

NI8U-EM12E-AN6X2-H1141

Inductive Sensor



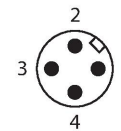
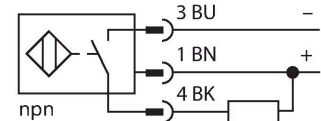
Features

- Threaded barrel, M12 x 1
- Stainless steel, 1.4301
- 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
- M12 x 1 male connector

Technical data

Type	NI8U-EM12E-AN6X2-H1141
ID	1644315
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
	$\leq \pm 20 \%, \leq -25 \text{ °C} \vee \geq +70 \text{ °C}$
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

Wiring diagram



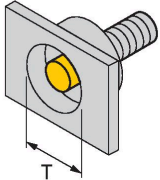
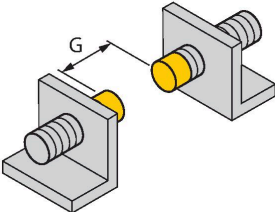
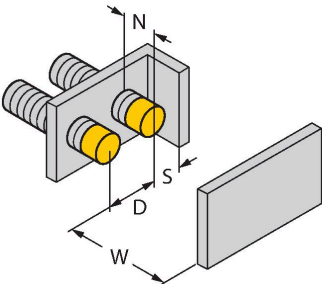
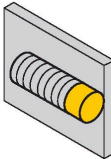
Functional principle

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

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 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
Power-on indication	LED, Green
Switching state	LED, Yellow

Mounting instructions

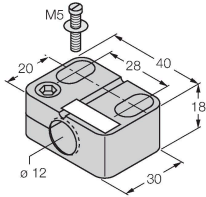
Mounting instructions/Description														
  														
	<table> <tr> <td>Distance D</td><td>36 mm</td></tr> <tr> <td>Distance W</td><td>24 mm</td></tr> <tr> <td>Distance T</td><td>45 mm</td></tr> <tr> <td>Distance S</td><td>18 mm</td></tr> <tr> <td>Distance G</td><td>48 mm</td></tr> <tr> <td>Distance N</td><td>16 mm</td></tr> <tr> <td>Diameter active area B</td><td>Ø 12 mm</td></tr> </table>	Distance D	36 mm	Distance W	24 mm	Distance T	45 mm	Distance S	18 mm	Distance G	48 mm	Distance N	16 mm	Diameter active area B
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Distance W	24 mm													
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Distance S	18 mm													
Distance G	48 mm													
Distance N	16 mm													
Diameter active area B	Ø 12 mm													
1-side flush mounting possible: 1-side flush mounting: Sr = 6 mm														

Accessories

BST-12B

6947212

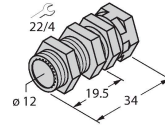
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6



QM-12

6945101

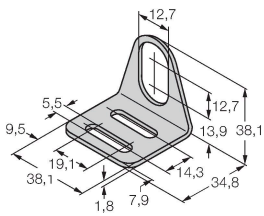
Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M16 × 1. Note: The switching distance of the proximity switches may change when using quick-mount brackets.



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

