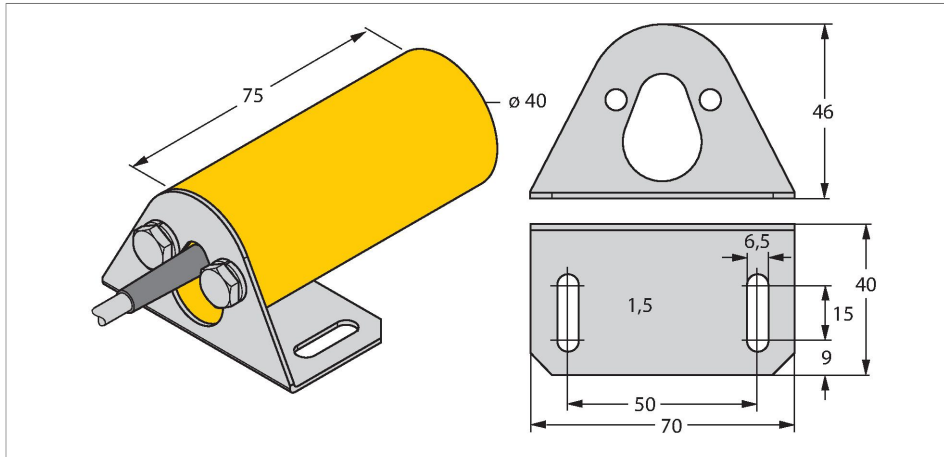


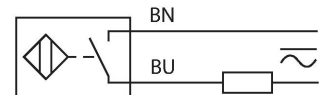
NI20-K40-AZ3X 2.00M Inductive Sensor



Features

- Smooth barrel, Ø 40 mm
- Plastic, ABS
- AC 2-wire, 20...250 VAC
- DC 2-wire, 10...300 VDC
- NO contact
- Cable connection

Wiring diagram

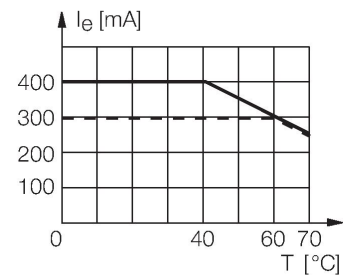


Technical data

Type	NI20-K40-AZ3X 2.00M
ID	13065
General data	
Rated switching distance	20 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	20...250 VAC
Operating voltage U_b	10...300 VDC
AC rated operational current	≤ 400 mA
DC rated operating current I_e	≤ 300 mA
Frequency	$\geq 50... \leq 60$ Hz
Residual current	≤ 1.7 mA
Isolation test voltage	1.5 kV
Surge current	≤ 8 A (≤ 10 ms max. 5 Hz)
Voltage drop at I_e	≤ 6 V
Output function	2-wire, NO contact, 2-wire
Smallest operating current	≥ 3 mA
Switching frequency	0.02 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	Smooth barrel, 40 mm
Dimensions	75 mm
Housing material	Plastic, ABS, Yellow
Active area material	Plastic, ABS, yellow
Electrical connection	Cable
Cable quality	Ø 5.2 mm, LifYY, PVC, 2 m
Core cross-section	2 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, Red
Included in delivery	Metal mounting bracket

Mounting instructions

Mounting instructions/Description

The image contains three technical diagrams illustrating the mounting of a sensor. The top diagram is a side view showing a sensor (yellow cylinder) mounted on a bracket (grey L-shape). Dimensions are indicated: N (distance from the top of the bracket to the top of the sensor), S (distance from the bottom of the bracket to the bottom of the sensor), D (distance from the front face of the bracket to the front face of the sensor), and W (distance from the front face of the bracket to the front face of a separate mounting plate). The bottom left diagram is a top view showing the sensor mounted on a bracket, with dimension T indicating the distance from the center of the sensor to the edge of the bracket. The bottom right diagram is a side view showing two sensors mounted on brackets, with dimension G indicating the distance between the front faces of the two sensors.

Distance D	$3 \times B$
Distance W	$3 \times S_n$
Distance T	$3 \times B$
Distance S	$1.5 \times B$
Distance G	$6 \times S_n$
Distance N	$2 \times S_n$
Diameter active area B	$\varnothing 40 \text{ mm}$

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Accessories

BS 40

69466

Fixing clamp; material mounting
block: PBT

