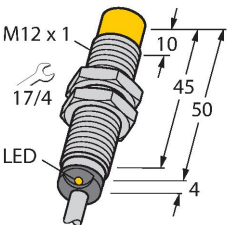


NI8U-M12-AP6X

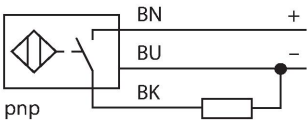
Inductive Sensor



Features

- M12 × 1 threaded barrel
- Chrome-plated brass
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Extended temperature range
- High switching frequency
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- Cable connection

Wiring diagram



Technical data

Type	NI8U-M12-AP6X
ID	1644100
General data	
Rated switching distance	8 mm
Mounting conditions	Non-flush
Secured operating distance	≤ (0.81 × S _n) mm
Repeat accuracy	≤ 2 % of full scale
Temperature drift	≤ ±10 %
	≤ ± 15 %, ≤ -25 °C v ≥ +70 °C
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
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 _e	≤ 1.8 V
Wire break/reverse polarity protection	yes/Complete
Output function	3-wire, NO contact, PNP
DC field stability	300 mT
AC field stability	300 mT _{ss}
Insulation class	□
Switching frequency	2 kHz
Mechanical data	
Design	Threaded barrel, M12 x 1

Functional principle

Inductive sensors are designed for wear-free and contactless detection of metal objects. Iprox 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	Metal, CuZn, Chrome-plated
Active area material	Plastic, LCP
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 drawings of a mounting plate. The top drawing is a side view showing a rectangular plate with a central circular hole and a threaded hole on the right side. Dimension T indicates the thickness of the plate. The middle drawing is a top view showing the plate with a threaded hole on the left and a central hole. Dimension G indicates the distance from the left edge to the center of the threaded hole. The bottom drawing is a perspective view showing the plate with two threaded holes on the left and a central hole. Dimensions N, S, D, and W are indicated: N is the distance from the top edge to the center of the top threaded hole, S is the distance from the bottom edge to the center of the bottom threaded hole, D is the distance between the centers of the two threaded holes, and W is the width of the plate.

Distance D	48 mm
Distance W	3 x Sn
Distance T	45 mm
Distance S	1.5 x B
Distance G	6 x Sn
Distance N	2 x Sn
Diameter active area B	Ø 12 mm

Accessories

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.	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
			