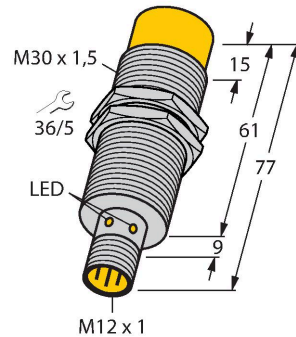


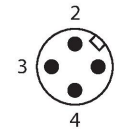
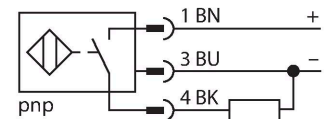
NI20-EM30E-AP6X-H1141/S1589 Inductive Sensor – With Weldguard® coating



Features

- Threaded barrel, M30 x 1.5
- Stainless steel, 1.4301
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M12 x 1 male connector

Wiring diagram



Technical data

Type	NI20-EM30E-AP6X-H1141/S1589
ID	4670590
Special version	S1589 Corresponds to: With weldguard coating
General data	
Rated switching distance	20 mm
Mounting conditions	Non-flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeat accuracy	≤ 2 % of full scale
Hysteresis	3...15 %
Electrical data	
Operating voltage U_B	10...30 VDC
Ripple U_{rs}	≤ 10 % U_{Bmax}
DC rated operating current I_B	≤ 200 mA
No-load current	≤ 15 mA
Residual current	≤ 0.1 mA
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic
Voltage drop at I_B	≤ 1.8 V
Wire break/reverse polarity protection	yes/Complete
Output function	3-wire, NO contact, PNP
Switching frequency	0.5 kHz

Functional principle

Inductive sensors detect metal objects contactless and wear-free. For this purpose they use a high-frequency electromagnetic AC field that interacts with the target. The sensors hosting a ferrite core coil generate the AC field through an LC resonant circuit.

Technical data

Mechanical data	
Design	Threaded barrel, M30 x 1.5
Dimensions	77 mm
Housing material	Stainless steel, 1.4301 (AISI 304)
Active area material	Plastic, PA12-GF30
Max. tightening torque of housing nut	75 Nm
Electrical connection	Connector, M12 x 1
Environmental conditions	
Ambient temperature	-25...+70 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
MTTF	2283 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 and its components. The top drawing is a side view showing a rectangular plate with a central circular hole and a threaded rod passing through it. A dimension line labeled 'T' indicates the distance from the left edge of the plate to the center of the hole. The middle drawing is a top view showing the same plate and rod, with a dimension line labeled 'G' indicating the distance from the left edge to the center of the rod. The bottom drawing is a perspective view showing the plate, rod, and a separate rectangular plate. Dimension lines indicate various distances: 'N' is the distance from the top edge of the plate to the center of the rod; 'S' is the distance from the bottom edge of the plate to the center of the rod; 'D' is the distance from the left edge of the plate to the center of the rod; and 'W' is the width of the plate.

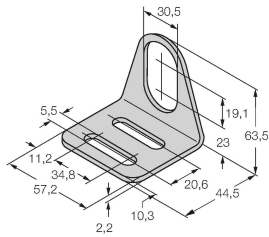
Distance D	3 x B
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn
Distance N	2 x Sn
Diameter active area B	Ø 30 mm

NI20-EM30E-AP6X-H1141/S1589| 02/21/2025 14-21 | technical changes reserved

Accessories

MW30

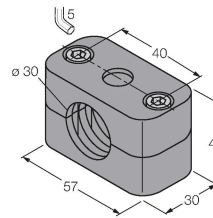
6945005



Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)

BSS-30

6901319



Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene