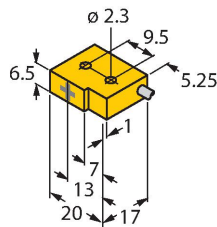


BI1-Q6.5-AP6/S34

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	$\leq (0.81 \times S_n) \text{ mm}$
Correction factors	St37 = 1; Al = 0.1; stainless steel = 0.7; Ms = 0.25
Repeat accuracy	$\leq 2 \%$ of full scale
Temperature drift	$\leq \pm 10 \%$
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	$\leq 150 \text{ mA}$
No-load current	$\leq 15 \text{ mA}$
Residual current	$\leq 0.1 \text{ mA}$
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic
Voltage drop at I_o	$\leq 1.8 \text{ V}$
Wire break/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

Technical data

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

This diagram shows a side view of a grey L-shaped mounting bracket with two yellow rectangular sensors. Dimension B is the width of the sensors. Dimension S is the height of the bracket's vertical flange. Dimension D is the distance between the centers of the two sensors. Dimension W is the total width of the bracket's base.

This diagram shows a front view of the mounting bracket assembly. Dimension G is the distance between the two vertical flanges of the bracket.

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