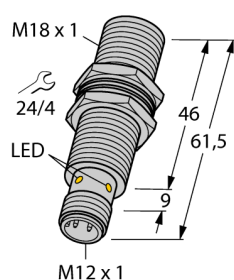


# Inductive Sensor

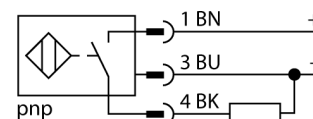
## With WeldGuard™ coating

### BI5U-MT18-AP6X2-H1141/S395/S1589



- Threaded barrel, M18 x 1
- Brass, PTFE
- Front cap with special coating, very resistant to thermal and mechanical load
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Extended temperature range
- High switching frequency
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M12 x 1 male connector

#### Wiring Diagram



#### Functional principle

Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox Factor 1 sensors have significant advantages due to their patented ferrite-coreless 3-coil system. They detect all metals at the same large switching distance and are resistant to magnetic fields.

Turck WeldGuard sensors for use in welding systems are equipped with a thin coating made of thermosetting plastic. This high-tech coating is resistant to abrasion and withstands mechanical stress.

Type	BI5U-MT18-AP6X2-H1141/S395/S1589
ID	1635291
Special version	S395-S1589 Corresponds to: Housing length: 61.5 mm; thread length: 46 mm; with WeldGuard™ coating

General data	
Rated switching distance $S_n$	5 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Repeat accuracy	$\leq 2\%$ of full scale
Temperature drift	$\leq \pm 10\%$
	$\leq \pm 15\%$ , $\leq -25^\circ\text{C}$ v $\geq +70^\circ\text{C}$
Hysteresis	3...15 %

Electrical data	
Operating voltage $U_s$	10...30 VDC
Ripple $U_{rs}$	$\leq 10\%$ $U_{Bmax}$
DC rated operating current $I_s$	$\leq 200$ mA
Residual current	$\leq 0.1$ mA
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic
Voltage drop at $I_s$	$\leq 1.8$ V
Wire break/reverse polarity protection	yes/Complete
Output function	3-wire, NO contact, PNP
DC field stability	300 mT
AC field stability	300 mT <sub>ss</sub>
Switching frequency	2.5 kHz

Mechanical data	
Design	Threaded barrel, M18 x 1
Dimensions	61.5 mm
Housing material	Metal, CuZn, PTFE-coated
Active area material	Plastic, PBT + WeldGuard™, PTFE-coated
Max. tightening torque of housing nut	15 Nm
Electrical connection	Connector, M12 x 1

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
Power-on indication	LED, Green
Switching state	LED, Yellow

## Accessories

Type code	Ident-No.		Dimension drawing
BST-18B	6947214	Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6	
QMT-18	6945104	Quick-mount bracket with dead-stop; material: brass, PTFE-coated; Male thread M24 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.	
BSS-18	6901320	Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene	
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.	