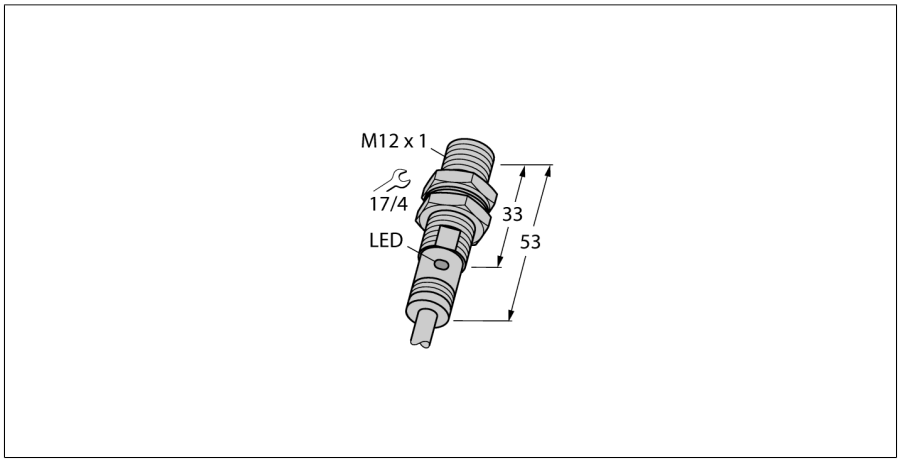
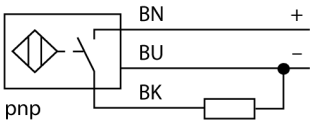
Inductive Sensor
Stainless Steel Front
BI2-EG12F-AP6X



- Threaded barrel, M12 x 1
- Stainless steel, 1.4305
- DC 3-wire, 10…30 VDC
- NO contact, PNP output
- 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.

Type	BI2-EG12F-AP6X
ID	4614632
General data	
Rated switching distance Sn	2 mm
Mounting conditions	Flush
Secured operating distance	≤ (0.81 × Sn) mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeat accuracy	≤ 10 % of full scale
Temperature drift	≤ ±20 %
Hysteresis	3…15 %
Electrical data	
Operating voltage U_B	10…30 VDC
Ripple U_{ss}	≤ 10 % U_{Bmax}
DC rated operating current I_e	≤ 200 mA
Residual current	≤ 0.1 mA
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic
Voltage drop at I_e	≤ 2 V
Wire break/reverse polarity protection	yes/Complete
Output function	3-wire, NO contact, PNP
Switching frequency	0.1 kHz
Mechanical data	
Design	Threaded barrel, M12 x 1
Dimensions	49 mm
Housing material	Stainless steel, 1.4305 (AISI 303)
Active area material	Stainless steel, 1.4305 (AISI 303)
Max. tightening torque of housing nut	10 Nm
Electrical connection	Cable
Cable quality	Ø 6mm, LifYY, PVC, 2 m
Core cross-section	3 x 0.34 mm²

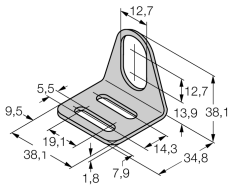
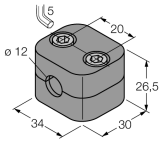
Edition • 2025-02-28T14:48:23+01:00

Environmental conditions	
Ambient temperature	-25…+70 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67

Switching state	LED, Yellow

Edition • 2025-02-28T14:48:23+01:00

Accessories

Type code	Ident-No.		Dimension drawing
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	

Edition • 2025-02-28T14:48:23+01:00