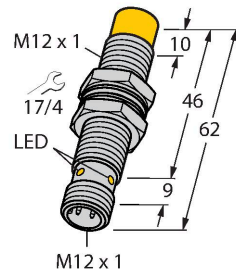


NI8U-EM12E-AN6X2-H1141/S1589 Inductive Sensor



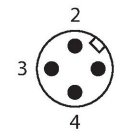
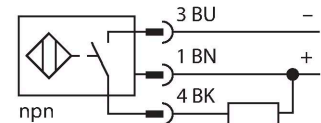
Features

- 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/S1589
ID	1644391
Special version	S1589 Corresponds to: With weldguard coating
General data	
Rated switching distance	8 mm
Mounting conditions	Non-flush, partially embeddable
Secured operating distance	$\leq (0.81 \times S_n) \text{ mm}$
Repeat accuracy	$\leq 2 \text{ \% of full scale}$
	$\leq \pm 20 \text{ \%, } \leq -25 \text{ }^\circ\text{C v } \geq +70 \text{ }^\circ\text{C}$
Hysteresis	3...15 %
Electrical data	
Operating voltage U_B	10...30 VDC
Ripple U_{ss}	$\leq 10 \text{ \% } U_{Bmax}$
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, NPN
DC field stability	300 mT
AC field stability	300 mT _{ss}

Wiring diagram



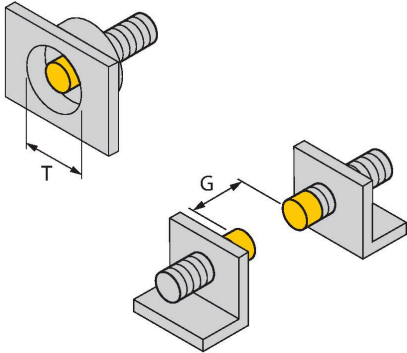
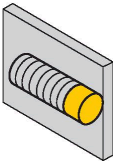
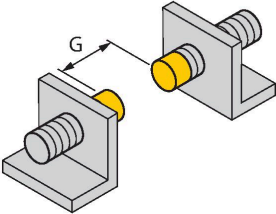
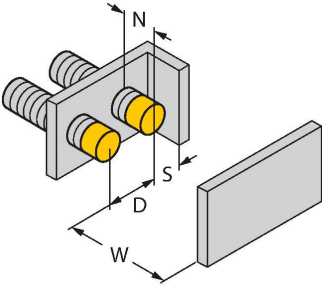
Functional principle

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

Insulation class	□
Switching frequency	1 kHz
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	-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	
	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 Ø 12 mm
	1-side flush mounting possible: 1-side flush mounting: Sr = 6 mm

NI8U-EM12E-AN6X2-H1141/S1589| 02/21/2025 13:58 | technical changes reserved

