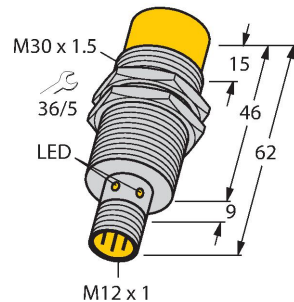


NI20-M30-AP6X-H1141

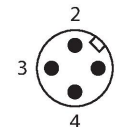
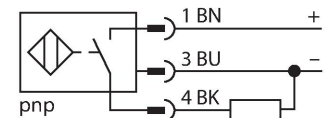
Inductive Sensor – With Increased Switching Distance



Features

- M30 × 1.5 threaded tube
- Chrome-plated brass
- Large sensing range
- 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	NI20-M30-AP6X-H1141
ID	4670510
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
Temperature drift	$\leq \pm 10$ %
Hysteresis	3...15 %
Electrical data	
Operating voltage U_B	10...30 VDC
Ripple U_{ss}	≤ 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	0.5 kHz
Mechanical data	
Design	Threaded barrel, M30 x 1.5
Dimensions	62 mm
Housing material	Metal, CuZn, Chrome-plated

Technical data

Active area material	Plastic, PA12-GF30
Max. tightening torque of housing nut	75 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

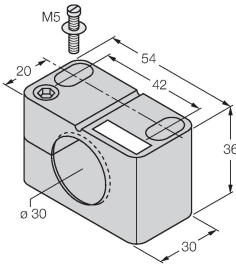
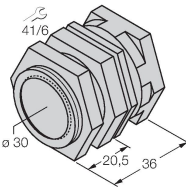
Mounting instructions/Description

The image contains three technical diagrams illustrating different mounting configurations for a sensor. The sensor is represented by a grey L-shaped bracket with a yellow cylindrical active area.

- Top Diagram:** A side view of the sensor mounted on a vertical plate. Dimension **T** indicates the distance from the bottom edge of the plate to the center of the sensor's active area.
- Middle Diagram:** A top view showing two sensors mounted on a horizontal plate. Dimension **G** indicates the distance between the centers of the two sensors. The dimension **Sn** is also indicated, representing the distance from the edge of the plate to the center of the sensor.
- Bottom Diagram:** A perspective view of a sensor mounted on a horizontal plate. Dimensions **N**, **S**, **D**, and **W** are shown. **N** is the distance from the top edge of the plate to the top of the sensor. **S** is the distance from the bottom edge of the plate to the bottom of the sensor. **D** is the distance from the front edge of the plate to the center of the sensor. **W** is the width of the plate. A separate rectangular plate is shown below the sensor.

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	20 mm
Diameter active area B	Ø 30 mm

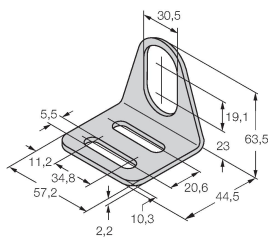
Accessories

BST-30B	6947216	QM-30	6945103
			
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6		Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M36 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.	

MW30

6945005

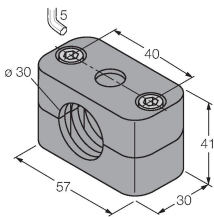
Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)



BSS-30

6901319

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



Accessories

Dimension drawing	Type	ID	
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RKC4T-2/TEL

6625010

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

