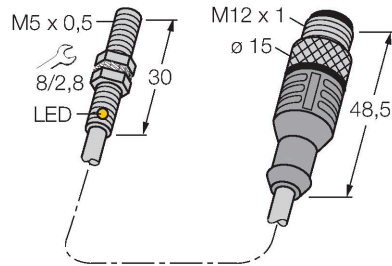


BI1-EG05-Y1-0.2-RS 4.21T

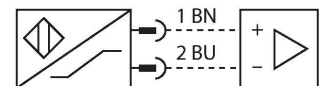
Inductive sensor



Features

- M5 × 0.5 threaded barrel
- Stainless steel, 1.4301
- DC 2-wire, nom. 8.2 VDC
- Output acc. to DIN EN 60947-5-6 (NAMUR)
- Cable with connector, M12 × 1
- 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.

Technical data

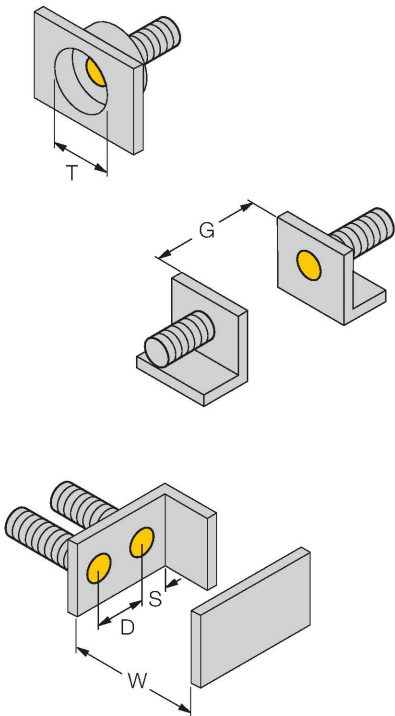
Type	BI1-EG05-Y1-0.2-RS 4.21T
Ident. no.	1003295
Rated switching distance	1 mm
Mounting conditions	Flush
Secured operating distance	≤ (0,81 × S _n) mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeat accuracy	≤ 2 % of full scale
Temperature drift	≤ ± 10 %
Hysteresis	1...10 %
Ambient temperature	-25...+70 °C
Output function	2-wire, NAMUR
Switching frequency	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	Ⓔ II 1 G Ex ia IIC T6 Ga/II 1 D Ex ia IIC T95 °C Da (max. U _i = 20 V, I _i = 60 mA, P _i = 80 mW)
Design	Threaded barrel, M5 × 0.5
Dimensions	30 mm
Housing material	Stainless steel, 1.4427 SO
Material coupling nut	metal, CuZn, nickel-plated
Max. tightening torque housing nut	5 Nm
Electrical connection	Cable with connector, M12 × 1
Cable quality	Ø 3 mm, Blue, Lif9YYW, PVC, 0.2 m

Technical data

Core cross-section	2 x 0.14 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

Mounting instructions

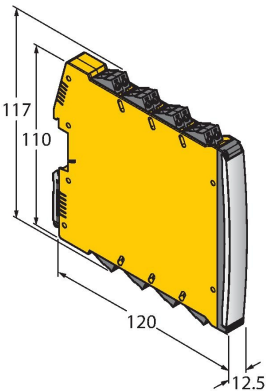
Mounting instructions/Description



Distance D	2 x B
Distance T	3 x B
Diameter active area B	Ø 5 mm

Accessories

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