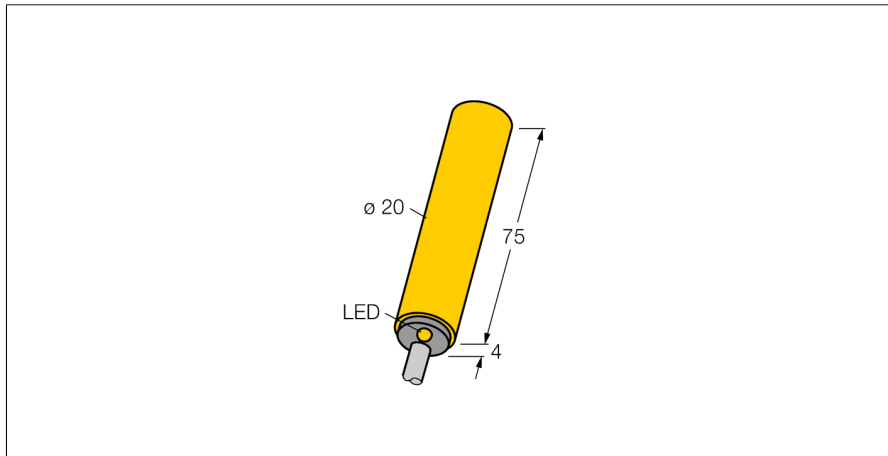


# Inductive sensor NI10-K20-AZ3X

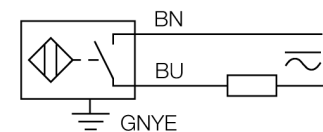
**TURCK**

Industrial  
Automation



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

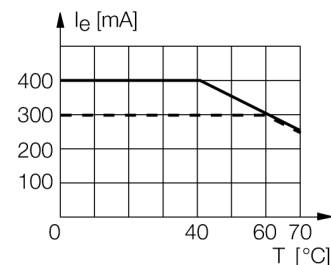
### Wiring diagram



### 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.

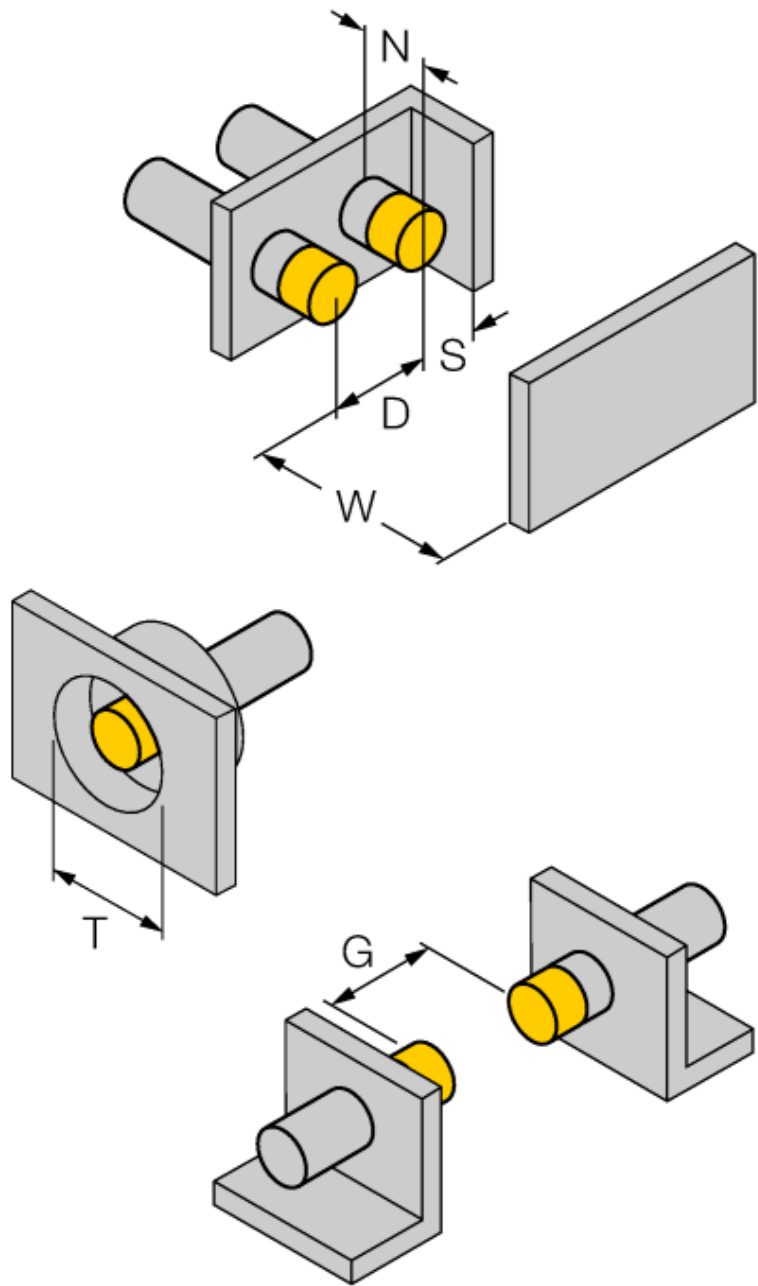
We offer special versions for temperatures of -60 °C up to +250 °C.



<b>Type code</b>	NI10-K20-AZ3X
Ident no.	43585
<b>Rated operating distance Sn</b>	10 mm
Mounting condition	non-flush
Assured sensing range	≤ (0,81 x Sn) mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeatability	≤ 2 % of full scale
Temperature drift	10 %
Hysteresis	3...15 %
Ambient temperature	-25...+70 °C
<b>Operating voltage</b>	20...250 VAC
Operating voltage	10...300VDC
AC rated operational current	≤ 400 mA
DC rated operational current	≤ 300 mA
Frequency	≥ 50...≤ 60 Hz
Residual current	≤ 1.7 mA
Rated insulation voltage	≤ 1.5 kV
Surge current	≤ 8 A (≤ 10 ms max. 5 Hz)
Voltage drop at I <sub>e</sub>	≤ 6 V
Output function	2-wire, NO contact
Smallest operating current I <sub>m</sub>	≤ 3 mA
Switching frequency	0.02 kHz
<b>Design</b>	smooth barrel, 20 mm
Dimensions	79 mm
Housing material	plastic, PBT
Material active area	Plastic, PBT
End cap	Plastic, EPTR
Connection	cable
Cable quality	5.2 mm, LiYY, PVC, 2 m
Cable cross section	2 x 0.34 mm <sup>2</sup>
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
<b>Switching state</b>	LED red
Included in scope of supply	BS20

**Inductive sensor  
NI10-K20-AZ3X**

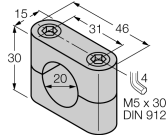
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn
Distance N	2 x Sn
<hr/>	
Diameter of the active area B	Ø 20 mm



# Inductive sensor NI10-K20-AZ3X



## Accessories

Type code	Ident no.	Description	Dimension drawing
BS 20	69464	Fixing clamp; material mounting block: PBT	 A technical drawing of a rectangular fixing clamp. The drawing shows a perspective view of the component. Dimensions are indicated: a height of 15, a width of 31, and a total length of 46. A circular hole is shown on the front face with a diameter of 20. A smaller hole is located on the side face, with a diameter of 4. The drawing is labeled with "M5 x 30 DIN 912" and an arrow pointing to the side hole, indicating the size and standard of the screw used for mounting.