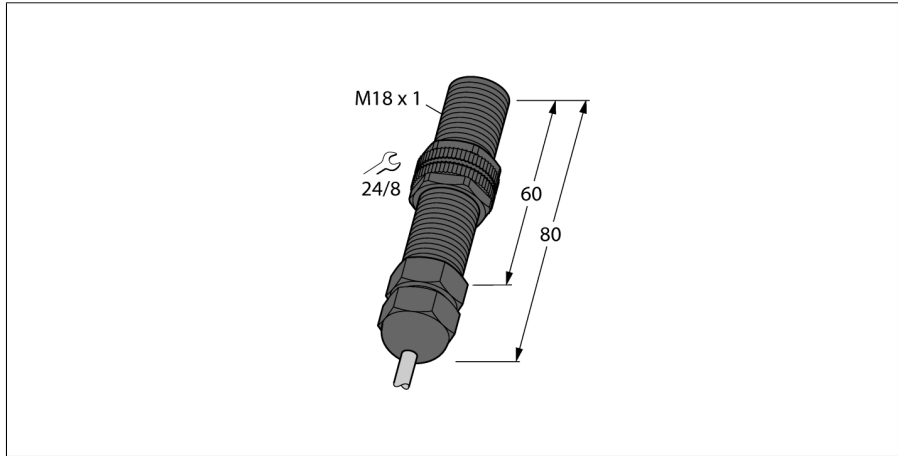
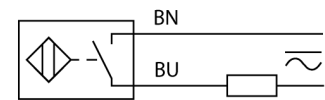


**Inductive sensor
for underwater applications
BI5-P18-AZ3/S139-S90**



- Threaded barrel, M18 x 1
- Plastic, POM
- For underwater applications
- Oil-resistant
- Protection class IP68, 500 m water column
- AC 2-wire, 20...250 VAC
- 2-wire DC, 10...300 VDC
- NO contact
- Cable connection

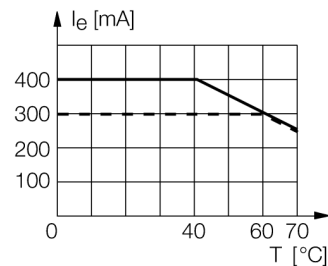
Wiring diagram



Functional principle

Inductive sensors detect metal objects contactless and wear-free. For this, they use a high-frequency electromagnetic AC field that interacts with the target. Inductive sensors generate this field via an RLC circuit with a ferrite coil.

We offer special versions for temperatures of -60 °C up to +250 °C.



Type code	BI5-P18-AZ3/S139-S90
Ident no.	13843
Rated operating distance Sn	5 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 %
Hysteresis	3...15 %
Ambient temperature	-25...+70 °C
Operating voltage	20...250 VAC
Operating voltage	10...300VDC
AC rated operational current	≤ 400 mA
DC rated operational current	≤ 300 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
Protection class	2
Switching frequency	0.02 kHz
Design	threaded barrel, M18 x 1
Dimensions	80 mm
Housing material	plastic, POM, black
Material active area	Plastic, POM, Black
End cap	Plastic, PA
Max. tightening torque housing nut	2 Nm
Connection	cable
Cable quality	5.2 mm, LifYY-11Y, PUR, 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	IP68

**Inductive sensor
for underwater applications
BI5-P18-AZ3/S139-S90**

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 18 mm



**Inductive sensor
for underwater applications
BI5-P18-AZ3/S139-S90**

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.	
BST-18B	6947214	Fixing clamp for threaded barrel devices, with dead-stop; material: PA6	
MW-18	6945004	Mounting bracket for threaded barrel devices; material: Stainless steel A2 1.4301 (AISI 304)	
BSS-18	6901320	Mounting bracket for smooth and threaded barrel devices; material: Polypropylene	