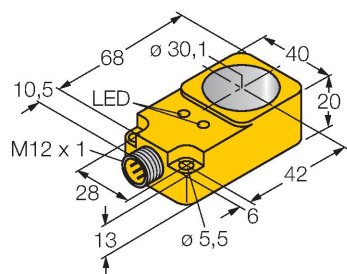


BI30R-Q20-AP6X2-H1141

Inductive Sensor – Ring Sensor



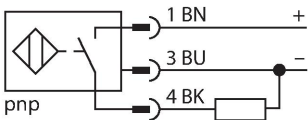
Technical data

Type	BI30R-Q20-AP6X2-H1141
ID	1407500
General data	
Inside ring diameter D	30.1 mm
Steel ball diameter (DIN 5401)	≥ 6 mm
Fly-by speed	40 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_{ss}	≤ 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, Q20
Dimensions	68 x 40 x 20 mm
Housing material	Plastic, PBT-GF30-V0
Electrical connection	Connector, M12 x 1
Coil body	plastic, POM

Features

- Rectangular, height 20 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



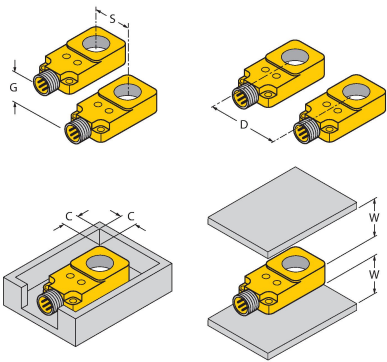
Functional principle

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

Environmental conditions	
Ambient temperature	-25...+70 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP65
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	55 mm
	Distance W	40 mm
	Distance S	20 mm
	Distance G	40 mm
	Distance C	0 mm

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