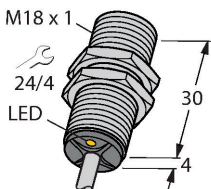


# BI5-G18-Y2X 7M

## Inductive Sensor



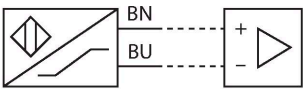
### Technical data

Type	BI5-G18-Y2X 7M
ID	4015501
General data	
Rated switching distance	5 mm
Mounting conditions	Flush
Secured operating distance	≤ (0.81 × S <sub>n</sub> ) mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeat accuracy	≤ 2 % of full scale
Temperature drift	≤ ±10 %
Hysteresis	1...10 %
Electrical data	
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 <sub>i</sub> )/inductance (L <sub>i</sub> )	150 nF/150 μH
Device marking	EX IM1 Ex ia I (max. U <sub>i</sub> = 15 V, I <sub>i</sub> = 60 mA, P <sub>i</sub> = 200 mW)
Mechanical data	
Design	Threaded barrel, M18 x 1
Dimensions	34 mm
Housing material	Metal, CuZn, Chrome-plated
Active area material	Plastic, PA12-GF30
End cap	Plastic, EPTR

### Features

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

### 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

Max. tightening torque of housing nut	25 Nm
Electrical connection	Cable
Cable quality	Ø 5.2 mm, Blue, LifYY, PVC, 7 m
Core cross-section	2 x 0.34 mm <sup>2</sup>
Environmental conditions	
Ambient temperature	-25...+70 °C
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

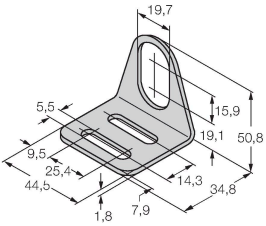
Mounting instructions

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 18 mm

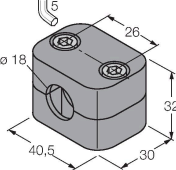
Accessories

MW186945004



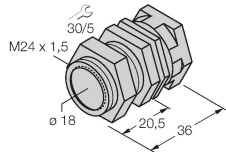
Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)

BSS-186901320



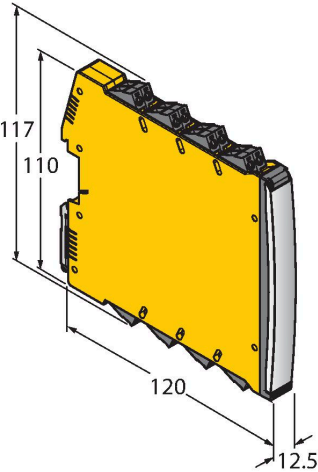
Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene

QM-186945102




Quick-mount bracket with dead-stop; material: Chrome-plated brass. Male thread M24 × 1.5. Note: The switching distance of the proximity switches may change when using quick-mount brackets.

Accessories

Dimension drawing	Type	ID	
	IMX12-DI01-2S-2T-0/24VDC	7580020	Isolating switching amplifier, 2-channel; SIL2 acc. to IEC 61508; Ex-proof version; 2 transistor outputs; input Namur signal; ON/OFF switchable monitoring of wire-break and short-circuit; toggle between NO/NC mode; signal doubling; removable screw terminals; 12.5 mm wide; 24 VDC power supply

## Instructions for use

Intended use	This device fulfills the directive 2014/34/EC and is suited for use in explosion hazardous areas according to EN 60079-0 (2012), EN 60079-11 (2012) 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 according to EN 60079-0 and EN 60079-11. 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.