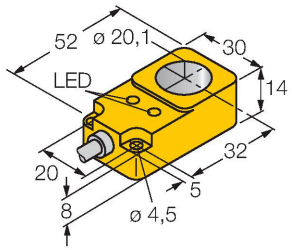
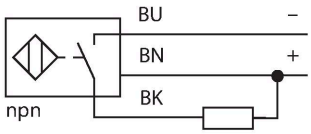
BI20R-Q14-AN6X2
Inductive Sensor – Ring Sensor



Features

- Rectangular, height 14 mm
- Plastic, PBT-GF30-V0
- Static output behaviour
- Output pulse length min. 100 ms
- DC 3-wire, 10…30 VDC
- NO contact, NPN output
- Cable connection

Wiring diagram



Functional principle

Inductive sensors detect metal objects contactless and wear-free. For this purpose they use a high-frequency electromagnetic AC field that interacts with the target. Inductive ring sensors generate this field through an LC resonant circuit. The target acts as the coil core.

Technical data

Type	BI20R-Q14-AN6X2
ID	1406320
General data	
Inside ring diameter D	20.1 mm
Steel ball diameter (DIN 5401)	≥ 4 mm
Fly-by speed	1…28 m/s
pulse stop	≥ 5 ms
Pulse duration at the ouput	≥ 100 ms ± 20 %
Electrical data	
Operating voltage U_B	10…30 VDC
Ripple U_{ss}	≤ 10 % U_{Bmax}
DC rated operating current I_e	≤ 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_e	≤ 1.8 V
Wire break/reverse polarity protection	yes/Complete
Output function	3-wire, NO contact, NPN
Switching frequency	0.008 kHz
Mechanical data	
Design	Ring sensor, Q14
Dimensions	52 x 30 x 14 mm
Housing material	Plastic, PBT-GF30-V0

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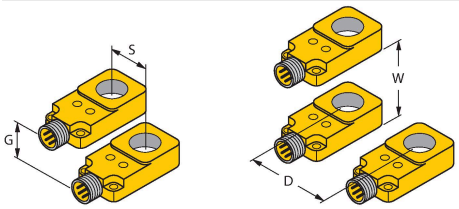
Technical data

Electrical connection	Cable
Cable quality	Ø 5.2 mm, LifYY-11Y, PUR, 2 m
Core cross-section	3 x 0.34 mm^2
Coil body	plastic, POM
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	45 mm
Distance W	45 mm
Distance S	14 mm
Distance G	30 mm

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