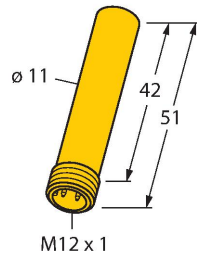


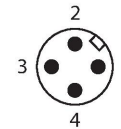
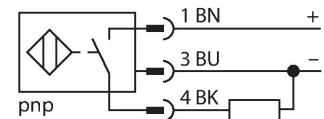
NI5-K11-AP6X-H1141 Inductive Sensor



Features

- Smooth barrel, Ø 11 mm
- 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	NI5-K11-AP6X-H1141
ID	4661102
General data	
Rated switching distance	5 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	Smooth barrel, 11 mm
Dimensions	51 mm
Housing material	Plastic, PA12-GF30
Active area material	Plastic, PA12-GF30
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
Included in delivery	BS11

Mounting instructions

Mounting instructions/Description

The image contains three technical diagrams illustrating the mounting of the BS11 sensor. The top diagram is an isometric view of the sensor (a grey L-shaped bracket with two yellow cylindrical pins) being mounted onto a grey rectangular plate. Dimension lines indicate the following measurements: 'N' is the distance between the two pins; 'S' is the distance from the inner corner of the L-bracket to the center of the rear pin; 'D' is the distance from the front face of the L-bracket to the center of the rear pin; and 'W' is the distance from the front face of the L-bracket to the front face of the mounting plate. The bottom-left diagram is a top-down view of the L-bracket, showing dimension 'T' as the width of the bracket's base. The bottom-right diagram is an isometric view showing two L-brackets, with dimension 'G' indicating the distance between the centers of their rear pins.

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 11 mm

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Accessories

BS 11

69462

Fixing clamp; material mounting
block: PBT

