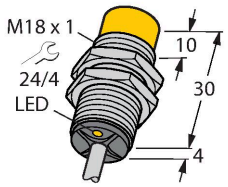
NI10-G18-Y1X
Inductive Sensor



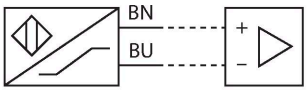
Technical data

Type	NI10-G18-Y1X
Ident. no.	40151
Rated switching distance	10 mm
Mounting conditions	Non-flush
Secured operating distance	≤ (0.81 × Sn) 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 %
Ambient temperature	-25…+70 °C
Output function	2-wire, NAMUR
Switching frequency	0.5 kHz
Voltage	Nom. 8.2 VDC
Non-actuated current consumption	≥ 2.1 mA
Actuated current consumption	≤ 1.2 mA
Approval acc. to	KEMA 02 ATEX 1090X
Internal capacitance (C_i)/inductance (L_i)	150 nF/150 µH
Device marking	Ⓔx II 1 G Ex ia IIC T6 Ga/II 1 D Ex ia IIIC T115 °C Da
	(max. U_i = 20 V, I_i = 20 mA, P_i = 200 mW)
Design	Threaded barrel, M18 × 1
Dimensions	34 mm
Housing material	Metal, CuZn, Chrome-plated
Active area material	Plastic, PA12-GF30

Features

- 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
- ATEX category II 1 G, Ex zone 0
- ATEX category II 1 D, Ex zone 20
- SIL2 (Low Demand Mode) acc. to IEC 61508, PL c acc. to ISO 13849-1 at HFT0
- SIL3 (All Demand Mode) acc. to IEC 61508, PL e acc. to ISO 13849-1 with redundant configuration HFT1

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.

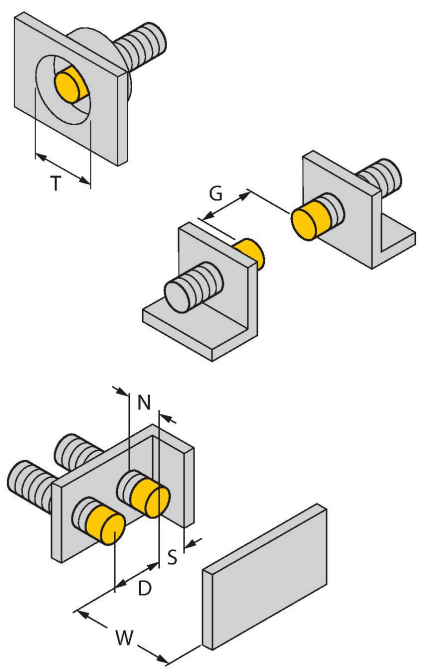
NI10-G18-Y1X | 05/27/2020 11-57 | technical changes reserved

Technical data

End cap	Plastic, EPTR
Max. tightening torque housing nut	25 Nm
Electrical connection	Cable
Cable quality	Ø 5.2 mm, Blue, LifYY, PVC, 2 m
Core cross-section	2 x 0.34 mm²
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

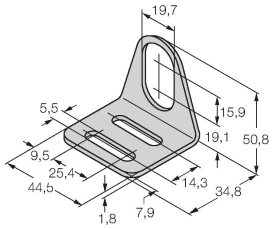


Distance D	3 x B
Distance W	3 x Sn
Distance T	3 x B
Distance S	1.5 x B
Distance G	6 x Sn
Distance N	2 x Sn
Diameter active area B	Ø 18 mm

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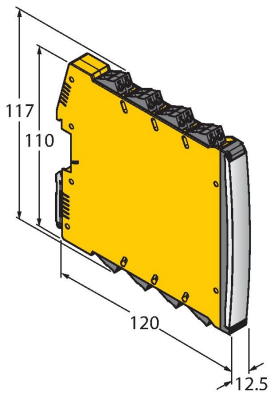
Accessories

MW18	6945004



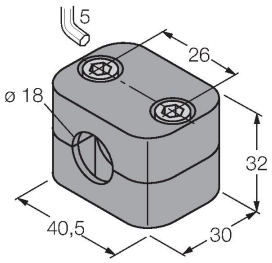
Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)

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

BSS-18	6901320



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

NI10-G18-Y1X | 05/27/2020 11-57 | technical changes reserved

Operating Instructions

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 + A11 and EN 60079-11:2012.Further it is suited for use in safety-related systems, including SIL2 as per IEC 61508.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

II 1 G and II 1 D (Group II, Category 1 G, electrical equipment for gaseous atmospheres and category 1 D, electrical equipment for dust atmospheres).

Marking (see device or technical data sheet)

Ex II 1 G and Ex ia IIC T6 Ga acc. to EN60079-0 and -26 and Ex II 1 D Ex ia IIIC T115°C Da acc. to EN60079-0

Local admissible ambient temperature

-25…+70 °C

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).Attention! When used in safety systems, all content of the security manual must be observed.

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.

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.

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NI30U-M30-AN6X-H1141 RKM 30-2M BIM-IKT-AP6X FS 4.4-0.5/14.5/NPT BI30U-CP40-AP6X2
C9-A41BX/024VADC IM31-22EX-I NI10-G18-AZ3X-B1431 50MM TX1-Q20L60 BI10-M30-AP6X-H1141
BI10U-Q14-AP6X2-V1131 Bi5-G18-Y1X NI10U-M12-AP6X BI4-M12-AN6X-H1141
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NI10U-M12E-AP6X-H1141 NI12U-S18-AP6X RKC8T-2/TXL RK 4T-4/S618 6936233
BIM-IKM-AP6X2-H1141/S34 W/KLI-3 NI 4U-Q8SE-AP6X