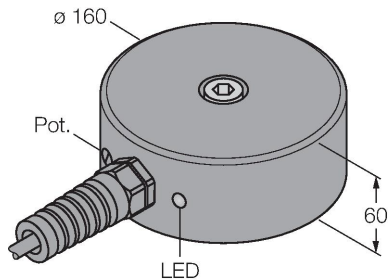


NI100-Q160-AP44X/S120

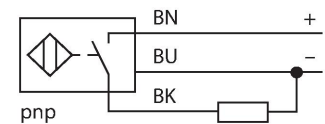
Inductive Sensor – With Increased Temperature Range



Features

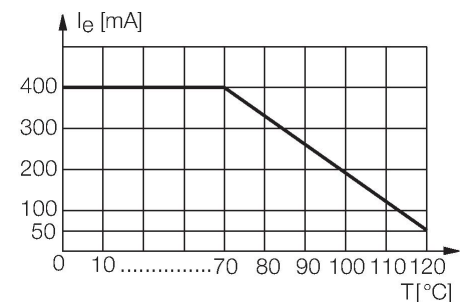
- Ø 160 mm, height 60 mm
- Active face on top
- Plastic, PPO
- Sensitivity adjusted via potentiometer
- Temperatures up to +120 °C
- DC 3-wire, 10...55 VDC
- NO contact, PNP output
- Cable connection

Wiring diagram



Functional principle

Inductive sensors detect metal objects contactless and wear-free. For this purpose they use a high-frequency electromagnetic AC field that interacts with the target. The sensors hosting a ferrite core coil generate the AC field through an LC resonant circuit. Special versions are available for ambient temperatures between -60°C and +250°C.



Technical data

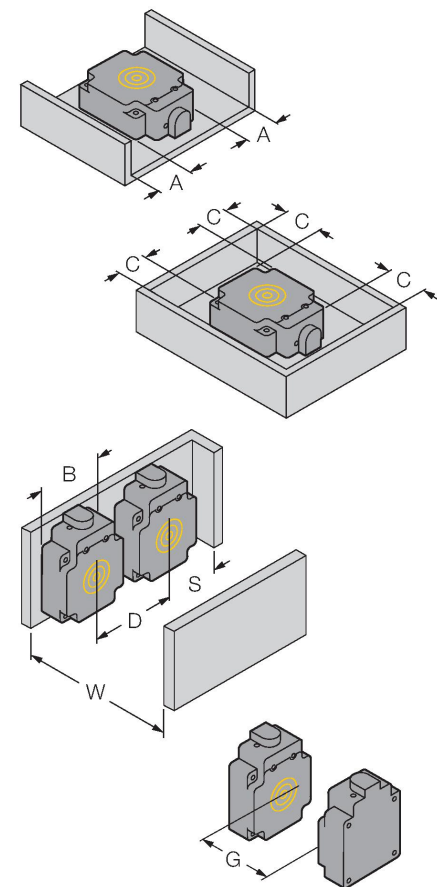
Type	NI100-Q160-AP44X/S120
ID	1440012
Special version	S120 Corresponds to: Maximum ambient temperature = 120 °C
General data	
Rated switching distance	100 mm
Mounting conditions	Non-flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeat accuracy	$\leq 2 \%$ of full scale
Temperature drift	$\leq \pm 10 \%$ $\leq \pm 20 \%, \geq +70 \text{ °C}$
Hysteresis	3...15 %
Electrical data	
Operating voltage U_B	10...55 VDC
Ripple U_{ss}	$\leq 10 \%$ U_{Bmax}
DC rated operating current I_o	≤ 400 mA
No-load current	≤ 20 mA
Residual current	≤ 0.1 mA
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic
Voltage drop at I_o	≤ 2 V
Wire break/reverse polarity protection	yes/Complete
Output function	3-wire, NO contact, PNP
Switching frequency	0.05 kHz
Mechanical data	
Design	Rectangular, Q160

Technical data

Dimensions	160 x 160 x 60 mm
Housing material	Plastic, PPO, Black
Active area material	PPO, black
Electrical connection	Cable
Cable quality	Ø 6 mm, SiHSi, Silicone, 2 m
Core cross-section	3 x 0.75 mm²
Environmental conditions	
Ambient temperature	-25...+120 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
Switching state	LED, Yellow
Included in delivery	plastic mounting screw, hexagonal, M16 x 2

Mounting instructions

Mounting instructions/Description



The image contains four technical diagrams illustrating the mounting of the NI100-Q160-AP44X/S120 sensor in different configurations:

- Top View (U-channel):** Shows a single sensor mounted in a U-channel. Dimension **A** indicates the distance from the sensor's side to the channel's edge. Dimension **C** indicates the distance from the sensor's front to the channel's end.
- Top View (Box):** Shows a single sensor mounted in a rectangular box. Dimension **C** indicates the distance from the sensor's front to the box's end.
- Side View (Two sensors):** Shows two sensors mounted side-by-side on a plate. Dimension **B** is the height of the sensor. Dimension **S** is the distance between the sensors. Dimension **D** is the distance from the sensor's side to the plate's edge. Dimension **W** is the total width of the mounting plate.
- Front View (Two sensors):** Shows two sensors mounted side-by-side. Dimension **G** indicates the distance between the sensors.

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
Distance A	1 x Sn
Distance C	2 x Sn
Width active area	160 mm
B	