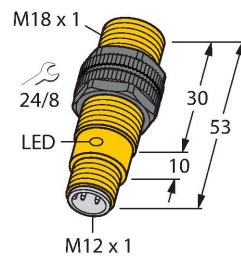


# BI5-S18-RP6X-H1141/S97

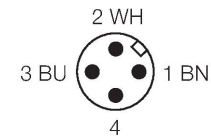
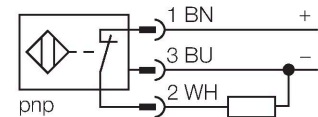
## Inductive Sensor – With Extended Temperature Range



### Features

- Threaded barrel, M18 x 1
- Plastic, PA12-GF30
- Temperatures up to -40 °C
- DC 3-wire, 10...30 VDC
- NC contact, PNP output
- M12 x 1 male connector

### 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.

### Technical data

Type	BI5-S18-RP6X-H1141/S97
ID	4656402
Special version	S97 Corresponds to: Minimum ambient temperature = -40 °C
<b>General data</b>	
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 $\leq \pm 20 \%, \leq -25 \text{ °C}$
Hysteresis	3...15 %
<b>Electrical data</b>	
Operating voltage $U_B$	10...30 VDC
Ripple $U_{ss}$	$\leq 10 \%$ $U_{Bmax}$
DC rated operating current $I_o$	$\leq 200$ mA
No-load current	$\leq 15$ mA
Residual current	$\leq 0.1$ mA
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic
Voltage drop at $I_o$	$\leq 1.8$ V
Wire break/reverse polarity protection	yes/Complete
Output function	3-wire, NC contact, PNP
Switching frequency	1 kHz

## Technical data

Mechanical data	
Design	Threaded barrel, M18 x 1
Dimensions	53 mm
Housing material	Plastic, PA12-GF30
Active area material	Plastic, PA12-GF30
Max. tightening torque of housing nut	2 Nm
Electrical connection	Connector, M12 × 1
Cable quality	Ø 5.2 mm, Black, SiHSi, Silicone
Core cross-section	3 x 0.25 mm <sup>2</sup>
Environmental conditions	
Ambient temperature	-40...+70 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
MTTF	2283 years acc. to SN 29500 (Ed. 99) 40 °C
Switching state	LED, Yellow

## Mounting instructions

### Mounting instructions/Description

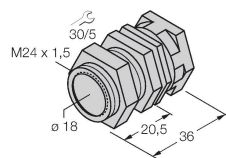


Distance D	2 x B
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn
Diameter active area B	Ø 18 mm

## Accessories

QM-18

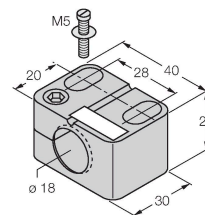
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Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M24 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

BST-18B

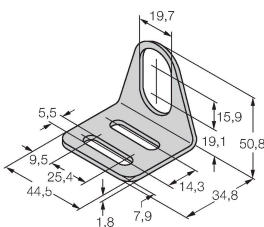
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Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6

MW18

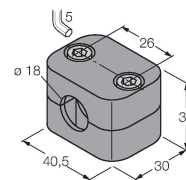
6945004



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