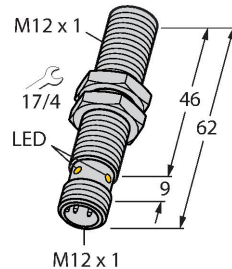


BI3U-EM12HE-AP6X2-H1141/S1589 Inductive Sensor – With WeldGuard™ coating



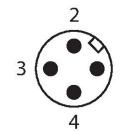
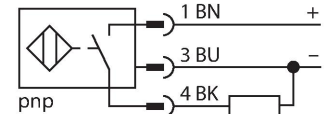
Features

- Threaded barrel, M12 x 1
- Stainless steel, 1.4301
- Duroplast front cap, 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

Technical data

Type	BI3U-EM12HE-AP6X2-H1141/S1589
ID	1634398
Special version	S1589 Corresponds to: With weldguard coating
General data	
Rated switching distance	3 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Repeat accuracy	$\leq 2 \%$ of full scale
Temperature drift	$\leq \pm 10 \%$
	$\leq \pm 15 \%, \leq -25^\circ\text{C} \vee \geq +70^\circ\text{C}$
Hysteresis	3...15 %
Electrical data	
Operating voltage U_B	10...30 VDC
Ripple U_{rs}	$\leq 10 \%$ U_{Bmax}
DC rated operating current I_B	≤ 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_B	≤ 1.8 V
Wire break/reverse polarity protection	yes/Complete
Output function	3-wire, NO contact, PNP
DC field stability	300 mT

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.

Technical data

AC field stability	300 mT _{ss}
Insulation class	□
Switching frequency	3 kHz
Mechanical data	
Design	Threaded barrel, M12 x 1
Dimensions	62 mm
Housing material	Stainless steel, 1.4301 (AISI 304)
Active area material	Plastic, Duroplast
Max. tightening torque of housing nut	10 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



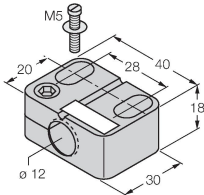
Distance D	2 x B
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn
Diameter active area B	Ø 12 mm

Accessories

BST-12B

6947212

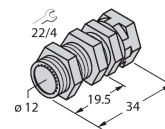
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6



QM-12

6945101

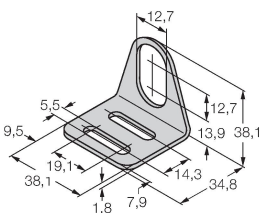
Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M16 x 1. Note: The switching distance of the proximity switches may change when using quick-mount brackets.



MW12

6945003

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



BSS-12

6901321

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

