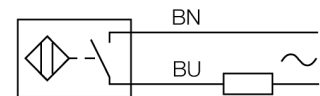


**Inductive sensor  
with extended temperature range  
BI5-M18-AZ3X/S120**

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

**Wiring diagram**

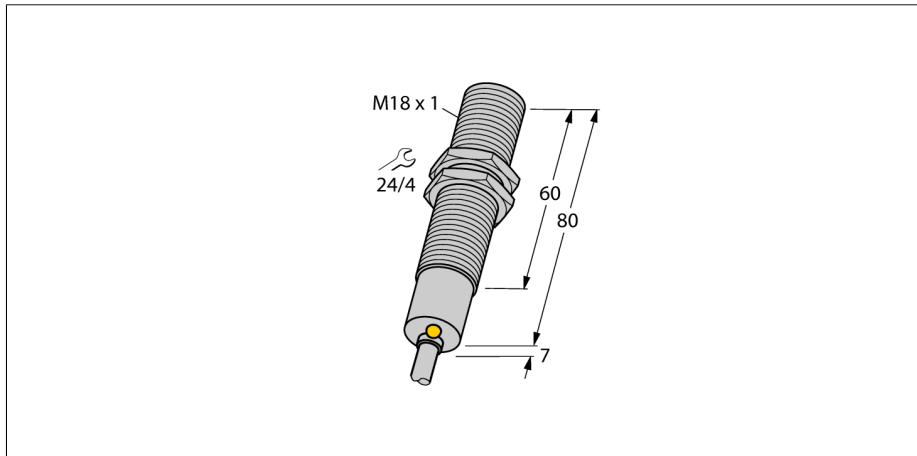
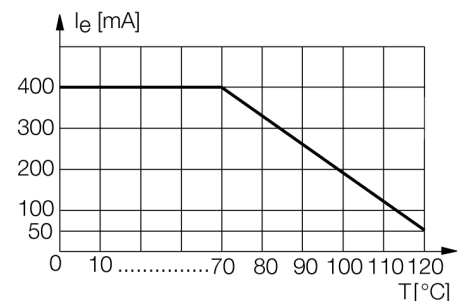


**Functional principle**

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.

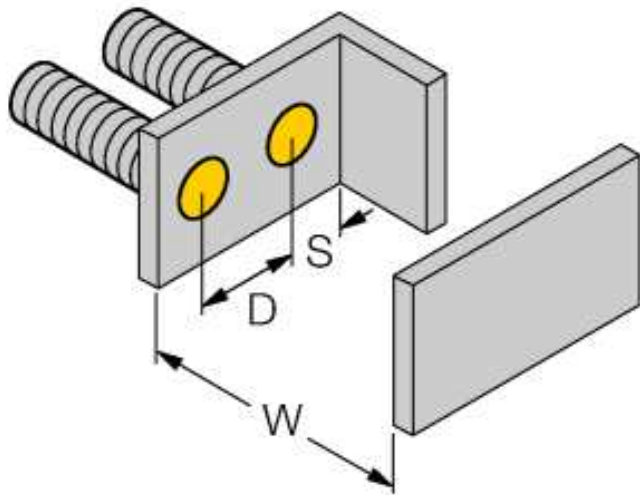
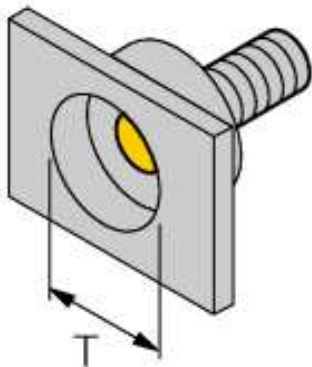
**derating curve**



<b>Type code</b>	BI5-M18-AZ3X/S120
Ident no.	4310410
<b>Rated operating distance S<sub>n</sub></b>	5 mm
Mounting condition	flush
Assured sensing range	≤ (0,81 x S <sub>n</sub> ) mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeatability	≤ 2 % of full scale
Temperaturdrift	10 %
	≤ ± 20 %, ≥ +70 °C
Hysteresis	3...15 %
Ambient temperature	-25...+120 °C
<b>Operating voltage</b>	20...250 VAC
AC rated operational current	≤ 400 mA
Rated operational current	see derating curve
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 <sub>e</sub>	≤ 6 V
Output function	2-wire, NO contact
Smallest operating current I <sub>m</sub>	≤ 3 mA
Switching frequency	0.02 kHz
<b>Design</b>	threaded barrel, M18 x 1
Dimensions	87 mm
Housing material	Metal, CuZn, chrome-plated
Material active face	Plastic, PA
End cap	Plastic, EPTR
Max. tightening torque housing nut	25 Nm
Connection	cable
Cable quality	6 mm, SiHSi, Silicone, 2 m
Cable cross section	3 x 0.75 mm <sup>2</sup>
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
<b>Switching state</b>	● yellow

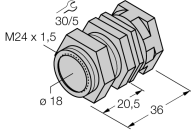
**Inductive sensor  
with extended temperature range  
BI5-M18-AZ3X/S120**

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 18 mm



**Inductive sensor  
with extended temperature range  
BI5-M18-AZ3X/S120**

**Accessories**

Type code	Ident no.	Description	Dimension drawing
QM-18	6945102	Quick-mount bracket with dead-stop; material: Chrome-plated brass Male thread M24 x 1.5. Note: The switching distance of proximity switches can be reduced by the use of quick-mount brackets.	
MW-18	6945004	Mounting bracket for threaded barrel devices; material: Stainless steel A2 1.4301 (AISI 304)	