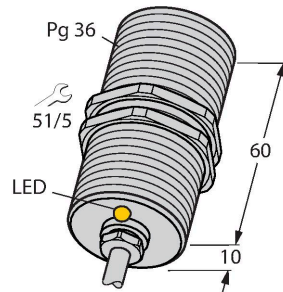


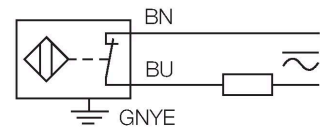
BI20-G47-RZ3X Inductive Sensor



Features

- Threaded barrel, PG36
- Chrome-plated brass
- AC 2-wire, 20...250 VAC
- DC 2-wire, 10...300 VDC
- NC contact
- Cable connection

Wiring diagram

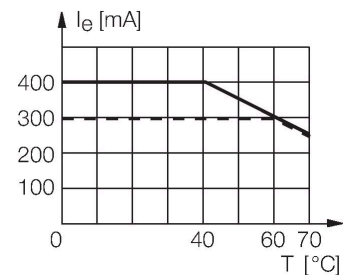


Technical data

Type	BI20-G47-RZ3X
ID	13187
General data	
Rated switching distance	20 mm
Mounting conditions	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	$\geq 50 \dots \leq 60$ 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, NC contact, 2-wire
Smallest operating current	≥ 3 mA
Switching frequency	0.02 kHz

Functional principle

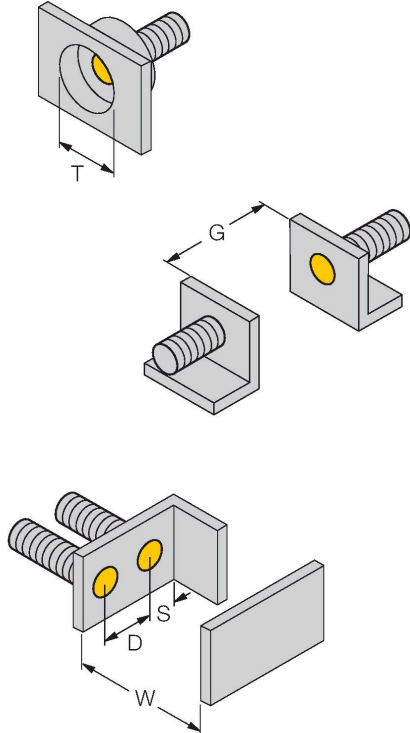
Inductive sensors detect metal objects contactless and wear-free. For this, they use a high-frequency electromagnetic AC field that interacts with the target. Inductive sensors generate this field via an RLC circuit with a ferrite coil.



Technical data

Mechanical data	
Design	Threaded barrel, G47
Dimensions	70 mm
Housing material	Metal, CuZn, Chrome-plated
Active area material	Plastic, PA12-GF30
End cap	Plastic, PA66-GF25
Max. tightening torque of housing nut	90 Nm
Electrical connection	Cable
Cable quality	Ø 5.2 mm, LifYY, PVC, 2 m
Core cross-section	3 x 0.75 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

Mounting instructions

Mounting instructions/Description	
	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 active area B
	Ø 47 mm

Accessories

MW47	69452
Mounting bracket; material: Steel plate, galvanized	

