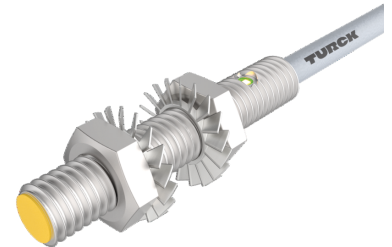
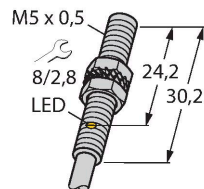


BI1U-EG05-AP6X

Inductive Sensor



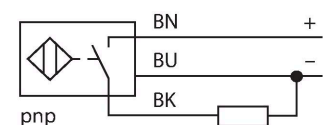
Technical data

Type	BI1U-EG05-AP6X
ID	4602116
General data	
Rated switching distance	1 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Repeat accuracy	$\leq 2 \%$ of full scale
Temperature drift	$\leq \pm 10 \%$
	$\leq \pm 20 \%, \leq 0^\circ \text{C}$
Hysteresis	3...15 %
Electrical data	
Operating voltage U_B	10...30 VDC
Ripple U_{ss}	$\leq 10 \%$ U_{Bmax}
DC rated operating current I_o	≤ 100 mA
No-load current	≤ 20 mA
Residual current	≤ 0.1 mA
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic
Voltage drop at I_o	≤ 1.8 V
Wire break/reverse polarity protection	yes/Complete
Output function	3-wire, NO contact, PNP
DC field stability	200 mT
AC field stability	200 mT _{ss}
Switching frequency	2 kHz
Mechanical data	
Design	Threaded barrel, M5 x 0.5
Dimensions	30.2 mm

Features

- M5 x 0.5 threaded barrel
- Stainless steel, 1.4427 SO
- Factor 1 for all metals
- Resistant to magnetic fields
- Large switching distance
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- Cable connection

Wiring diagram



Functional principle

Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox3 sensors have significant advantages due to their patented multi-coil system. They excel thanks to their optimum switching distances, maximum flexibility and operational reliability as well as efficient standardization.

Technical data

Housing material	Stainless steel, 1.4427 SO
Active area material	PA12
Max. tightening torque of housing nut	5 Nm
Electrical connection	Cable
Cable quality	Ø 3 mm, LiFY-11Y, PUR, 2 m
Core cross-section	3 x 0.14 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	874 years acc. to SN 29500 (Ed. 99) 40 °C
Switching state	LED, Yellow

Mounting instructions

Mounting instructions/Description

The image contains three technical diagrams illustrating different mounting configurations for a sensor. Each sensor is represented as a rectangular block with a circular active area (highlighted in yellow) and a threaded mounting post.

- Top Diagram:** Shows a single sensor mounted on a surface. The dimension **T** is indicated as the distance from the mounting post to the edge of the sensor block.
- Middle Diagram:** Shows two sensors mounted on a surface. The dimension **G** is indicated as the distance between the mounting posts of the two sensors.
- Bottom Diagram:** Shows two sensors mounted on a surface. The dimensions **D**, **S**, and **W** are indicated:
 - D**: Distance from the mounting post to the edge of the sensor block.
 - S**: Distance between the mounting posts of the two sensors.
 - W**: Distance from the mounting post to the edge of the sensor block.

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 5 mm