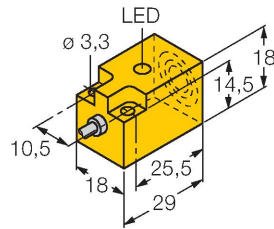


NI5-Q18-AP6X Inductive Sensor



Features

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

Wiring diagram



Technical data

Type	NI5-Q18-AP6X
ID	4614606
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, PNP
Switching frequency	0.5 kHz

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	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 mounting dimensions for the Q18 sensor. It shows two views of the sensor (yellow cube) mounted on a grey base. The top view shows the sensor with its active area (indicated by a target symbol) facing the viewer. The bottom view shows the sensor with its active area facing away. The dimensions are labeled as follows:

- D**: Distance from the front face of the sensor to the front face of the base.
- W**: Width of the base.
- S**: Distance from the front face of the sensor to the back face of the base.
- N**: Distance from the top face of the sensor to the top face of the base.
- G**: Distance from the front face of the sensor to the back face of the base.
- B**: Width of the sensor.

The diagram illustrates the mounting dimensions for the Q18 sensor. It shows two views of the sensor (yellow cube) mounted on a grey base. The top view shows the sensor with its active area (indicated by a target symbol) facing the viewer. The bottom view shows the sensor with its active area facing away. The dimensions are labeled as follows:

- S**: Distance from the front face of the sensor to the back face of the base.
- N**: Distance from the top face of the sensor to the top face of the base.
- G**: Distance from the front face of the sensor to the back face of the base.
- B**: 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

NI5-Q18-AP6X | 02/21/2025 13:30 | technical changes reserved