

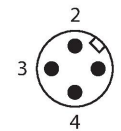
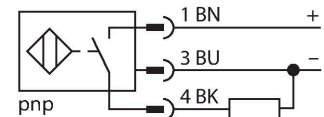
BI5U-EM18H-AP6X2-H1141/S395/S1589

Inductive Sensor – With WeldGuard™ coating

Features

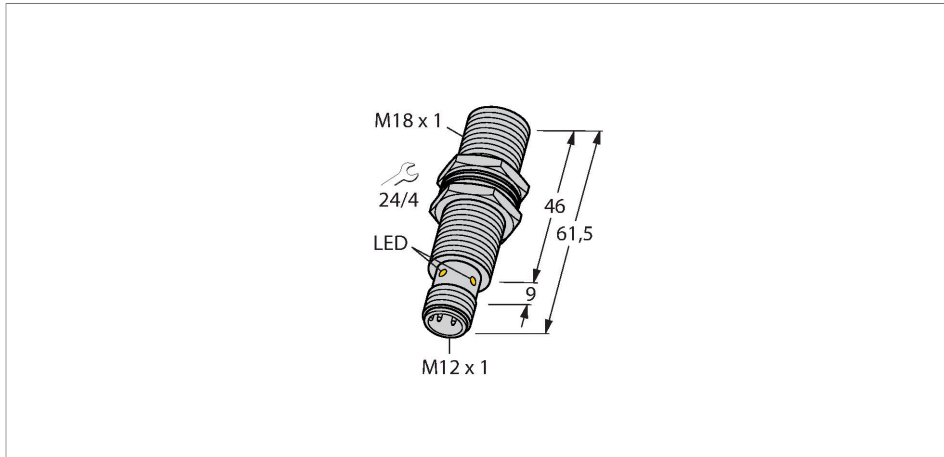
- Threaded barrel, M18 x 1
- Stainless steel, 1.4301
- Front cap with special coating, very resistant to thermal and mechanical load
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Extended temperature range
- High switching frequency
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M12 x 1 male connector

Wiring diagram



Functional principle

Inductive sensors are designed for wear-free and contactless detection of metal objects. approx 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.



Technical data

Type	BI5U-EM18H-AP6X2-H1141/S395/S1589
ID	1635197
Special version	S395-S1589 corresponds to: Housing length: 61.5 mm; thread length: 46 mm; with WeldGuard™ coating
General data	
Rated switching distance	5 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Repeat accuracy	$\leq 2\%$ of full scale
Temperature drift	$\leq \pm 10\%$ $\leq \pm 15\%$, $\leq -25\text{ °C}$ v $\geq +70\text{ °C}$
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	25 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

Technical data

AC field stability	300 mT _{ss}
Insulation class	□
Switching frequency	2.5 kHz
Mechanical data	
Design	Threaded barrel, M18 × 1
Dimensions	61.5 mm
Housing material	Stainless steel, 1.4301 (AISI 304)
Active area material	Plastic, PBT + WeldGuard™
Max. tightening torque of housing nut	25 Nm
Electrical connection	Connector, M12 × 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

Mounting instructions

Mounting instructions/Description

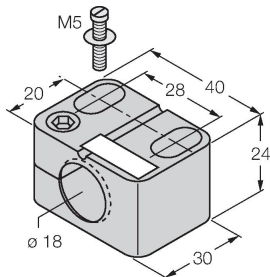


Distance D	2 x B
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn
Diameter active area B	Ø 18 mm

Accessories

BST-18B

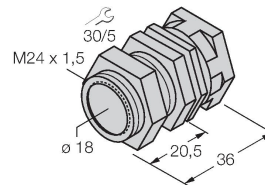
6947214



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

QM-18

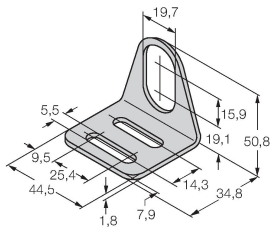
6945102



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

MW-18

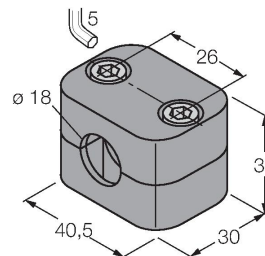
6945004



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