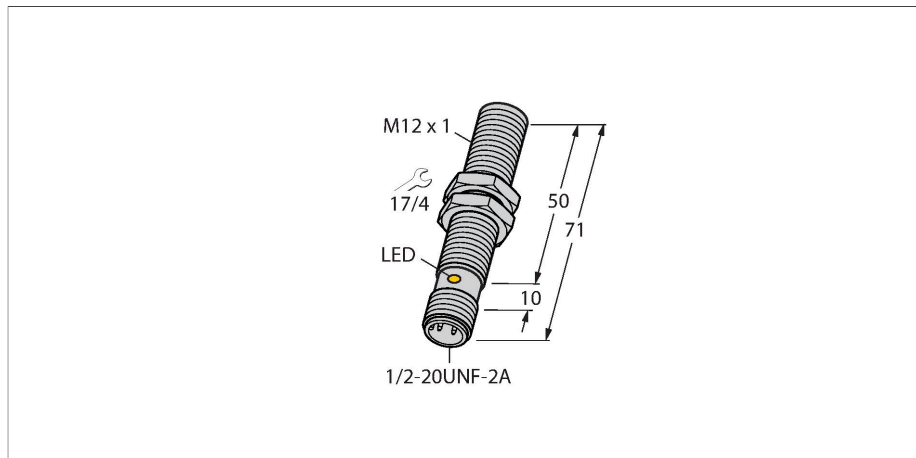


# BI2U-G12-ADZ32X-B3131

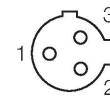
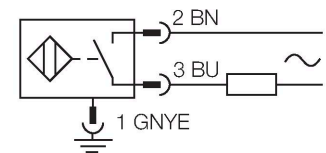
## Inductive Sensor



### Features

- Threaded barrel, M12 x 1
- Chrome-plated brass
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- Extended temperature range
- High switching frequency
- AC 2-wire, 20...250 VAC
- DC 2-wire, 10...300 VDC
- NO contact
- 1/2" male connector

### Wiring diagram



### Functional principle

Inductive sensors are designed for wear-free and contactless detection of metal objects. Approx Factor 1 sensors have significant advantages due to their patented ferrite-coreless multi-coil system. They detect all metals at the same large switching distance and are resistant to magnetic fields.

### Technical data

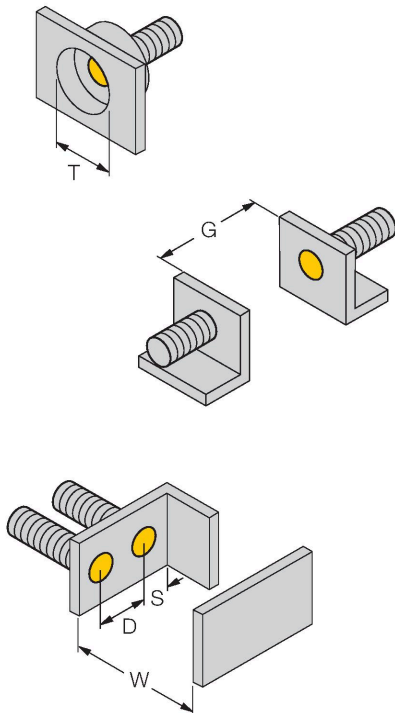
Type	BI2U-G12-ADZ32X-B3131
ID	4281005
<b>General data</b>	
Rated switching distance	2 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Repeat accuracy	$\leq 2\%$ of full scale
Temperature drift	$\leq \pm 10\%$
	$\leq \pm 15\%$ , $\leq -25\text{ °C}$ v $\geq +70\text{ °C}$
Hysteresis	3...15 %
<b>Electrical data</b>	
Operating voltage	20...250 VAC
Operating voltage	10...300 VDC
AC rated operational current	$\leq 100\text{ mA}$
DC rated operational current	$\leq 100\text{ mA}$
Frequency	$\geq 50\text{...}\leq 60\text{ Hz}$
Residual current	$\leq 1.7\text{ mA}$
Isolation test voltage	$\leq 1.5\text{ kV}$
Surge current	$\leq 1\text{ A}$ ( $\leq 10\text{ ms max. } 5\text{ Hz}$ )
Short-circuit protection	yes / Latching
Voltage drop at $I_s$	$\leq 6\text{ V}$
Wire breakage/Reverse polarity protection	yes / Complete
Output function	2-wire, NO contact, 2-wire
DC field stability	300 mT
AC field stability	300 mT <sub>ss</sub>
Smallest operating current	$\geq 3\text{ mA}$

## Technical data

Insulation class	□
Switching frequency	0.01 kHz
<b>Mechanical data</b>	
Design	Threaded barrel, M12 x 1
Dimensions	71 mm
Housing material	Metal, CuZn, Chrome-plated
Active area material	Plastic, PBT-GF30
Max. tightening torque of housing nut	10 Nm
Electrical connection	Connector, 1/2"
<b>Environmental conditions</b>	
Ambient temperature	-30...+85 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP68
MTTF	874 years acc. to SN 29500 (Ed. 99) 40 °C
Switching state	LED, Yellow

## Mounting instructions

### Mounting instructions/Description



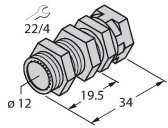
Distance D	2 x B
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn
Diameter active area B	Ø 12 mm

## Accessories

QM-12

6945101

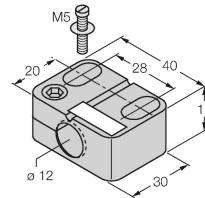
Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M16 × 1. Note: The switching distance of the proximity switches may change when using quick-mount brackets.



BST-12B

6947212

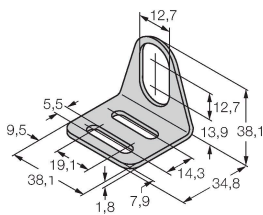
Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6



MW-12

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

