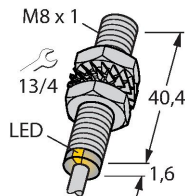


BI2-EG08-AG41X

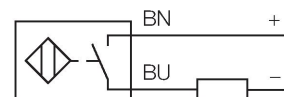
Inductive Sensor – With Increased Switching Distance



Features

- Threaded barrel, M8 x 1
- Stainless steel, 1.4427 SO
- Large sensing range
- DC 2-wire, 10...55 VDC
- Polarized version
- NO contact
- Cable connection

Wiring diagram



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

Type	BI2-EG08-AG41X
ID	4562000
General data	
Rated switching distance	2 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	≤ 2 % of full scale
Temperature drift	$\leq \pm 10$ %
Hysteresis	1...15 %
Electrical data	
Operating voltage U_B	10...55 VDC
Ripple U_{ss}	≤ 10 % U_{Bmax}
DC rated operating current I_o	≤ 100 mA
Residual current	≤ 0.6 mA
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic
Voltage drop at I_o	≤ 3.5 V
Wire break/reverse polarity protection	Polarized
Output function	NO contact, 2-wire
Smallest operating current	≥ 3 mA
Switching frequency	0.3 kHz
Mechanical data	
Design	Threaded barrel, M8 x 1
Dimensions	42 mm
Housing material	Stainless steel, 1.4427 SO

Technical data

Active area material	Plastic
End cap	Plastic, PA12-GF30
Max. tightening torque of housing nut	5 Nm
Electrical connection	Cable
Cable quality	Ø 4 mm, LiYY-11Y, PUR, 2 m
Core cross-section	2 x 0.25 mm²
Environmental conditions	
Ambient temperature	-25...+70 °C
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

The image contains three technical diagrams illustrating different mounting configurations for a sensor.

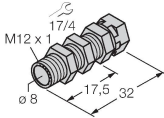
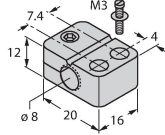
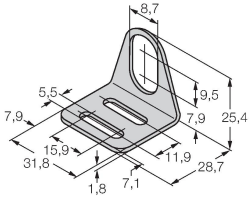
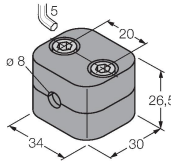
1. The top diagram shows a single sensor mounted to a flat surface using a screw. A dimension line labeled 'T' indicates the distance from the mounting surface to the center of the sensor's active area.

2. The middle diagram shows two sensors mounted to a surface, one above the other. A dimension line labeled 'G' indicates the vertical distance between the centers of the two sensors.

3. The bottom diagram shows two sensors mounted side-by-side on a surface. Three dimension lines are present: 'D' for the horizontal distance between the centers of the two sensors, 'S' for the distance from the mounting surface to the center of the sensor, and 'W' for the total width of the mounting plate.

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

QM-08	6945100	Quick-mount bracket with dead-stop, chrome-plated brass, male thread M12 x 1. Note: The switching distance of proximity switches may be reduced through the use of quick-mount brackets.	BST-08B	6947210	Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6
					
MW08	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			
