

NI8-EM12E-AP6X-H1141/S1589

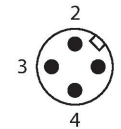
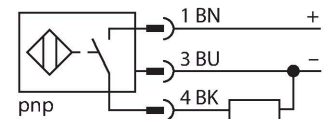
Inductive Sensor – With Weldguard® coating



Features

- Threaded barrel, M12 x 1
- Stainless steel, 1.4301
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M12 x 1 male connector

Wiring diagram



Technical data

Type	NI8-EM12E-AP6X-H1141/S1589
ID	4611396
Special version	S1589 corresponds to: With weldguard coating
General data	
Rated switching distance	8 mm
Mounting conditions	Non-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
Hysteresis	3...15 %
Electrical data	
Operating voltage	10...30 VDC
Residual ripple	≤ 10 % U_{ss}
DC rated operational current	≤ 200 mA
No-load current	15 mA
Residual current	≤ 0.1 mA
Isolation test voltage	≤ 0.5 kV
Short-circuit protection	yes / Cyclic
Voltage drop at I_o	≤ 1.8 V
Wire breakage/Reverse polarity protection	yes / Complete
Output function	3-wire, NO contact, PNP
Switching frequency	2 kHz

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. The sensors hosting a ferrite core coil generate the AC field through an LC resonant circuit.

Technical data

Mechanical data	
Design	Threaded barrel, M12 x 1
Dimensions	62 mm
Housing material	Stainless steel, 1.4301 (AISI 304)
Active area material	Plastic, PA12-GF30
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
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 the mounting of a sensor on a plate. The sensor is represented by a yellow cylinder with a threaded end.

- Top Diagram:** A side view of the sensor mounted on a plate. Dimension **T** is indicated as the distance from the front face of the plate to the center of the sensor.
- Middle Diagram:** A top view showing two sensors mounted on a plate. Dimension **G** is indicated as the distance between the centers of the two sensors.
- Bottom Diagram:** A perspective view showing a sensor mounted on a plate. Dimensions are indicated as follows:
 - N:** Distance from the top edge of the plate to the top of the sensor.
 - S:** Distance from the bottom edge of the plate to the bottom of the sensor.
 - D:** Distance from the front face of the plate to the center of the sensor.
 - W:** Width of the plate.

Distance D	3 x B
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn
Distance N	2 x Sn
Diameter active area B	Ø 12 mm

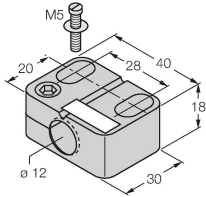
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Accessories

BST-12B

6947212

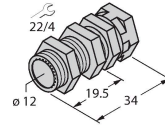
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6



QM-12

6945101

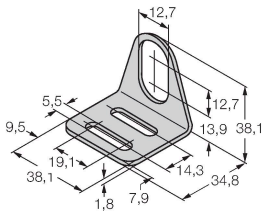
Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M16 × 1. Note: The switching distance of the proximity switches may change when using quick-mount brackets.



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

