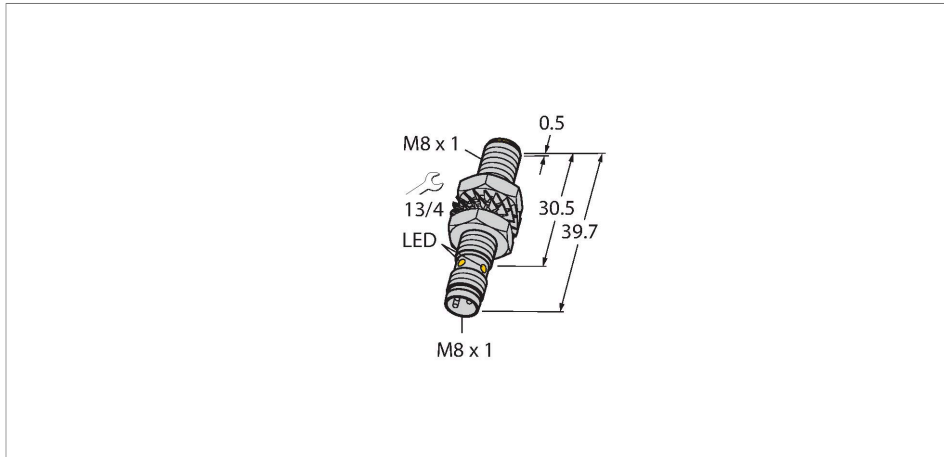


# BI3-M08-AP6X-V1131

## Inductive Sensor – With Increased Switching Distance



### Features

- Threaded barrel, M8 x 1
- Nickel-plated brass
- Large sensing range
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M8 x 1 male connector

### Wiring diagram



### Technical data

Type	BI3-M08-AP6X-V1131
Ident. no.	4602911
Rated switching distance	3 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
Temperature drift	$\leq \pm 10$ %
Hysteresis	3...15 %
Ambient temperature	-25...+70 °C
Operating voltage	10...30 VDC
Residual ripple	$\leq 10$ % $U_{ss}$
DC rated operational current	$\leq 150$ mA
No-load current	$\leq 15$ 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
Switching frequency	2.8 kHz
Design	Threaded barrel, M8 x 1
Dimensions	39.7 mm

### Functional principle

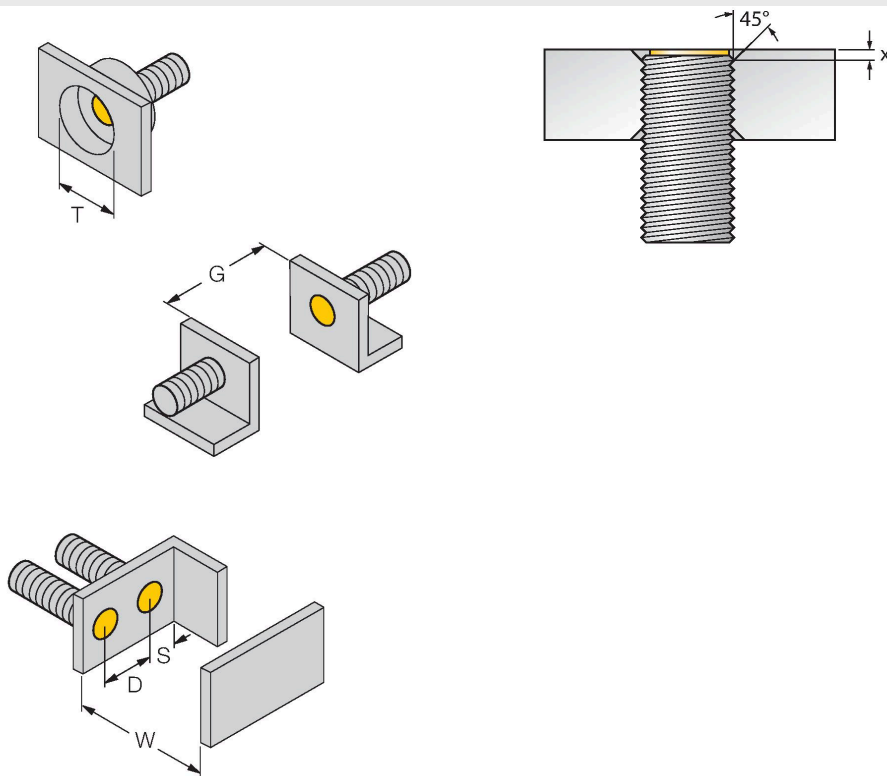
Inductive sensors detect metal objects contactless and wear-free. For this, they use a high-frequency electromagnetic AC field that interacts with the target. Inductive sensors generate this field via an RLC circuit with a ferrite coil.

## Technical data

Housing material	Metal, CuZn, Nickel-plated
Active area material	Plastic, PP-GF20
Max. tightening torque of housing nut	7 Nm
Electrical connection	Connector, M8 × 1
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



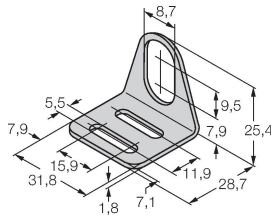
Distance D	2 x B
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn
Diameter active area B	Ø 8 mm

Flush installation in brass, aluminium and stainless steel with the supplied nuts is possible without restrictions.

If installed flush in steel, a phase of 45° and min. depth of 1.7 mm (dimension X) must be observed.

## Accessories

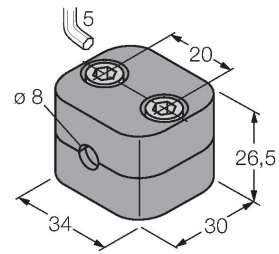
**MW-08** 6945008



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

Technical drawing showing dimensions: 8,7, 5,5, 7,9, 15,9, 31,8, 1,8, 7,1, 7,9, 11,9, 28,7, 9,5, 25,4.

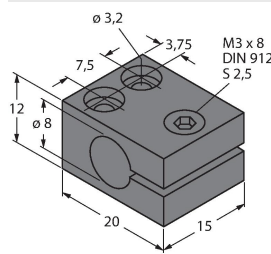
**BSS-08** 6901322



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

Technical drawing showing dimensions: 5, 20, 26,5, 30, 34, 8.

**MBS80** 69479

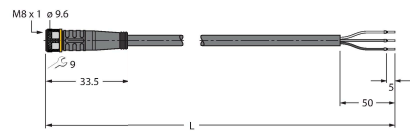


Mounting clamp for smooth barrel sensors; mounting block material: Anodized aluminum

Technical drawing showing dimensions: 7,5, 3,75, M3 x 8 DIN 912 5,2,5, 12, 8, 20, 15.

## Wiring accessories

Dimension drawing	Type	Ident. no.	
	PKG3M-2/TEL	6625058	Connection cable, female M8, straight, 3-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see <a href="http://www.turck.com">www.turck.com</a>



B13-M08-AP6X-V1131 | 12/03/2020 05-48 | technical changes reserved