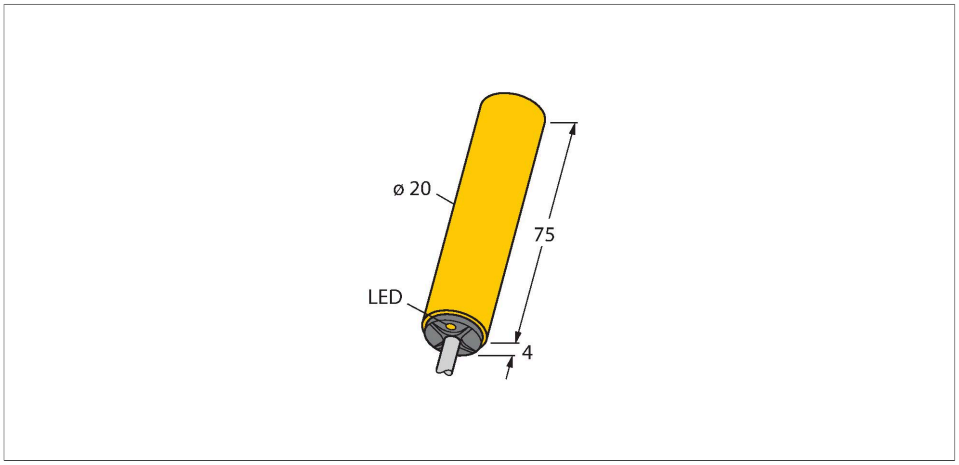
NI10-K20-AZ3X
Inductive Sensor



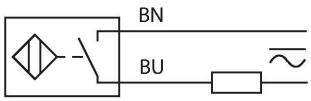
Technical data

Type	NI10-K20-AZ3X
ID	43585
General data	
Rated switching distance	10 mm
Mounting conditions	Non-flush
Secured operating distance	≤ (0.81 × Sn) mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeat accuracy	≤ 2 % of full scale
Temperature drift	≤ ±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	≥ 50…≤ 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

Features

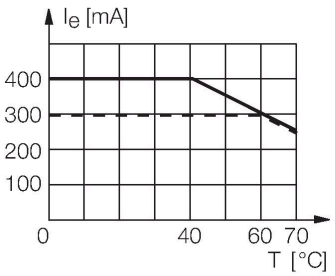
- Smooth barrel, Ø 20 mm
- Plastic, PBT-GF30-V0
- AC 2-wire, 20…250 VAC
- DC 2-wire, 10…300 VDC
- NO contact
- Cable connection

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.



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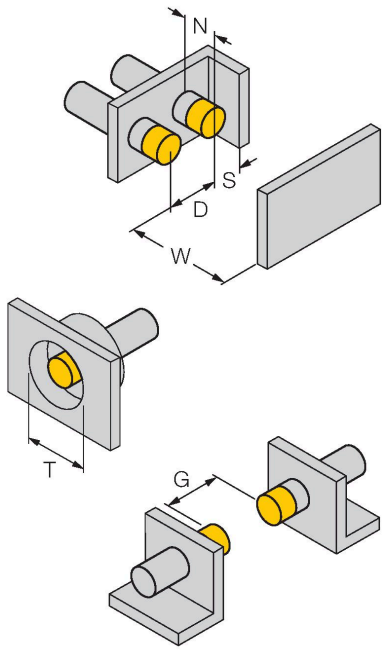
Technical data

Mechanical data	
Design	Smooth barrel, 20 mm
Dimensions	79 mm
Housing material	Plastic, PBT-GF30-V0
Active area material	Plastic, PBT-GF30-V0
End cap	Plastic, EPTR
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	BS20

Mounting instructions

Mounting instructions/Description



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 20 mm

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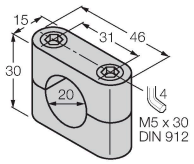
Accessories

BS 20	69464

Fixing clamp; material mounting block: PBT



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