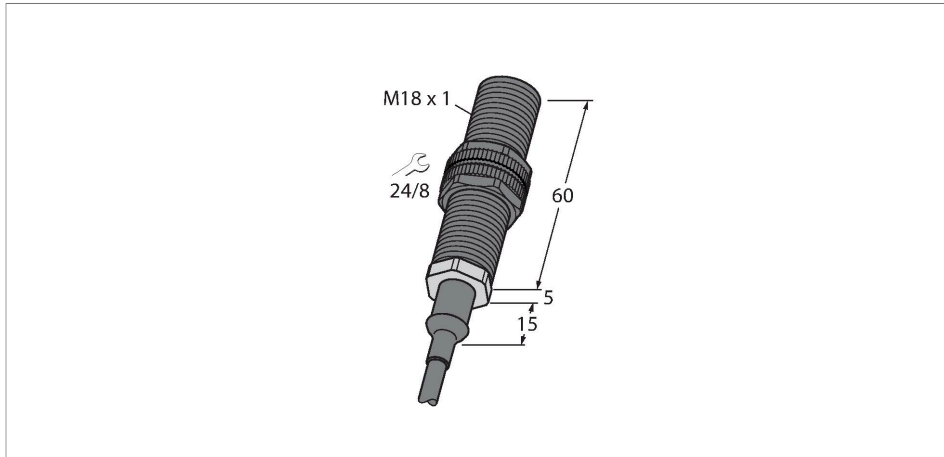


BI8U-P18-AP6/S139-S1261

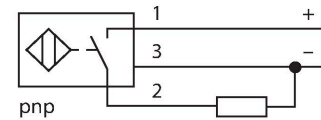
Inductive Sensor – For Underwater Applications



Features

- Threaded barrel, M18 x 1
- Plastic, POM
- For underwater and off-shore applications
- Oil and seawater resistant
- Protection class IP68, 500 m water column
- Factor 1 for all metals
- Resistant to magnetic fields
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- Cable connection

Wiring diagram



Technical data

Type	BI8U-P18-AP6/S139-S1261
ID	1650230
General data	
Rated switching distance	8 mm
Mounting conditions	Flush/Non-flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Repeat accuracy	$\leq 2 \%$ of full scale
Static pressure	≤ 50 bar
Temperature drift	$\leq \pm 10 \%$ $\leq \pm 15 \%, \leq -25 \text{ °C} \vee \geq +70 \text{ °C}$
Hysteresis	3...15 %
Electrical data	
Operating voltage	10...30 VDC
Residual ripple	$\leq 10 \%$ U_{ss}
DC rated operational current	≤ 200 mA
No-load current	15 mA
Residual current	≤ 0.1 mA
Isolation test voltage	≤ 0.5 kV
Short-circuit protection	yes / Cyclic
Voltage drop at I_o	≤ 1.8 V
Wire breakage/Reverse polarity protection	yes / Complete
Output function	3-wire, NO contact, PNP
DC field stability	300 mT
AC field stability	300 mT _{ss}

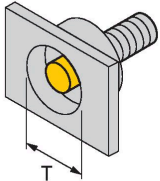
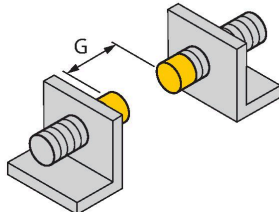
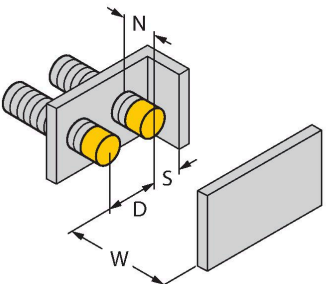
Functional principle

Inductive sensors detect metal objects contactless and wear-free. Due to the patented ferrite-coreless 3-coil system, uprox factor 1 sensors have distinct advantages compared to conventional sensors. They detect all metals at the same switching distance, are magnetic field immune and feature large switching distances.

Technical data

Switching frequency	2 kHz
Mechanical data	
Design	Threaded barrel, M18 x 1
Dimensions	80 mm
Housing material	Plastic, POM, Black
Active area material	Plastic, POM, black
End cap	Metal, 1.4401 (AISI 316L)
Max. tightening torque of housing nut	2 Nm
Electrical connection	Cable
Cable quality	Ø 5.2 mm, Öflex rugged 210, TPE, 2 m
Core cross-section	3 x 0.5 mm ²
Environmental conditions	
Ambient temperature	-30...+85 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP68
MTTF	874 years acc. to SN 29500 (Ed. 99) 40 °C

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

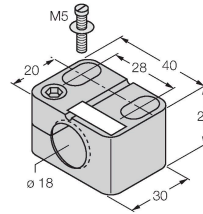
Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M24 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.



BST-18B

6947214

Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6



MW-18

6945004

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



BSS-18

6901320

Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene

