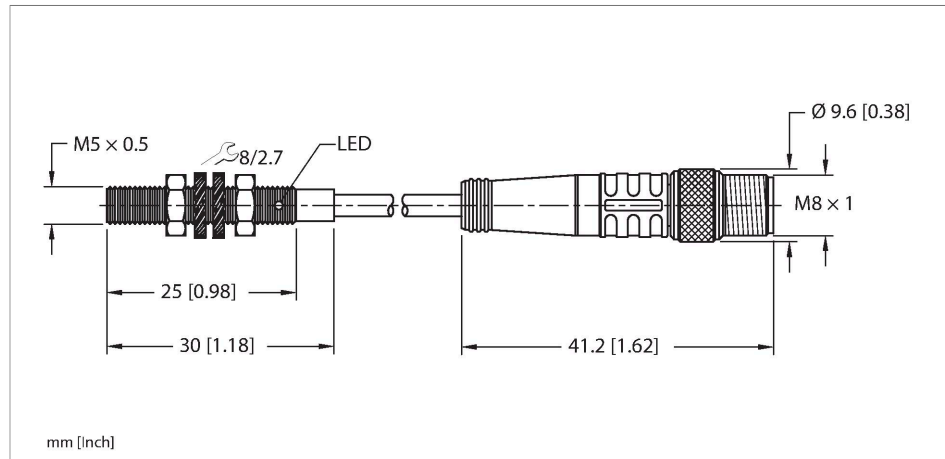


# BI1-EG05-RP6X-0.2-PSG3M

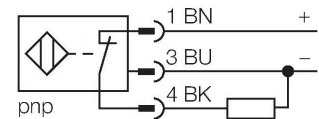
## Inductive Sensor



### Features

- Threaded barrel, M5 × 0.5
- Stainless steel, 1.4305 (AISI303)
- DC 3-wire, 10...30 VDC
- NC contact, PNP output
- Pigtail with male end M8 x 1

### Wiring diagram



### Technical data

Type	BI1-EG05-RP6X-0.2-PSG3M
ID	4609777
<b>General data</b>	
Rated switching distance	1 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeat accuracy	$\leq 2$ % of full scale
Hysteresis	10 %
<b>Electrical data</b>	
Operating voltage $U_B$	10...30 VDC
Ripple $U_{ss}$	$\leq 10$ % $U_{Bmax}$
DC rated operating current $I_o$	$\leq 100$ mA
No-load current	$\leq 15$ mA
Residual current	$\leq 0.1$ mA
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic
Voltage drop at $I_o$	$\leq 1.8$ V
Wire break/reverse polarity protection	yes/Complete
Output function	3-wire, NC contact, PNP
Switching frequency	3 kHz
<b>Mechanical data</b>	
Design	Threaded barrel, M5 x 0.5

### Functional principle

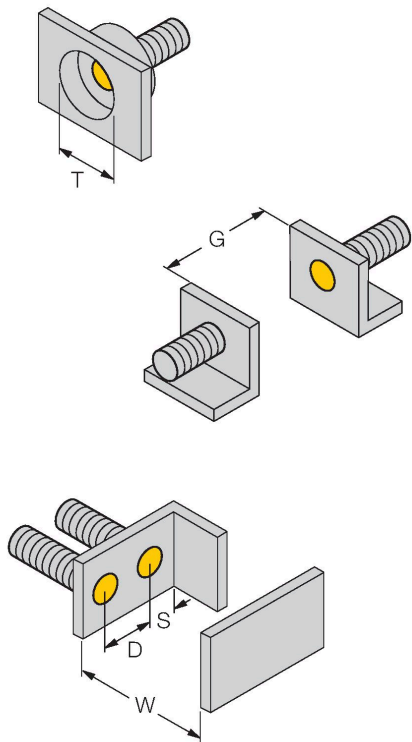
Inductive sensors detect metal objects contactless and wear-free. For this, they use a high-frequency electromagnetic AC field that interacts with the target. Inductive sensors generate this field via an RLC circuit with a ferrite coil.

Technical data

Dimensions	30 mm
Housing material	Stainless steel, 1.4305 (AISI 303)
Active area material	Plastic, PA6.6
Material coupling nut	CuZn, nickel-plated
Max. tightening torque of housing nut	2.5 Nm
Electrical connection	Cable with connector, M8 × 1
Cable quality	Ø 3.3 mm, Gray, LiFY-11Y, PUR, 0.2 m
Core cross-section	3 x 0.14 mm <sup>2</sup>
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	LED, Yellow

Mounting instructions

Mounting instructions/Description
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Distance D	3 × B
Distance W	3 × Sn
Distance T	3 × B
Distance S	1.5 × B
Distance G	6 × Sn
Diameter active area B	Ø 5 mm

BI1-EG05-RP6X-0.2-PSG3M| 02/21/2025 14-03 | technical changes reserved