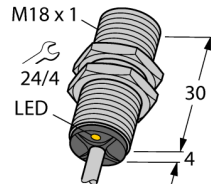


Inductive sensor BI5-G18-Y2X 7M

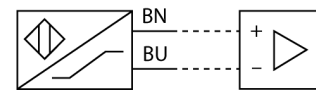
TURCK

Industrial
Automation



- ATEX category I M1, mining
- Threaded barrel, M18 x 1
- Chrome-plated brass
- DC 2-wire, nom. 8.2 VDC
- Output acc. to DIN EN 60947-5-6 (NAMUR)
- Cable connection

Wiring diagram



Type code	BI5-G18-Y2X 7M
Ident no.	4015501
Rated operating distance Sn	5 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
Temperature drift	10 %
Hysteresis	1...10 %
Ambient temperature	-25...+70 °C
Output function	2-wire, NAMUR
Switching frequency	1 kHz
Voltage	Nom. 8.2 VDC
Non-actuated current consumption	≥ 2.1 mA
Actuated current consumption	≤ 1.2 mA
Approval acc. to	BVS 04 ATEX E 202
Internal capacitance (C) / inductance (L)	150 nF / 150 μ H
Device designation	IM1 Ex ia I (max. $U_i = 15$ V, $I_i = 60$ mA, $P_i = 200$ mW)
Design	threaded barrel, M18 x 1
Dimensions	34 mm
Housing material	metal, CuZn, chrome-plated
Material active area	Plastic, PA
End cap	Plastic, EPTR
Max. tightening torque housing nut	25 Nm
Connection	cable
Cable quality	5.2 mm, blue, LifYY, PVC, 7 m
Cable cross section	2 x 0.34 mm ²
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
MTTF	6198 years acc. to SN 29500 (Ed. 99) 40 °C
Switching state	LED yellow

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.

**Inductive sensor
BI5-G18-Y2X 7M**

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 18 mm

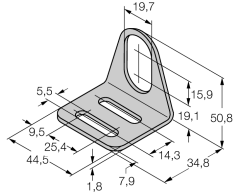
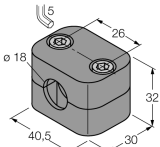
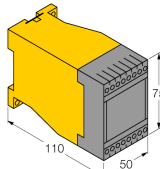


**Inductive sensor
BI5-G18-Y2X 7M**

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Accessories

Type code	Ident no.	Description	Dimension drawing
MW-18	6945004	Mounting bracket for threaded barrel devices; material: Stainless steel A2 1.4301 (AISI 304)	 <p>Technical drawing of a stainless steel mounting bracket. Dimensions include: 19.7 (width of the top loop), 15.9 (height of the loop), 50.8 (total height), 19.1 (width of the base), 34.8 (width of the base), 14.3 (width of the mounting hole), 7.9 (width of the mounting hole), 1.8 (thickness of the base), 44.5 (total width), 25.4 (width of the mounting hole), 9.5 (width of the mounting hole), and 5.5 (width of the mounting hole).</p>
BSS-18	6901320	Mounting bracket for smooth and threaded barrel devices; material: Polypropylene	 <p>Technical drawing of a polypropylene mounting bracket. Dimensions include: 26 (width of the top), 32 (height), 30 (width of the base), 40.5 (total width), and 18 (diameter of the mounting hole).</p>
MS13-22EX0-R	5322203		 <p>Technical drawing of a yellow mounting bracket. Dimensions include: 110 (width), 75 (height), and 50 (width of the base).</p>

Inductive sensor

BI5-G18-Y2X 7M

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Operating manual

Intended use

This device fulfills the directive 94/9/EC and is suited for use in explosion hazardous areas according to EN 60079-0 (2006), EN 60079-11 (2007) and EN 50303 (2000).

In order to ensure correct operation to the intended purpose it is required to observe the national regulations and directives.

For use in explosion hazardous areas conform to classification

I M 1 (Group I, Category M 1, electrical equipment for mining).

Marking (see device or technical data sheet)

⊕ I M 1 and Ex ia I acc. to EN 60079-11

Installation / Commissioning

These devices may only be installed, connected and operated by trained and qualified staff. Qualified staff must have knowledge of protection classes, directives and regulations concerning electrical equipment designed for use in explosion hazardous areas.

Please verify that the classification and the marking on the device comply with the actual application conditions.

This device is only suited for connection to approved Exi circuits compliant to EN60079-0 and -11. Please observe the maximum admissible electrical values.

After connection to other circuits the sensor may no longer be used in Exi installations. When interconnected to (associated) electrical equipment, it is required to perform the "Proof of intrinsic safety" (EN60079-14).

Installation and mounting instructions

Avoid static charging of cables and plastic devices. Please only clean the device with a damp cloth. Do not install the device in a dust flow and avoid build-up of dust deposits on the device.

If the devices and the cable could be subject to mechanical damage, they must be protected accordingly. They must also be shielded against strong electro-magnetic fields.

The pin configuration and the electrical specifications can be taken from the device marking or the technical data sheet.

In order to avoid contamination of the device, please remove possible blanking plugs of the cable glands or connectors only shortly before inserting the cable or opening the cable socket.

service / maintenance

Repairs are not possible. The approval expires if the device is repaired or modified by a person other than the manufacturer. The most important data from the approval are listed.