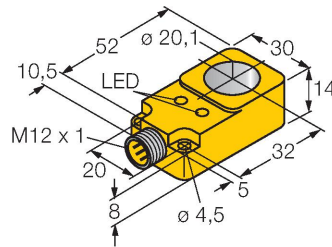


BI20R-Q14-AP6X2-H1141 Inductive Sensor – Ring Sensor



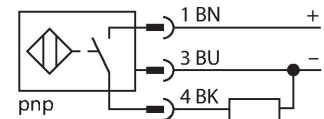
Technical data

Type	BI20R-Q14-AP6X2-H1141
ID	1407300
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 output	≥ 100 ms ± 20 %
Electrical data	
Operating voltage U_B	10...30 VDC
Ripple U_{rs}	≤ 10 % U_{Bmax}
DC rated operating current I_o	≤ 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_o	≤ 1.8 V
Wire break/reverse polarity protection	yes/Complete
Output function	3-wire, NO contact, PNP
Switching frequency	0.008 kHz
Mechanical data	
Design	Ring sensor, Q14
Dimensions	62.5 x 30 x 14 mm
Housing material	Plastic, PBT-GF30-V0

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, PNP output
- M12 x 1 male connector

Wiring diagram



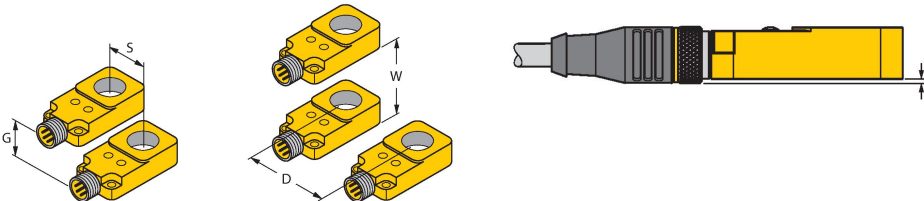
Functional principle

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

Electrical connection	Connector, M12 × 1
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

When mounting the sensor with an M12 connector, observe a low horizontal offset to the surface. This may vary depending on the choice of the connector.

Wiring accessories

Dimension drawing	Type	ID	
	RKC4T-2/TEL	6625010	Connection cable, M12 female connector, straight, 3-pin, cable length: 2 m, jacket material: PVC, black; cULus approval

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