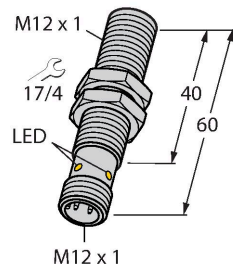


BI2.5FE-EM12FE-AP6X-H1141

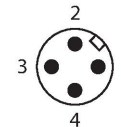
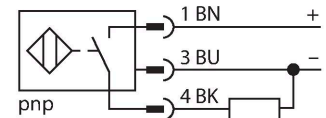
Inductive Sensor – With Selective Behaviour



Features

- Threaded barrel, M12 x 1
- Stainless steel
- Detects only ferromagnetic metals
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M12 x 1 male connector

Wiring diagram



Functional principle

Inductive sensors detect metal objects contactless and wear-free. For this purpose they use a high-frequency electromagnetic AC field that interacts with the target. Inductive sensors of the FE series with selective features can only detect ferrous metals.

Technical data

Type	BI2.5FE-EM12FE-AP6X-H1141
ID	1615011
General data	
Rated switching distance	2.5 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Correction factors	St37 = 1; Al = 0; Cu=0; stainless steel = 0.5; Ms = 0
Repeat accuracy	≤ 2 % of full scale
Temperature drift	$\leq \pm 10$ %
Hysteresis	3...15 %
Electrical data	
Operating voltage U_B	10...30 VDC
Ripple U_{rs}	≤ 10 % U_{Bmax}
DC rated operating current I_o	≤ 100 mA
No-load current	≤ 20 mA
Residual current	≤ 0.1 mA
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic
Voltage drop at I_o	≤ 2.5 V
Wire break/reverse polarity protection	yes/Complete
Output function	3-wire, NO contact, PNP
Insulation class	□
Switching frequency	0.1 kHz

Technical data

Mechanical data	
Design	Threaded barrel, M12 x 1
Dimensions	60 mm
Housing material	Stainless steel, 1.4301 (AISI 304)
Active area material	Stainless steel
Max. tightening torque of housing nut	10 Nm
Electrical connection	Connector, M12 × 1
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

Mounting instructions

Mounting instructions/Description

Diagram showing the side view of the mounting bracket. Dimension T is indicated as the distance from the center of the active area to the edge of the bracket.

Diagram showing the top view of the mounting bracket. Dimension G is indicated as the distance between the centers of the two active areas.

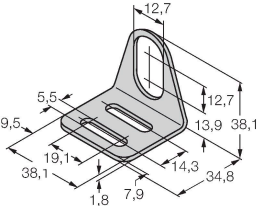
Diagram showing the front view of the mounting bracket. Dimensions D, S, W, and B are indicated. D is the distance from the center of the active area to the edge of the bracket. S is the distance from the center of the active area to the edge of the bracket. W is the width of the bracket. B is the diameter of the active area.

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 12 mm

BI2.5FE-EM12FE-AP6X-H114| 02/21/2025 13-14 | technical changes reserved

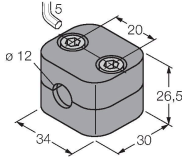
Accessories

MW126945003



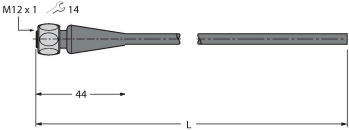
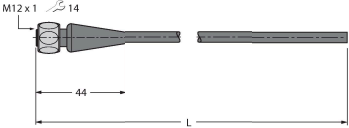
Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)

BSS-126901321



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

Wiring accessories

Dimension drawing	Type	ID	
	RKH4-2/TFE	6935482	Connection cable, M12 female connector, straight, 3-pin, stainless steel coupling nut, cable length: 2 m, jacket material: PVC, gray; temperature range: -25...+80 °C
	RKH4-2/TFG	6934384	Connection cable, M12 female connector, straight, 3-pin, stainless steel coupling nut, cable length: 2 m, jacket material: TPE, gray; temperature range: -40...+105 °C