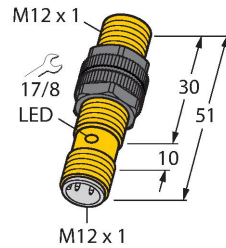


NI4-S12-AP6X-H1141

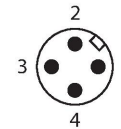
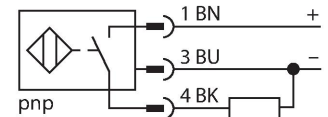
Inductive Sensor



Features

- Threaded barrel, M12 x 1
- Plastic, PA12-GF30
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- M12 x 1 male connector

Wiring diagram



Functional principle

Inductive sensors detect metal objects contactless and wear-free. For this, they use a high-frequency electromagnetic AC field that interacts with the target. Inductive sensors generate this field via an RLC circuit with a ferrite coil.

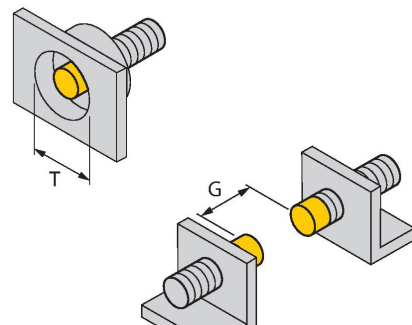
Technical data

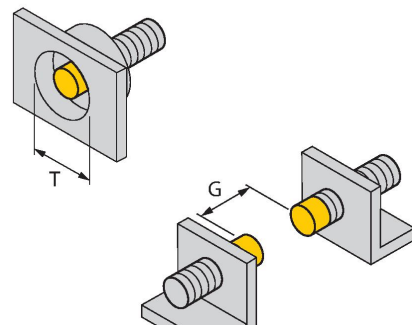
Type	NI4-S12-AP6X-H1141
ID	46522
General data	
Rated switching distance	4 mm
Mounting conditions	Non-flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeat accuracy	≤ 2 % of full scale
Temperature drift	$\leq \pm 10$ %
Hysteresis	3...15 %
Electrical data	
Operating voltage U_B	10...30 VDC
Ripple U_{rs}	≤ 10 % U_{Bmax}
DC rated operating current I_o	≤ 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_o	≤ 1.8 V
Wire break/reverse polarity protection	yes/Complete
Output function	3-wire, NO contact, PNP
Switching frequency	2 kHz

Technical data

Mechanical data	
Design	Threaded barrel, M12 x 1
Dimensions	51 mm
Housing material	Plastic, PA12-GF30
Active area material	Plastic, PA12-GF30
Max. tightening torque of housing nut	1 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

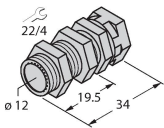
The image contains three technical drawings of a sensor mounting bracket. The top drawing is a side view showing a rectangular plate with a central circular hole and a threaded rod passing through it. A dimension line labeled 'T' indicates the thickness of the plate. The middle drawing is a top view showing the same plate from above, with a dimension line labeled 'G' indicating the distance from the edge to the center of the hole. The bottom drawing is a perspective view showing the bracket mounted on a surface, with dimension lines labeled 'N', 'S', 'D', and 'W' indicating various mounting dimensions.

Mounting instructions/Description		
	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 12 mm

N14-S12-AP6X-H1141 | 02/21/2025 14-37 | technical changes reserved

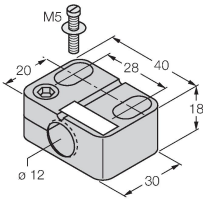
Accessories

QM-12 6945101



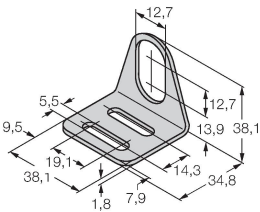
Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M16 × 1. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

BST-12B 6947212



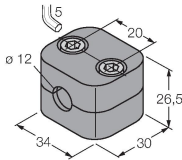
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6

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

Wiring accessories

Dimension drawing	Type	ID
	RKC4T-2/TEL	6625010



Connection cable, M12 female connector, straight, 3-pin, cable length: 2 m, jacket material: PVC, black; cULus approval