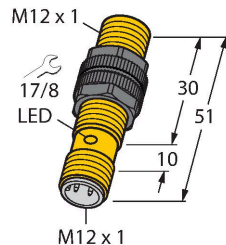


NI4-S12-AP6X-H1141

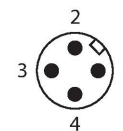
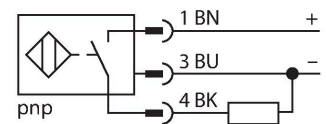
Inductive Sensor



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	10...30 VDC
Residual ripple	≤ 10 % U_{ss}
DC rated operational current	≤ 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 breakage/Reverse polarity protection	yes / Complete
Output function	3-wire, NO contact, PNP
Switching frequency	2 kHz
Mechanical data	
Design	Threaded barrel, M12 x 1
Dimensions	51 mm
Housing material	Plastic, PA12-GF30

Technical data

Active area material	Plastic, PA12-GF30
Max. tightening torque of housing nut	1 Nm
Electrical connection	Connector, M12 × 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

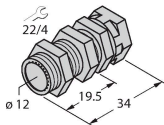
Mounting instructions/Description

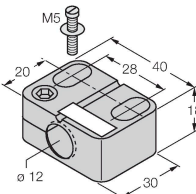
The image contains three isometric diagrams illustrating different mounting configurations for a sensor. The sensor is represented by a grey rectangular block with a yellow cylindrical active area in the center.

- Top diagram:** Shows a single sensor mounted on a grey plate. The dimension T is indicated as the distance from the bottom edge of the plate to the center of the sensor.
- Middle diagram:** Shows two sensors mounted on a grey plate. The dimension G is indicated as the distance between the centers of the two sensors.
- Bottom diagram:** Shows a sensor mounted on a grey plate. The dimensions are indicated as follows:
 - N : Distance from the top edge of the plate to the center of the sensor.
 - S : Distance from the bottom edge of the plate to the center of the sensor.
 - D : Distance from the left edge of the plate to the center of the sensor.
 - W : Distance from the left edge of the plate to the right edge of the plate.

Distance D	$3 \times B$
Distance W	$3 \times S_n$
Distance T	$3 \times B$
Distance S	$1.5 \times B$
Distance G	$6 \times S_n$
Distance N	$2 \times S_n$
Diameter active area B	$\varnothing 12 \text{ mm}$

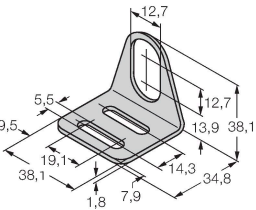
Accessories

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	

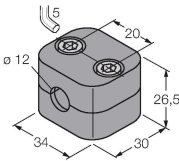
MW-126945003

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



BSS-126901321

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



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

