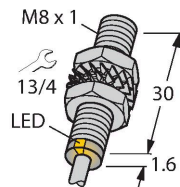


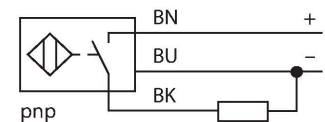
# BI3U-EM08-AP6X Inductive Sensor



## Features

- Threaded barrel, M8 x 1
- Stainless steel, 1.4427 SO
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Large switching distance
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- Cable connection

## Wiring diagram



## Functional principle

Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox3 sensors have significant advantages due to their patented multi-coil system. They excel thanks to their optimum switching distances, maximum flexibility and operational reliability as well as efficient standardization.

## Technical data

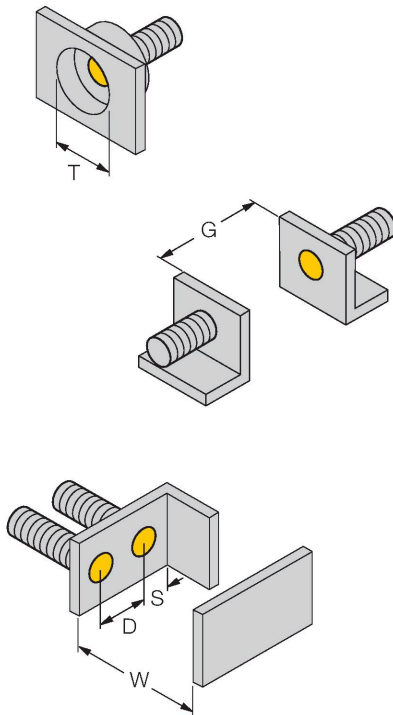
Type	BI3U-EM08-AP6X
ID	4602411
General data	
Rated switching distance	3 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Repeat accuracy	$\leq 2 \%$ of full scale
Temperature drift	$\leq \pm 10 \%$
Hysteresis	3...15 %
Electrical data	
Operating voltage	10...30 VDC
Residual ripple	$\leq 10 \%$ $U_{ss}$
DC rated operational current	$\leq 150$ mA
No-load current	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
DC field stability	200 mT
AC field stability	200 mT <sub>ss</sub>
Insulation class	□
Switching frequency	1 kHz
Mechanical data	
Design	Threaded barrel, M8 x 1

Technical data

Dimensions	31.6 mm
Housing material	Stainless steel, 1.4427 SO
Active area material	Plastic, PA12
End cap	Plastic, PA12
Max. tightening torque of housing nut	5 Nm
Electrical connection	Cable
Cable quality	Ø 3 mm, LifY-11Y, PUR, 2 m
Core cross-section	3 x 0.14 mm <sup>2</sup>
Environmental conditions	
Ambient temperature	0...+60 °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
Switching state	LED, Yellow

Mounting instructions

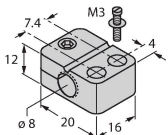
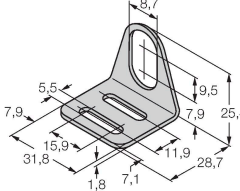
# Mounting instructions/Description



The image contains three technical diagrams illustrating different mounting configurations for a sensor. The top diagram shows a single sensor with a dimension line labeled 'T' indicating the distance from the mounting surface to the center of the active area. The middle diagram shows two sensors mounted on a surface, with a dimension line labeled 'G' indicating the distance between the centers of the two sensors. The bottom diagram shows two sensors mounted in a panel, with dimension lines labeled 'D' (distance between centers), 'S' (distance from the edge to the center), and 'W' (width of the panel).

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

Accessories

BST-08B	6947210	Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6	MW-08	6945008	Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)
					
BSS-08	6901322	Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene	MBS80	69479	Mounting clamp for smooth barrel sensors; mounting block material: Anodized aluminum
