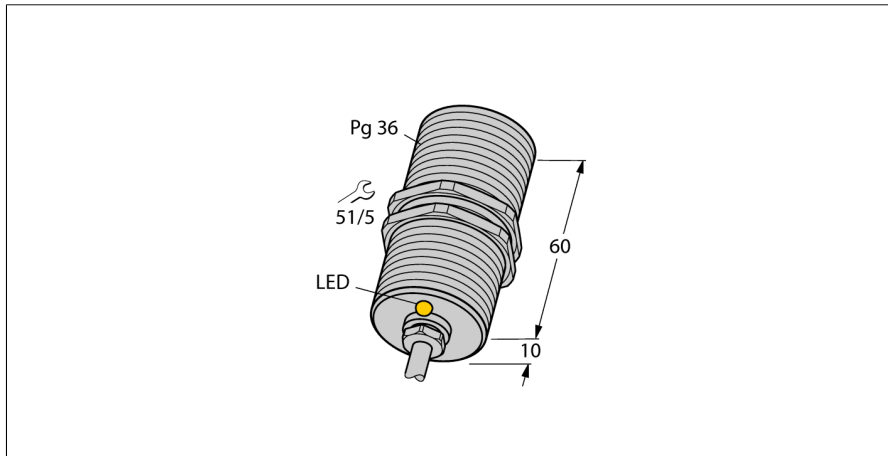


# Inductive sensor BI20-G47-AZ3X

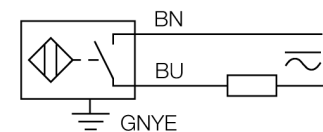
**TURCK**

Industrial  
Automation



- Threaded barrel, PG36
- Chrome-plated brass
- AC 2-wire, 20...250 VAC
- 2-wire DC, 10...300 VDC
- NO contact
- Cable connection

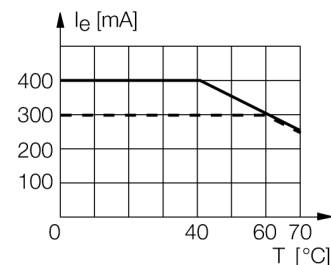
### Wiring diagram



### 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>	BI20-G47-AZ3X
Ident no.	13088
<b>Rated operating distance Sn</b>	20 mm
Mounting condition	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>	threaded barrel, G47
Dimensions	70 mm
Housing material	metal, CuZn, chrome-plated
Material active area	Plastic, PA
End cap	Plastic, PA66-GF25
Max. tightening torque housing nut	90 Nm
Connection	cable
Cable quality	5.2 mm, LifYY, PVC, 2 m
Cable cross section	3 x 0.75 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

**Inductive sensor  
BI20-G47-AZ3X**

Distance D	2 x B
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn

Diameter of the active area B                       $\varnothing$  47 mm



# Inductive sensor BI20-G47-AZ3X

**TURCK**

Industrial  
Automation

## Accessories

Type code	Ident no.	Description	Dimension drawing
MW 47	69452	Mounting bracket; material: Steel plate, zinc-plated	