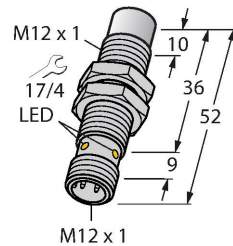


NI8U-EM12H-AP6X-H1141 Inductive Sensor



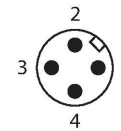
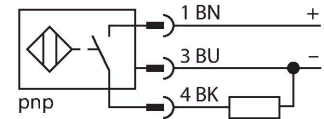
Features

- Threaded barrel, M12 x 1
- Stainless steel, 1.4301
- Duroplast front cap, very resistant to thermal and mechanical load
- 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, PNP output
- M12 x 1 male connector

Technical data

Type	NI8U-EM12H-AP6X-H1141
ID	1644312
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	$\leq \pm 10 \%$
	$\leq \pm 20 \%, \leq -25 \text{ }^\circ\text{C} \vee \geq +70 \text{ }^\circ\text{C}$
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	$\leq 200 \text{ mA}$
No-load current	$\leq 25 \text{ mA}$
Residual current	$\leq 0.1 \text{ mA}$
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic
Voltage drop at I_o	$\leq 1.8 \text{ V}$
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	□

Wiring diagram



Functional principle

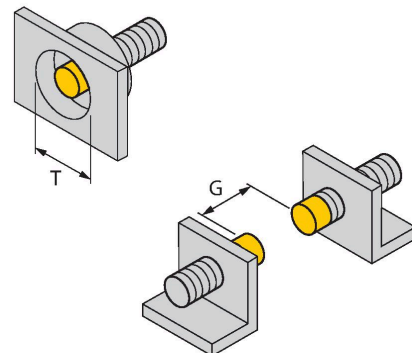
Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox Factor 1 sensors have significant advantages due to their patented ferrite-coreless multi-coil system. They detect all metals at the same large switching distance and are resistant to magnetic fields.

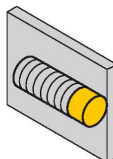
Technical data

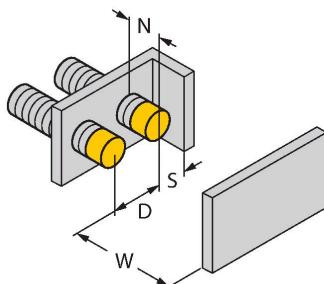
Switching frequency	1 kHz
Mechanical data	
Design	Threaded barrel, M12 x 1
Dimensions	52 mm
Housing material	Stainless steel, 1.4301 (AISI 304)
Active area material	Plastic, Duroplast
Max. tightening torque of housing nut	10 Nm
Electrical connection	Connector, M12 x 1
Environmental conditions	
Ambient 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

This diagram shows two views of a threaded barrel component. The top view shows a square flange with a central hole and a threaded barrel protruding from it. Dimension T indicates the distance from the center of the hole to the edge of the flange. The bottom view shows the barrel being inserted into a hole in a plate. Dimension G indicates the distance from the center of the barrel to the edge of the plate.

This diagram shows a side view of the threaded barrel component. Dimension T indicates the distance from the center of the barrel to the edge of the flange. Dimension G indicates the distance from the center of the barrel to the edge of the plate.

This diagram shows a side view of the threaded barrel component. Dimension N indicates the distance from the center of the barrel to the edge of the flange. Dimension S indicates the distance from the center of the barrel to the edge of the plate. Dimension D indicates the distance from the center of the barrel to the edge of the flange. Dimension W indicates the distance from the center of the barrel to the edge of the plate.

Distance D	$3 \times B$
Distance W	$3 \times S_n$
Distance T	45 mm
Distance S	$0.5 \times B$
Distance G	$6 \times S_n$
Distance N	$2 \times S_n$
Diameter active area B	$\varnothing 12 \text{ mm}$

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



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.



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

