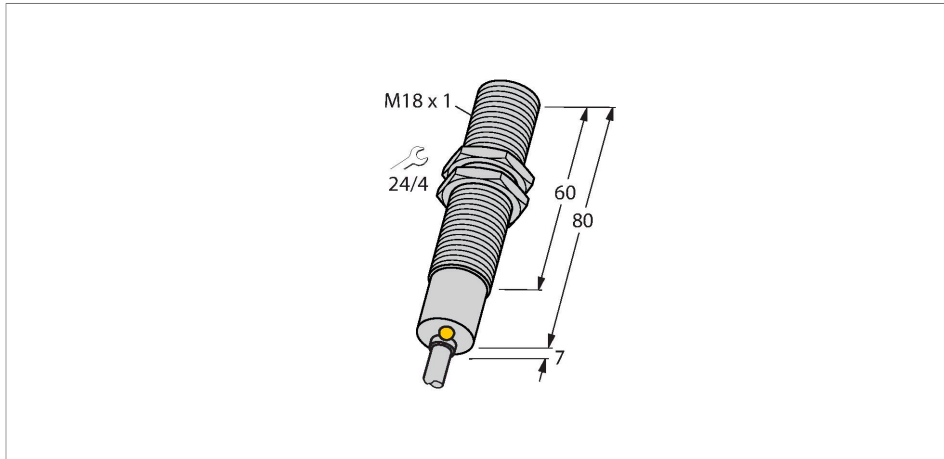


BI5-M18-RZ3X/S120

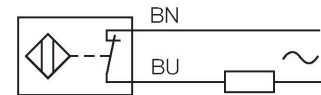
Inductive Sensor – With Increased Temperature Range



Features

- Threaded barrel, M18 x 1
- Chrome-plated brass
- S120 = Temperatures up to +120 °C
- AC 2-wire, 20...250 VAC
- NC contact
- Cable connection

Wiring diagram



Technical data

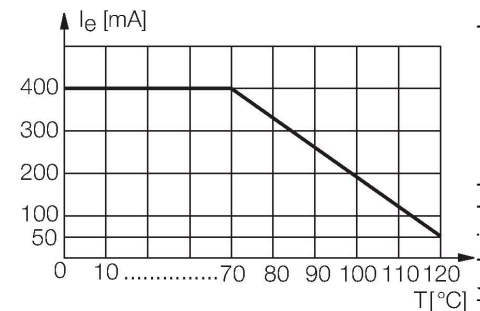
Type	BI5-M18-RZ3X/S120
ID	4310419
Special version	S120 Corresponds to: Maximum ambient temperature = 120 °C

General data	
Rated switching distance	5 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	$\leq \pm 10\%$
	$\leq \pm 20\%$, $\geq +70\text{ °C}$
Hysteresis	3...15 %

Electrical data	
Operating voltage U_b	20...250 VAC
AC rated operational current	≤ 400 mA
Frequency	$\geq 50... \leq 60$ Hz
Residual current	≤ 1.7 mA
Isolation test voltage	1.5 kV
Surge current	≤ 8 A (≤ 10 ms max. 5 Hz)
Voltage drop at I_o	≤ 6 V
Output function	2-wire, NC contact, 2-wire
Smallest operating current	≥ 3 mA
Switching frequency	0.02 kHz

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.



BI5-M18-RZ3X/S120 | 02/21/2025 13-46 | technical changes reserved

Technical data

Mechanical data	
Design	Threaded barrel, M18 x 1
Dimensions	87 mm
Housing material	Metal, CuZn, Chrome-plated
Active area material	Plastic, PA12-GF30
End cap	Plastic, EPTR
Max. tightening torque of housing nut	25 Nm
Electrical connection	Cable
Cable quality	Ø 6 mm, SiHSi, Silicone, 2 m
Core cross-section	3 x 0.75 mm ²
Environmental conditions	
Ambient temperature	-25...+120 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
Switching state	LED, Yellow

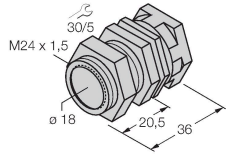
Mounting instructions

Mounting instructions/Description		
	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 active area B	Ø 18 mm

Accessories

QM-18

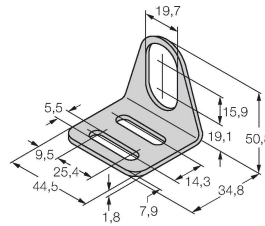
6945102



Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M24 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

MW18

6945004



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