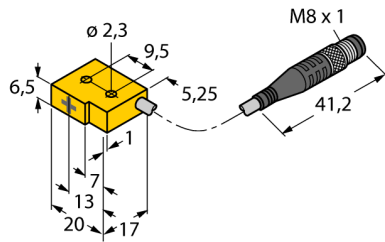


Inductive Sensor

Resistant to Magnetic Fields

BI1-Q6.5-AP6-0.4-PSG3M/S34



Type	BI1-Q6.5-AP6-0.4-PSG3M/S34
ID	4613415

Special version	S34 corresponds to: Resistant to magnetic fields
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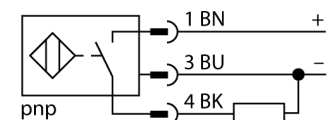
General data	
Rated switching distance S_n	1 mm
Mounting conditions	Flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeat accuracy	≤ 2 % of full scale
Temperature drift	$\leq \pm 10$ %
Hysteresis	3...15 %

Electrical data	
Operating voltage	10...30 VDC
Residual ripple	≤ 10 % U_{ss}
DC rated operational current	≤ 150 mA
Residual current	≤ 0.1 mA
Isolation test voltage	≤ 0.5 kV
Short-circuit protection	yes/ Cyclic
Voltage drop at I_s	≤ 1.8 V
Wire breakage/Reverse polarity protection	yes/ Complete
Output function	3-wire, NO contact, PNP
Switching frequency	0.03 kHz

Mechanical data	
Design	Rectangular, Q6,5
Dimensions	20.2 x 17.2 x 6.5 mm
Housing material	Plastic, PP GR-20
Electrical connection	Cable with connector, M8 x 1
Cable quality	Ø 2 mm, Gray, Lif9Y-11Y, PUR, 0.4 m
Core cross-section	3 x 0.08 mm ²
Litz wire	40x0.05mm

- Rectangular, height 6.5 mm
- Active face, lateral
- Plastic, PP GR-20
- Resistant to magnetic fields (weld resistant), for DC and AC fields
- DC 3-wire, 10...30 VDC
- NO contact, PNP output
- Pigtail with male end M8 x 1

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.

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