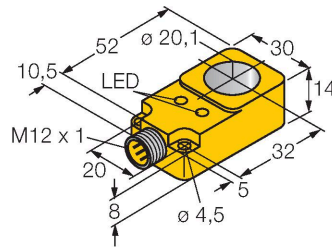


# BI20R-Q14-AP6X2-H1141

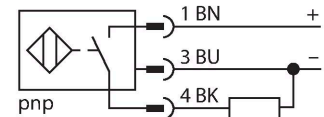
## Inductive Sensor – Ring Sensor



### 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, PNP output
- M12 x 1 male connector

### Wiring diagram



### Technical data

Type	BI20R-Q14-AP6X2-H1141
ID	1407300
<b>General data</b>	
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 %
<b>Electrical data</b>	
Operating voltage	10...30 VDC
Residual ripple	≤ 10 % U <sub>ss</sub>
DC rated operational current	≤ 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 <sub>o</sub>	≤ 1.8 V
Wire breakage/Reverse polarity protection	yes / Complete
Output function	3-wire, NO contact, PNP
Switching frequency	0.008 kHz
<b>Mechanical data</b>	
Design	Ring sensor, Q14
Dimensions	62.5 x 30 x 14 mm
Housing material	Plastic, PBT-GF30-V0

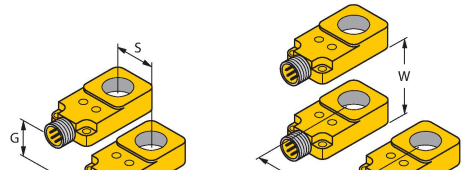
### Functional principle

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
<b>Environmental conditions</b>	
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, female M12, straight, 3-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see <a href="http://www.turck.com">www.turck.com</a>