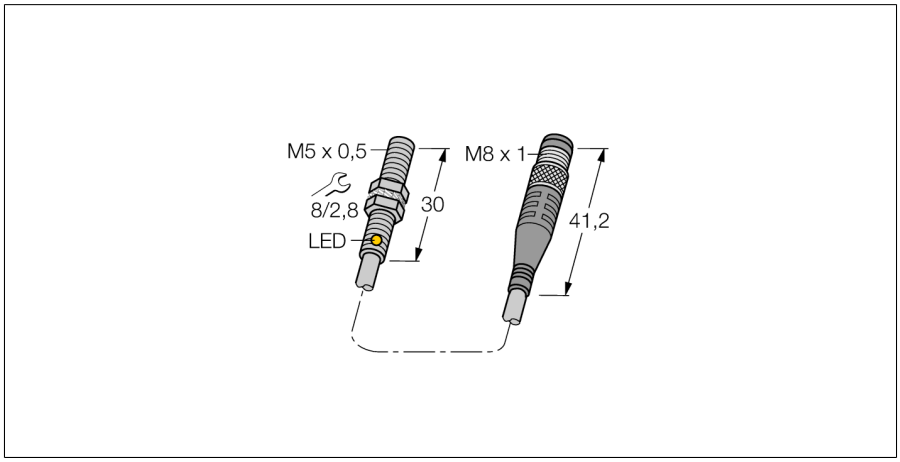
Inductive Sensor
BI1-EG05-AP6X-0.5-PSG3M/S90



- Threaded barrel, M5 x 0.5
- Stainless steel, 1.4427 SO
- DC 3-wire, 10…30 VDC
- NO contact, PNP output
- M8 x 1 male connector

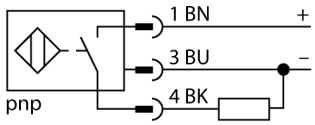
Type	BI1-EG05-AP6X-0.5-PSG3M/S90
ID	4609742

General data	
Rated switching distance Sn	1 mm
Mounting conditions	Flush
Secured operating distance	≤ (0.81 × Sn) 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	3…15 %

Electrical data	
Operating voltage U_B	10…30 VDC
Ripple U_{ss}	≤ 10 % U_{Bmax}
DC rated operating current I_e	≤ 100 mA
Residual current	≤ 0.1 mA
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic
Voltage drop at I_e	≤ 1.8 V
Wire break/reverse polarity protection	yes/Complete
Output function	3-wire, NO contact, PNP
Switching frequency	3 kHz

Mechanical data	
Design	Threaded barrel, M5 x 0.5
Dimensions	30 mm
Housing material	Stainless steel, 1.4427 SO
Active area material	Plastic, PA12
Material coupling nut	metal, CuZn, nickel-plated
Max. tightening torque of housing nut	5 Nm
Electrical connection	Connector, M8 × 1
Cable quality	Ø 2 mm, Gray, Lif9Y-11Y, PUR, 0.5 m
Core cross-section	3 x 0.08 mm²
Litz wire	40x0.05mm

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.

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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

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