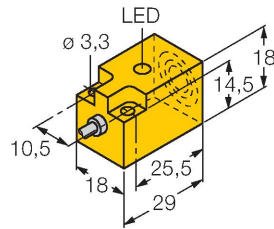


NI5-Q18-AN6X

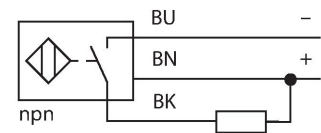
Inductive Sensor



Features

- Rectangular, height 18 mm
- Active face in front
- Plastic, PBT-GF30-V0
- DC 3-wire, 10...30 VDC
- NO contact, NPN output
- Cable connection

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-Q18-AN6X
ID	4614607
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_{ss}	≤ 10 % U_{Bmax}
DC rated operating current I_b	≤ 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_b	≤ 1.8 V
Wire break/reverse polarity protection	yes/Complete
Output function	3-wire, NO contact, NPN
Switching frequency	0.5 kHz

Technical data

Mechanical data	
Design	Rectangular, Q18
Dimensions	29 x 18 x 18 mm
Housing material	Plastic, PBT-GF30-V0
Active area material	PBT-GF30-V0
Electrical connection	Cable
Cable quality	Ø 5.2 mm, LifYY, PVC, 2 m
Core cross-section	3 x 0.34 mm ²
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 diagram illustrates the backside mounting of a yellow Q18 sensor onto a grey panel. It shows two views: a side view and a top-down view. In the side view, the sensor is being inserted into a slot in the panel. Dimensions are labeled: 'N' for the distance from the top of the panel to the top of the sensor, 'D' for the distance from the front face of the panel to the front face of the sensor, 'W' for the width of the panel, and 'S' for the distance from the front face of the panel to the back face of the sensor. In the top-down view, the sensor is shown fully seated in the slot. Dimensions are labeled: 'G' for the distance from the front face of the panel to the front face of the sensor, and 'B' for the width of the sensor.

The diagram shows the yellow Q18 sensor mounted on a grey panel. The sensor is shown in two positions: one where it is being inserted into a slot in the panel, and another where it is fully seated. Dimensions are labeled: 'S' for the distance from the front face of the panel to the back face of the sensor, 'G' for the distance from the front face of the panel to the front face of the sensor, 'N' for the distance from the top of the panel to the top of the sensor, and 'B' for the width of the sensor.

Distance D	3 x B
Distance W	3 x Sn
Distance S	1.5 x B
Distance G	6 x Sn
Distance N	2 x Sn
Width active area B	18 mm

Backside mounting with full switching distance

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