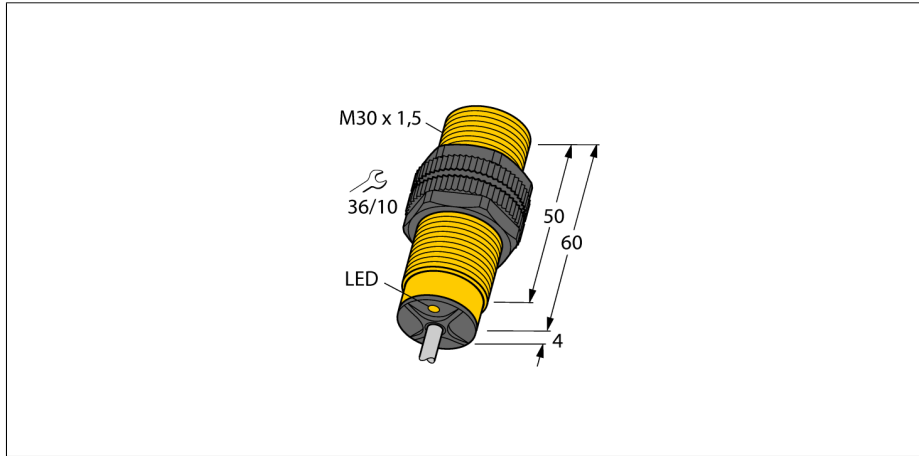


# Inductive sensor BI10-S30-AZ3X

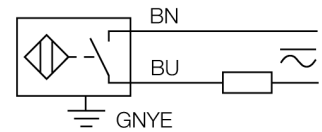
**TURCK**

Industrial  
Automation



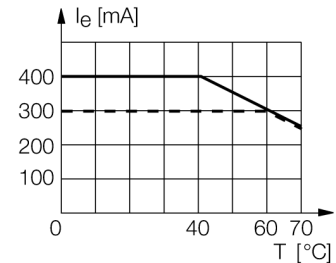
- Threaded barrel, M30 x 1.5
- Plastic, PA12-GF30
- AC 2-wire, 20...250 VAC
- DC 2-wire, 10...300 VDC
- NO contact
- Cable connection

### Wiring diagram



### Functional principle

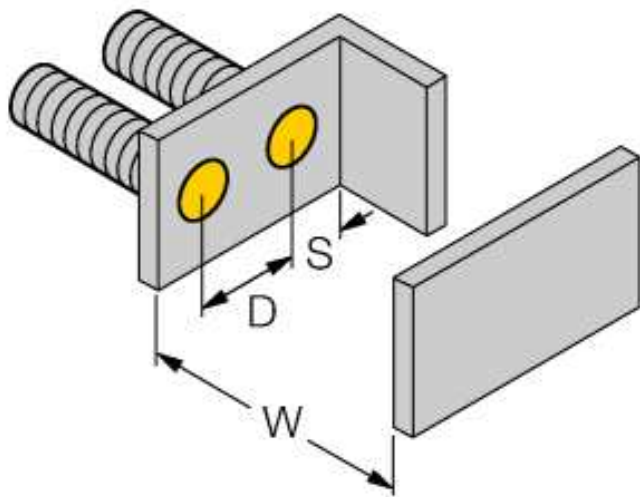
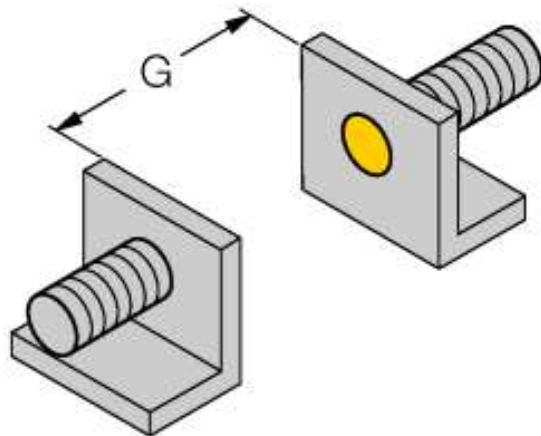
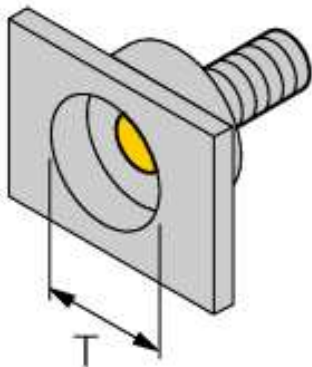
Inductive sensors detect metal objects contactless and wear-free. For this purpose they use a high-frequency electromagnetic AC field that interacts with the target. The sensors hosting a ferrite core coil generate the AC field through an LC resonant circuit.



<b>Type code</b>	BI10-S30-AZ3X
Ident no.	43554
<b>Rated operating distance Sn</b>	10 mm
Mounting condition	flush
Assured sensing range	$\leq (0,81 \times S_n)$ mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeatability	$\leq 2\%$ of full scale
Temperaturdrift	10 %
Hysteresis	3...15 %
Ambient temperature	-25...+70 °C
<b>Operating voltage</b>	20...250 VAC
Operating voltage	10...300VDC
AC rated operational current	$\leq 400$ mA
DC rated operational current	$\leq 300$ mA
Frequency	$\geq 50... \leq 60$ Hz
Residual current	$\leq 1.7$ mA
Rated insulation voltage	$\leq 1.5$ kV
Surge current	$\leq 8$ A ( $\leq 10$ ms max. 5 Hz)
Voltage drop at I <sub>e</sub>	$\leq 6$ V
Output function	2-wire, NO contact
Smallest operating current I <sub>m</sub>	$\leq 3$ mA
Switching frequency	0.02 kHz
<b>Design</b>	threaded barrel, M30 x 1.5
Dimensions	64 mm
Housing material	Plastic, PA
Material active face	Plastic, PA
End cap	Plastic, EPTR
Max. tightening torque housing nut	5 Nm
Connection	cable
Cable quality	5.2 mm, LifYY, 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>	• red

**Inductive sensor  
BI10-S30-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
<hr/>	
Diameter of the active area B	Ø 30 mm



Accessories

Type code	Ident no.	Description	Dimension drawing
QM-30	6945103	Quick-mount bracket with dead-stop; material: Chrome-plated brass Male thread M36 x 1.5. Note: The switching distance of proximity switches can be reduced by the use of quick-mount brackets.	
BST-30B	6947216	Fixing clamp for threaded barrel devices, with dead-stop; material: PA6	
MW-30	6945005	Mounting bracket for threaded barrel devices; material: Stainless steel A2 1.4301 (AISI 304)	
BSS-30	6901319	Mounting bracket for smooth and threaded barrel devices; material: Polypropylene	