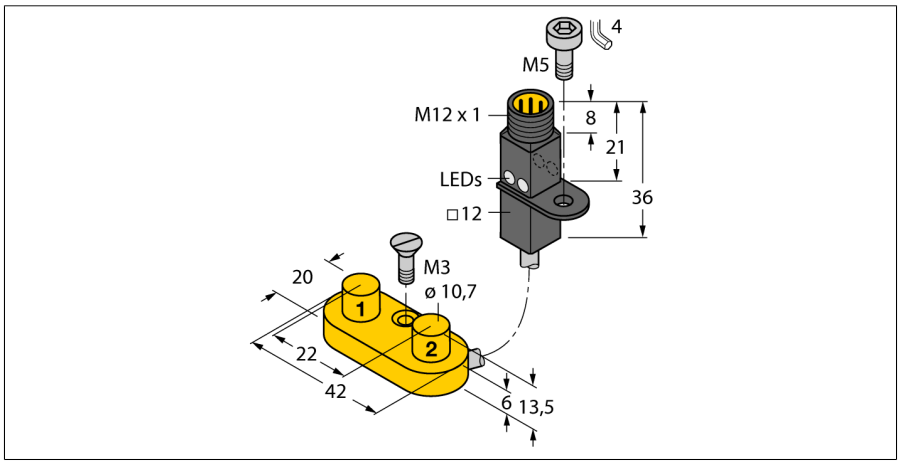
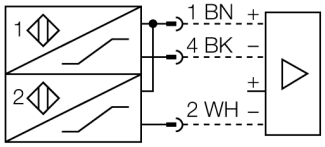
Inductive sensor
NI11,5-DS13,5-0,035-BM-2AY1X2-H1140 E07030171



- **ATEX category II 2 G, Ex Zone 1**
- **DS13.5 pig detector with two sensors and LEDs**
- **Plastic, PA12-GF30**
- **Oscillation frequency 1**
- **DC 2-wire, nom. 8.2 VDC**
- **2 outputs acc. to DIN EN 60947-5-6 (NAMUR)**
- **Output with square-wave signal**
- **NO contact**
- **M12 x 1 male connector**

Wiring diagram



Functional principle

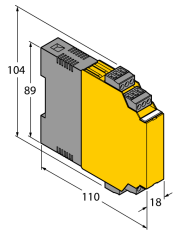
Inductive sensors detect metal objects contactless and wear-free. For this, they use a high-frequency electromagnetic AC field that interacts with the target. Inductive sensors generate this field via an RLC circuit with a ferrite coil.

Type code	NI11,5-DS13,5-0,035-BM-2AY1X2-H1140 E07030171
Ident no.	1050007
Customer-specific print	Dürr E0703 0171
Rated switching distance Sn	11.5 mm
Mounting conditions	non-flush
Assured switching distance	≤ (0,81 x Sn) mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeatability	≤ 2 % of full scale
Temperature drift	≤ ± 10 %
Hysteresis	1…2 %
Ambient temperature	0…+40 °C
Output function	3-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 04 ATEX 1152 X
Internal capacitance (C_i) / inductance (L_i)	360 nF / 700 µH
Device designation	Ex II 2 G Ex ia IIC T6 (max. U_i = 20 V, I_i = 60 mA, P_i = 200 mW)
Construction	rectangular, DS13.5
Dimensions	42 x 20 x 13.5 mm
Housing material	metal, PA
Material active area	plastic, PA
Connector housing	metal, CuZn, chrome-plated
Connection	male, M12 x 1
Cable quality	5.2 mm, blue, LifYY, PVC, 0.035m
Cable cross section	4 x 0.34 mm^2
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
IP Rating	IP67
MTTF	6198 years acc. to SN 29500 (Ed. 99) 40 °C
Switching state	LED yellow / red

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Accessories

Type code	Ident no.	Description	Design
IM1-22EX-R	7541231	Isolating switching amplifier, 2-channel; 2 relay outputs; input NAMUR signal; selectable ON/OFF mode for wire-break and short-circuit monitoring; adjustable output mode (NO / NC mode); removable terminal blocks; width 18 mm; universal power supply unit	

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Industrial Automation

Operating manual

Intended use

This device fulfills the directive 94/9/EC and is suited for use in explosion hazardous areas according to EN60079-0:2009, -11:2012 and -26:2007.
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 2 G (Group II, Category 2 G, electrical equipment for gaseous atmospheres).

Marking (see device or technical data sheet)

Ex II 2 G and Ex ia IIC T6 acc. to EN60079-0, -11 and -26

Local admissible ambient temperature

0…+40 °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 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.

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