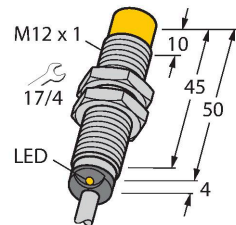


NI8U-EM12-AN6X

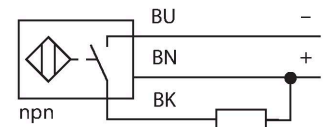
Inductive Sensor



Features

- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Extended temperature range
- High switching frequency
- Auto-compensation protects against pre-damping
- DC 3-wire, 10...30 VDC
- NO contact, NPN output
- Cable connection

Wiring diagram



Technical data

Type	NI8U-EM12-AN6X
ID	1644320
General data	
Rated switching distance	8 mm
Mounting conditions	Non-flush, partially embeddable
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Repeat accuracy	$\leq 2 \%$ of full scale
Temperature drift	$\leq \pm 10 \%$ $\leq \pm 20 \%, \leq -25 \text{ °C} \vee \geq +70 \text{ °C}$
Hysteresis	3...15 %
Electrical data	
Operating voltage U_B	10...30 VDC
Ripple U_{ss}	$\leq 10 \%$ U_{Bmax}
DC rated operating current I_o	≤ 200 mA
No-load current	≤ 25 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 break/reverse polarity protection	yes/Complete
Output function	3-wire, NO contact, NPN
DC field stability	300 mT
AC field stability	300 mT _{ss}
Insulation class	□
Switching frequency	1 kHz
Mechanical data	
Design	Threaded barrel, M12 x 1

Functional principle

Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox Factor 1 sensors have significant advantages due to their patented ferrite-coreless multi-coil system. They detect all metals at the same large switching distance and are resistant to magnetic fields.

Technical data

Dimensions	54 mm
Housing material	Stainless steel, 1.4301 (AISI 304)
Active area material	Plastic, PBT
End cap	Plastic, EPTR
Max. tightening torque of housing nut	10 Nm
Electrical connection	Cable
Cable quality	Ø 5.2 mm, LifYY, PVC, 2 m
Core cross-section	3 x 0.34 mm ²
Environmental conditions	
Ambient temperature	-30...+85 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP68
MTTF	874 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 methods for a device. The top-left diagram shows a side view of a device mounted on a panel, with dimension T indicating the distance from the panel edge to the center of the device. The middle diagram shows a top view of two devices mounted on a panel, with dimension G indicating the distance between the centers of the two devices and dimension S indicating the distance from the panel edge to the center of the device. The bottom diagram shows a perspective view of a device mounted on a panel, with dimension N indicating the distance from the panel edge to the center of the device, dimension D indicating the distance from the panel edge to the center of the device, dimension S indicating the distance from the panel edge to the center of the device, and dimension W indicating the width of the panel.

This diagram shows a side view of a device mounted on a panel. The device is shown in a perspective view, with its cylindrical body and mounting flange. The mounting flange is shown with a central hole and a threaded hole. The device is mounted on a panel, and the distance from the panel edge to the center of the device is indicated by dimension T.

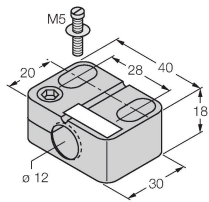
Distance D	3 x B
Distance W	3 x Sn
Distance T	4 x B
Distance S	0.5 x B
Distance G	6 x Sn
Distance N	2 x Sn
Diameter active area B	Ø 12 mm

1-side flush mounting possible:
1-side flush mounting: $S_r = 6 \text{ mm}$

Accessories

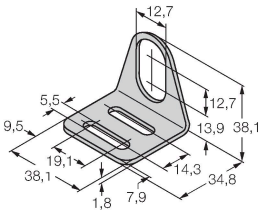
BST-12B 6947212

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



MW12 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

