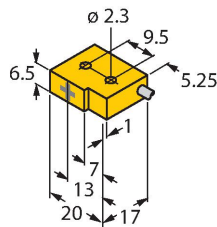


BI1-Q6.5-AP6/S34

Inductive Sensor – Resistant to Magnetic Fields



Features

- 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
- 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

Type	BI1-Q6.5-AP6/S34
ID	4613401
Special version	S34 corresponds to: Resistant to magnetic fields
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 = 0.1; stainless steel = 0.7; Ms = 0.25
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
No-load current	15 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 breakage/Reverse polarity protection	yes / Complete
Output function	3-wire, NO contact, PNP
Switching frequency	0.03 kHz
Mechanical data	
Design	Rectangular, Q6,5

Technical data

Dimensions	20.2 x 17.2 x 6.5 mm
Housing material	Plastic, PP GR-20
Active area material	PP GR-20
Electrical connection	Cable
Cable quality	Ø 2 mm, Gray, Lif9Y-11Y, PUR, 2 m
Core cross-section	3 x 0.08 mm ²
Litz wire	40 x0.05 mm
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

Mounting instructions

Mounting instructions/Description

The diagram illustrates the mounting dimensions for the sensor. The top view shows a yellow sensor block mounted on a grey plate. Dimension B is the width of the sensor. Dimension D is the height of the sensor. Dimension S is the depth of the sensor. Dimension W is the width of the mounting plate. The bottom view shows the sensor mounted on a grey plate, with dimension G indicating the height of the mounting plate.

Distance D	2 x B
Distance W	3 x Sn
Distance S	1 x B
Distance G	6 x Sn
Width active area	6.5 mm
B	

Note for installation in ST37:
4-side flush mounting is not possible