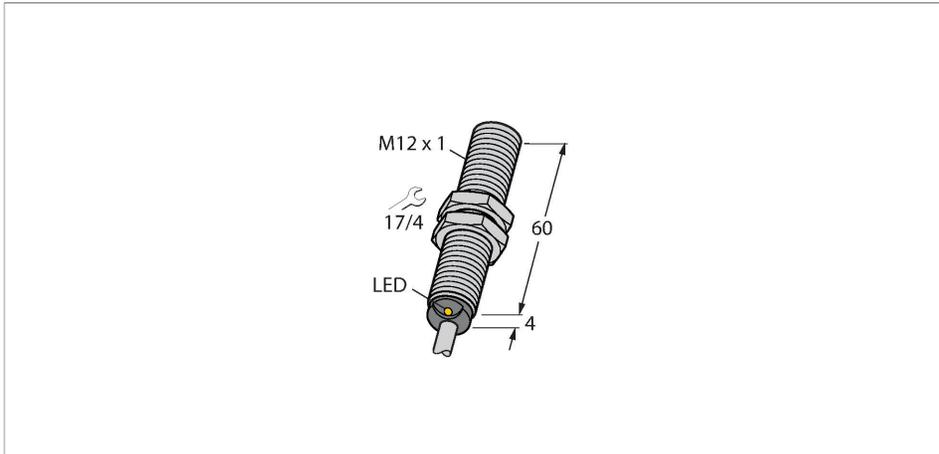


# BI4-G12-RDZ32X Inductive Sensor



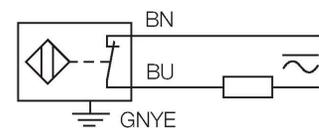
## Technical data

Type	BI4-G12-RDZ32X
ID	42050891
<b>General data</b>	
Rated switching distance	4 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	$\leq 2$ % of full scale
Hysteresis	3...15 %
<b>Electrical data</b>	
Operating voltage $U_b$	20...250 VAC
Operating voltage $U_b$	10...300 VDC
AC rated operational current	$\leq 100$ mA
DC rated operating current $I_o$	$\leq 100$ mA
Frequency	$\geq 50 \dots \leq 60$ Hz
Residual current	$\leq 1.7$ mA
Isolation test voltage	1.5 kV
Surge current	$\leq 3$ A ( $\leq 20$ ms max. 5 Hz)
Short-circuit protection	yes/Latching
Voltage drop at $I_o$	$\leq 6$ V
Wire break/reverse polarity protection	yes/Complete
Output function	2-wire, NC contact, 2-wire
Smallest operating current	$\geq 3$ mA

## Features

- Threaded barrel, M12 x 1
- Chrome-plated brass
- AC 2-wire, 20...250 VAC
- DC 2-wire, 10...300 VDC
- NC contact
- Cable connection

## Wiring diagram



## Functional principle

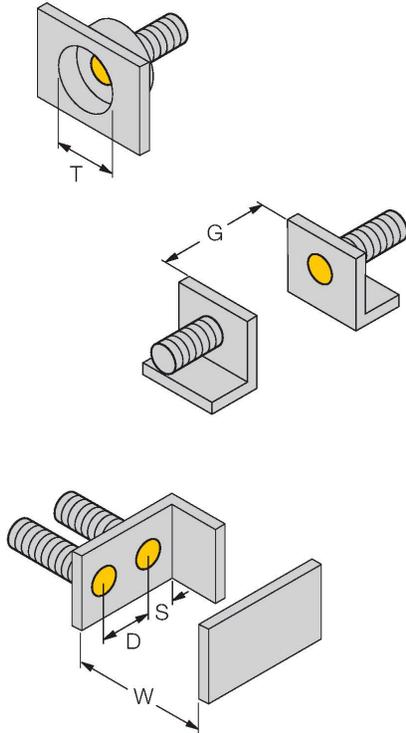
Inductive sensors detect metal objects contactless and wear-free. For this, they use a high-frequency electromagnetic AC field that interacts with the target. Inductive sensors generate this field via an RLC circuit with a ferrite coil.

## Technical data

Switching frequency	0.02 kHz
<b>Mechanical data</b>	
Design	Threaded barrel, M12 x 1
Dimensions	64 mm
Housing material	Metal, CuZn, Chrome-plated
Active area material	Plastic, PA12-GF30
End cap	Plastic, EPTR
Max. tightening torque of housing nut	10 Nm
Electrical connection	Cable
Cable quality	Ø 5.2 mm, LifYY, PVC, 2 m
Core cross-section	3 x 0.5 mm <sup>2</sup>
<b>Environmental conditions</b>	
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



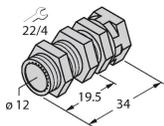
Distance D	2 x B
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn
Diameter active area B	Ø 12 mm

## Accessories

QM-12

6945101

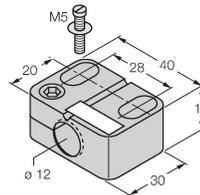
Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M16 x 1. Note: The switching distance of the proximity switches may change when using quick-mount brackets.



BST-12B

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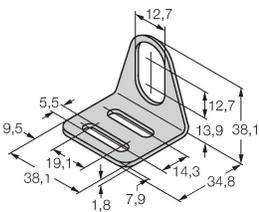
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6



MW12

6945003

Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)



BSS-12

6901321

Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene

