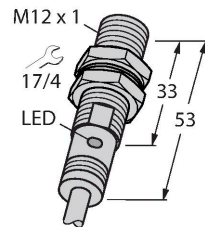


BI3-EG12F-AG6X

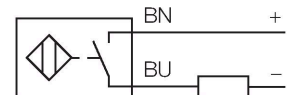
Inductive Sensor – Stainless Steel Front



Features

- Threaded barrel, M12 x 1
- Stainless steel, 1.4305
- DC 2-wire, 10...30 VDC
- Polarized version
- NO contact
- Cable connection

Wiring diagram



Technical data

Type	BI3-EG12F-AG6X
ID	4614665
General data	
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	≤ 10 % of full scale
Temperature drift	$\leq \pm 20$ %
Hysteresis	1...15 %
Electrical data	
Operating voltage	10...30 VDC
Residual ripple	≤ 10 % U_{ss}
DC rated operational current	≤ 100 mA
Rated operational current	at 25°C
Residual current	≤ 0.8 mA
Isolation test voltage	≤ 0.5 kV
Short-circuit protection	yes / Cyclic
Voltage drop at I_o	≤ 3.5 V
Wire breakage/Reverse polarity protection	Polarized
Output function	NO contact, 2-wire
Smallest operating current	≥ 3 mA
Switching frequency	0.08 kHz

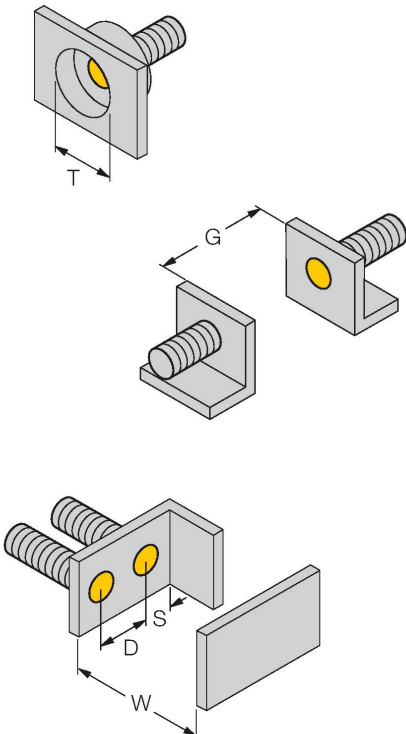
Functional principle

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

Mechanical data	
Design	Threaded barrel, M12 x 1
Dimensions	53 mm
Housing material	Stainless steel, 1.4305 (AISI 303)
Active area material	Stainless steel, 1.4305 (AISI 303)
Max. tightening torque of housing nut	30 Nm
Electrical connection	Cable
Cable quality	Ø 6 mm, Gray, LifYY, PVC, 2 m
Core cross-section	2 x 0.5 mm ²
Environmental conditions	
Ambient temperature	-10...+70 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
Switching state	2-color LED, Red/green

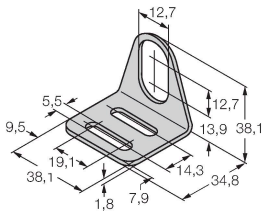
Mounting instructions

Mounting instructions/Description	
	Distance D
	35 mm
	Distance W
	12mm
	Distance T
	12 mm (Fe metal); 70 mm (Fe non-metal)
	Distance S
	20 mm (Fe metal); 35 mm (non Fe-metal)
	Distance G
	40 mm
	Diameter active area B
	Ø 12 mm
Switching distance not reduced when flush mounted in ferrous metals	
When mounted in non-ferrous metals the active face has to protrude 16 mm.	
The values depend on the mounting nuts used. Therefore we recommend the use of the nuts which are included in the delivery.	

Accessories

MW-12

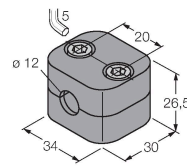
6945003



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