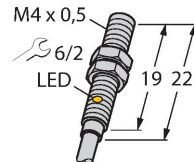


BI1-EG04-AN6X

Inductive Sensor



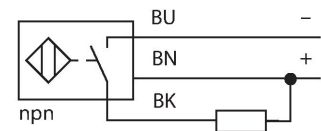
Technical data

Type	BI1-EG04-AN6X
ID	1619328
General data	
Rated switching distance	1 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Correction factors	St37 = 1; Al = 0.5; Cu=0.45; stainless steel = 0.8; Ms = 0.6
Repeat accuracy	$\leq 2 \%$ of full scale
Temperature drift	$\leq \pm 10 \%$
Hysteresis	3...15 %
Electrical data	
Operating voltage U_B	10...30 VDC
Ripple U_{rs}	$\leq 20 \%$ U_{Bmax}
DC rated operating current I_o	≤ 100 mA
No-load current	≤ 10 mA
Residual current	≤ 0.1 mA
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic
Voltage drop at I_o	≤ 2 V
Wire break/reverse polarity protection	yes/Complete
Output function	3-wire, NO contact, NPN
Switching frequency	3 kHz

Features

- Threaded barrel, M4 × 0.5
- Stainless steel, 1.4305
- DC 3-wire, 10...30 VDC
- NO contact, NPN output
- Cable connection

Wiring diagram



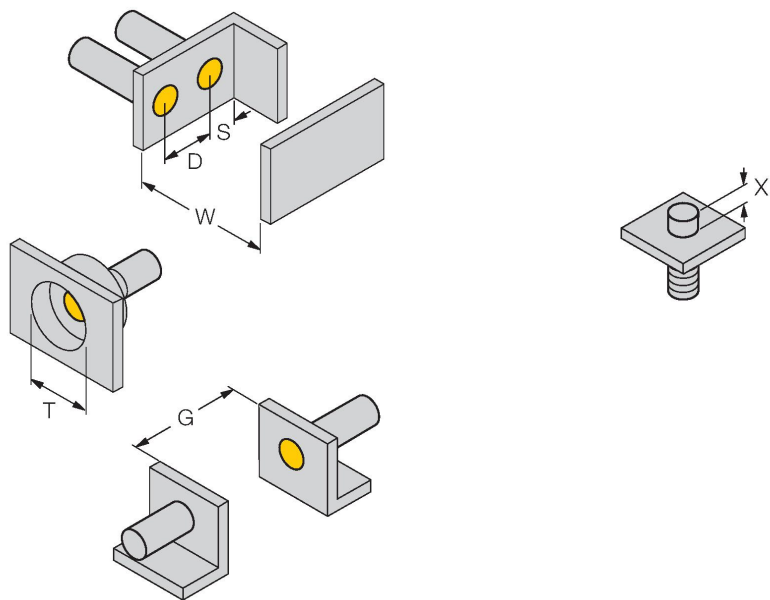
Functional principle

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

Mechanical data	
Design	Threaded barrel, M4 x 0.5
Dimensions	22 mm
Housing material	Stainless steel, 1.4427 SO
Active area material	Plastic, Polyester
Max. tightening torque of housing nut	0.8 Nm
Electrical connection	Cable
Cable quality	Ø 2.6 mm, LiFY-11Y, PUR
Core cross-section	3 x 0.055 mm ²
Environmental conditions	
Ambient temperature	-25...+70 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
MTTF	2283 years acc. to SN 29500 (Ed. 99) 40 °C
Switching state	Flashes within the limits (>0.8 Sn)

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
	9 x Sn
	Diameter active area B
	Ø 4 mm

The sensor can be flush-mounted in non-ferromagnetic material.
When mounted in ferromagnetic material the distance X must be observed.

Distance X: 1.0 mm