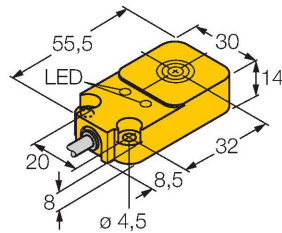


BI10-Q14-AN6X2

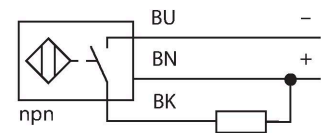
Inductive Sensor



Features

- Rectangular, height 14 mm
- Active face on top
- Plastic, PBT-GF30-V0
- DC 3-wire, 10...30 VDC
- NO contact, NPN output
- Cable connection

Wiring diagram



Technical data

Type	BI10-Q14-AN6X2
ID	1608320
General data	
Rated switching distance	10 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 U_B	10...30 VDC
Ripple U_{ss}	≤ 10 % U_{Bmax}
DC rated operating current I_B	≤ 200 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_B	≤ 1.8 V
Wire break/reverse polarity protection	yes/Complete
Output function	3-wire, NO contact, NPN
Switching frequency	0.25 kHz

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

Mechanical data	
Design	Rectangular, Q14
Dimensions	52 x 30 x 14 mm
Housing material	Plastic, PBT-GF30-V0
Active area material	PBT-GF30-V0
Electrical connection	Cable
Cable quality	Ø 5.2 mm, LiYY-11Y, PUR, 2 m
Core cross-section	3 x 0.34 mm ²
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
Power-on indication	LED, Green
Switching state	LED, Yellow

Mounting instructions

Mounting instructions/Description

Distance D	$1.5 \times B$
Distance W	$3 \times S_n$
Distance S	$1 \times B$
Distance G	$6 \times S_n$
Width active area B	30 mm

Accessories

MW-Q14/Q20

6945006

Mounting bracket for rectangular Q14 or Q20; material VA 1.4301

Technical drawing of the MW-Q14/Q20 mounting bracket. The drawing shows a 3D perspective view of the bracket, which is L-shaped. The vertical flange has a height of 69.5 mm and a width of 38 mm. The horizontal base has a width of 59.5 mm and a thickness of 1.5 mm. The bracket features a central rectangular cutout and several mounting holes. Dimensions for the mounting holes are given as 6 mm and 8 mm. A hole diameter of 5.3 mm is indicated. The material is specified as VA 1.4301.