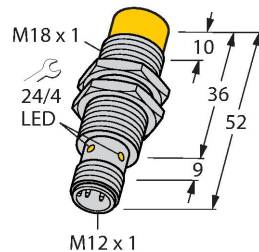


NI14-M18-AD4X-H1141

Inductive Sensor – With Increased Switching Distance

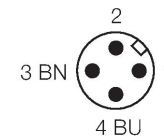
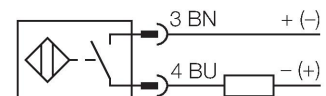


Technical data

Type	NI14-M18-AD4X-H1141
ID	4417241
General data	
Rated switching distance	14 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	$\leq 2 \%$ of full scale
Temperature drift	$\leq \pm 10 \%$
Hysteresis	1...15 %
Electrical data	
Operating voltage U_B	10...65 VDC
Ripple U_{rs}	$\leq 10 \%$ U_{Bmax}
DC rated operating current I_o	≤ 100 mA
Residual current	≤ 0.6 mA
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic
Voltage drop at I_o	≤ 5 V
Wire break/reverse polarity protection	Complete
Output function	2-wire, NO contact, 2-wire
Smallest operating current	≥ 3 mA
Switching frequency	0.5 kHz

Features

- Threaded barrel, M18 x 1
- Chrome-plated brass
- Large sensing range
- DC 2-wire, 10...65 VDC
- NO contact
- M12 x 1 male connector



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

Mechanical data	
Design	Threaded barrel, M18 x 1
Dimensions	52 mm
Housing material	Metal, CuZn, Chrome-plated
Active area material	Plastic, PA12-GF30
Max. tightening torque of housing nut	25 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 diagrams illustrating the mounting of a sensor. The top diagram shows a side view of the sensor mounted on a plate, with dimension T indicating the distance from the mounting surface to the sensor's active area. The middle diagram shows a top view of the sensor mounted on a plate, with dimension G indicating the distance between the sensor's mounting points. The bottom diagram shows a perspective view of the sensor mounted on a plate, with dimensions N, S, D, and W indicating various mounting parameters: N is the distance from the mounting surface to the sensor's active area, S is the distance from the mounting surface to the sensor's active area, D is the distance from the mounting surface to the sensor's active area, and W is the distance from the mounting surface to the sensor's active area.

Distance D	7 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 18 mm

NI14-M18-AD4X-H1141 | 02/21/2025 14-13 | technical changes reserved

Accessories

BST-18B

6947214

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



QM-18

6945102

Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M24 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.



MW18

6945004

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



BSS-18

6901320

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

