

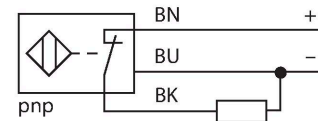
# BI5-P18-RP6/S139-S90 10M

## Inductive Sensor – For underwater applications

### Features

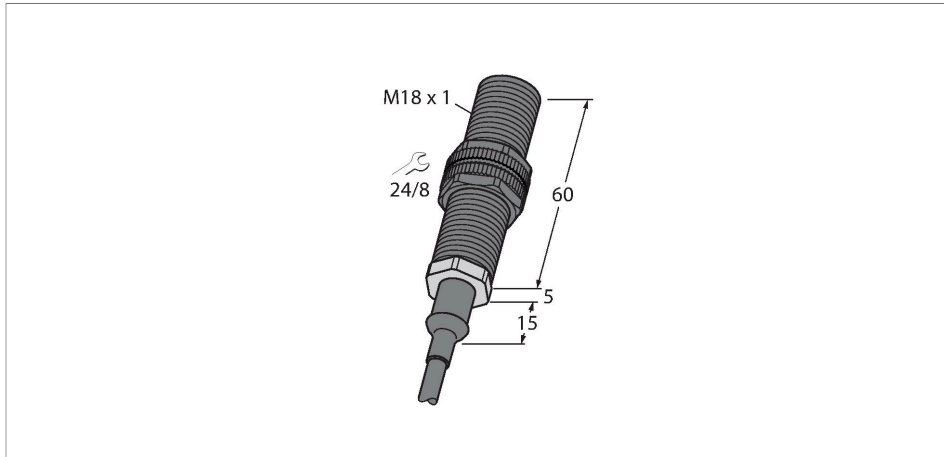
- Threaded barrel, M18 x 1
- Plastic, POM
- For underwater applications
- Oil-resistant
- Protection class IP68, 500 m water column
- DC 3-wire, 10...30 VDC
- NC contact, PNP output
- Cable connection

### 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.



### Technical data

Type	BI5-P18-RP6/S139-S90 10M
Ident. no.	1660366
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
Static pressure	$\leq 50$ bar
Temperature drift	$\leq \pm 10\%$
Hysteresis	3...15 %
Ambient temperature	-25...+70 °C
Operating voltage	10...30 VDC
Residual ripple	$\leq 10\% U_{ss}$
DC rated operational current	$\leq 200$ mA
No-load current	$\leq 15$ mA
Residual current	$\leq 0.1$ mA
Isolation test voltage	$\leq 0.5$ kV
Short-circuit protection	yes / Cyclic
Voltage drop at $I_e$	$\leq 1.8$ V
Wire breakage/Reverse polarity protection	yes / Complete
Output function	3-wire, NC contact, PNP
Switching frequency	0.5 kHz
Design	Threaded barrel, M18 x 1
Dimensions	80 mm

## Technical data

Housing material	Plastic, POM, Black
Active area material	Plastic, POM, black
End cap	Metal, A4 1.4401 (AISI 316L)
Max. tightening torque housing nut	2 Nm
Electrical connection	Cable
Cable quality	Ø 5.2 mm, LifYY-11Y, PUR, 10 m
Core cross-section	3 x 0.34 mm <sup>2</sup>
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP68

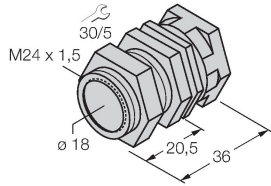
## Mounting instructions

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	Ø 18 mm
	B	

## Accessories

QM-18

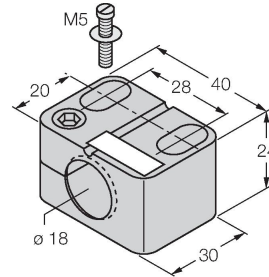
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Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M24 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

BST-18B

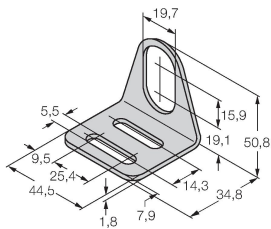
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Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6

MW18

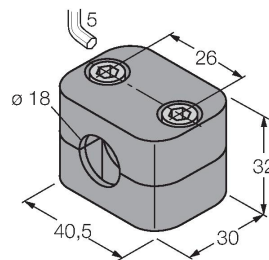
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Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)

BSS-18

6901320



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