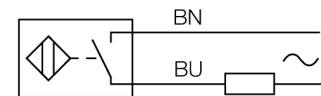
TURCK
works

Industrial
Automation



- Threaded barrel, M18 x 1
- Chrome-plated brass
- Temperatures up to +120 °C
- AC 2-wire, 20...250 VDC
- NO contact
- Cable connection

Wiring diagram

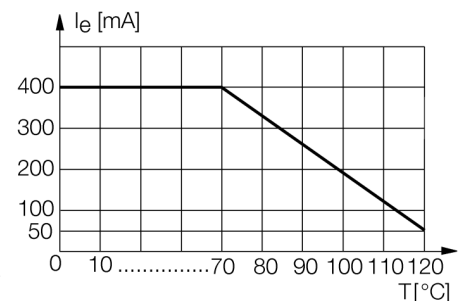


Functional principle

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	BI5-M18-AZ3X/S120
Ident-No.	4310410
Ident-No (TUSA)	M4310410
Rated operating distance Sn	5 mm
Mounting condition	flush
Assured switching distance	≤ (0,81 x Sn) mm
Repeatability	≤ 2 % of full scale
Temperature drift	≤ ± 10 %
	≤ ± 20 %, ≥ +70 °C
Hysteresis	3...15 %
Ambient temperature	-25...+120 °C
Operating voltage	20...250 VAC
AC rated operational current	≤ 400 mA
Frequency	≥ 50...≤ 60 Hz
Residual current	≤ 1.7 mA
Rated insulation voltage	≤ 1.5 kV
Surge current	≤ 8 A (≤ 10 ms max. 5 Hz)
Voltage drop at I _e	≤ 6 V
Output function	2-wire, NO contact
Smallest operating current I _m	≤ 3 mA
Switching frequency	0.02 kHz
Construction	threaded barrel, M18 x 1
Dimensions	87 mm
Housing material	metal, CuZn, chrome-plated
Material active area	plastic, PA
End cap	Plastic, EPTR
Max. tightening torque housing nut	25 Nm
Connection	cable
Cable quality	6 mm, SiHSi, Silicone, 2m
Cable cross section	3 x 0.75 mm ²
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
Switching state	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

Diameter of the active area B	Ø 18 mm
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