

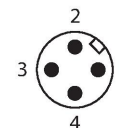
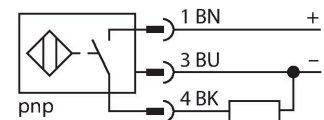
# BI3U-MT12-AP6X-H1141/S1589

## Inductive sensor – With WeldGuard™ Coating

### Features

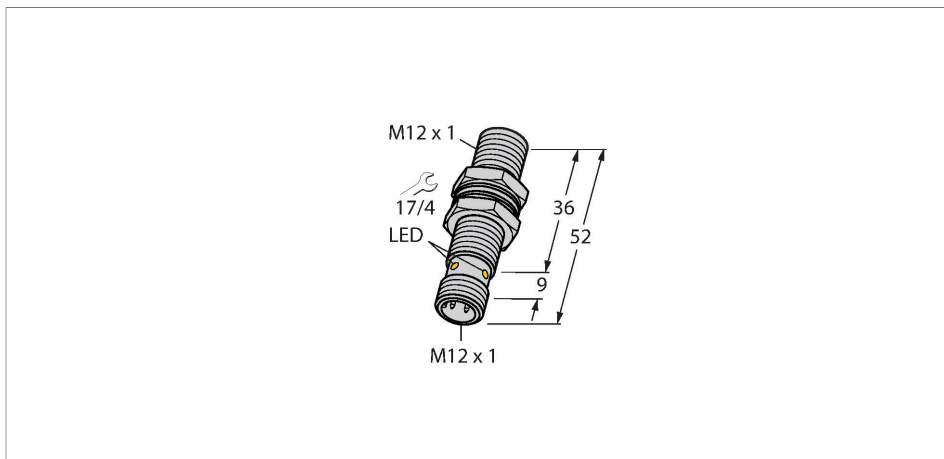
- Threaded barrel, M12 x 1
- Brass, PTFE-coated
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Extended temperature range
- High switching frequency
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M12 x 1 male connector

### 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

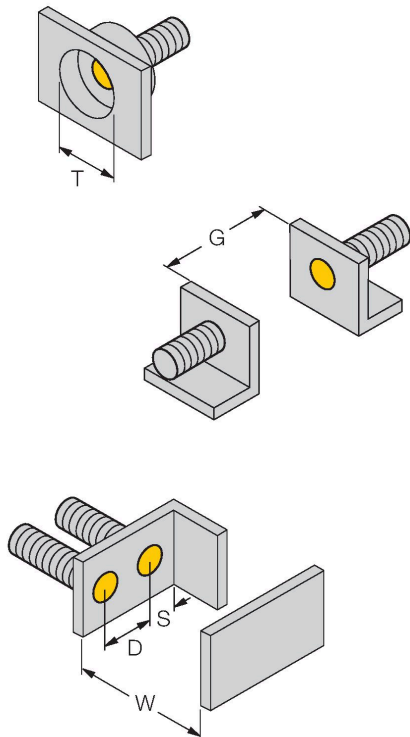
Type	BI3U-MT12-AP6X-H1141/S1589
Ident. no.	100000340
Remark to product	Discontinued; Turck Inc. replacement item 16342121 BI3U-MT12-AP6X-H1141/S1589
Special version	S1589 corresponds to: With weldguard coating
Rated switching distance	3 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Repeat accuracy	$\leq 2$ % of full scale
Temperature drift	$\leq \pm 10$ % $\leq \pm 15$ %, $\leq -25$ °C v $\geq +70$ °C
Hysteresis	3...15 %
Ambient temperature	-30...+85 °C
Operating voltage	10...30 VDC
Residual ripple	$\leq 10$ % $U_{ss}$
DC rated operational current	$\leq 200$ mA
No-load current	$\leq 20$ mA
Residual current	$\leq 0.1$ mA
Isolation test voltage	$\leq 0.5$ kV
Short-circuit protection	yes / Cyclic
Voltage drop at $I_o$	$\leq 1.8$ V
Wire breakage/Reverse polarity protection	yes / Complete
Output function	3-wire, NO contact, PNP

## Technical data

Insulation class	□
Switching frequency	2 kHz
<b>Design</b>	Threaded barrel, M12 × 1
Dimensions	52 mm
Housing material	Metal, CuZn, PTFE-coated
Active area material	Plastic, LCP + WeldGuard™, grey
Max. tightening torque of housing nut	7 Nm
Electrical connection	Connector, M12 × 1
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
Switching state	LED, Yellow

## Mounting instructions

### Mounting instructions/Description

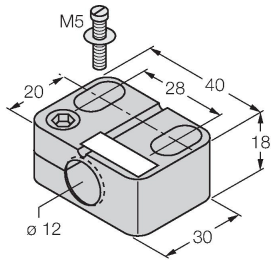


Distance D	2 x B
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn
Diameter active area B	Ø 12 mm

## Accessories

BST-12B

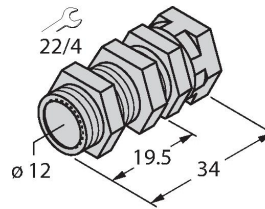
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Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6

QMT-12

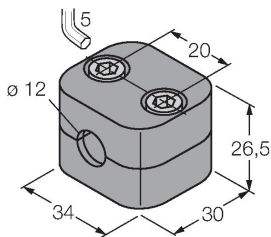
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Quick-mount bracket with dead-stop; material: brass, PTFE-coated; Male thread M16 × 1. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

BSS-12

6901321



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

## Wiring accessories

Dimension drawing

Type

Ident. no.

RKC4T-2/TXL1001

6630249

Connection cable, M12 connector, female, straight, 3-pin, cable length: 2 m, protective sheathing material: Aramid fibers, yellow; Temperature peak: 200 °C; other cable lengths and qualities available, see [www.turck.com](http://www.turck.com)

