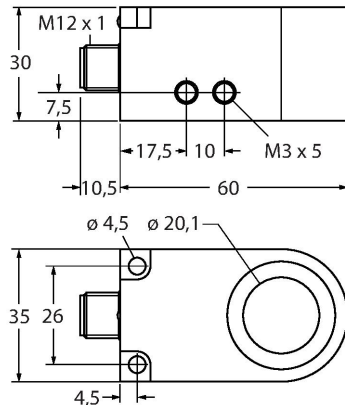


BI20R-W30-DAN6X-H1141

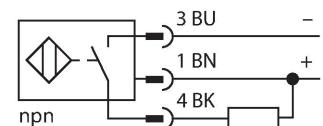
Inductive Sensor – Ring Sensor



Features

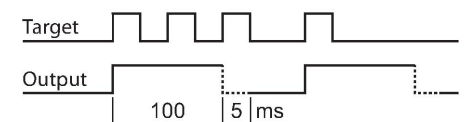
- Rectangular, height 30 mm
- Plastic, PA12-GF30
- Pulse duration 100 ms
- Sensitivity adjusted via potentiometer
- DC 3-wire, 10...30 VDC
- Dynamic output behaviour
- NO contact, NPN output
- M12 x 1 male connector

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.



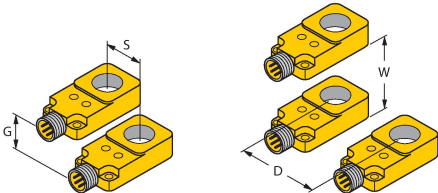
Technical data

Type	BI20R-W30-DAN6X-H1141
ID	14043
General data	
Inside ring diameter D	20.1 mm
Steel ball diameter (DIN 5401)	≥ 4 mm
Fly-by speed	0.1...50 m/s
pulse stop	≥ 5 ms
Pulse duration	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	≤ 10 mA
Residual current	≤ 0.1 mA
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Cyclic
Voltage drop at I_o	≤ 2.5 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, W30
Dimensions	60 x 35 x 30 mm
Housing material	Plastic, PA12-GF30
Electrical connection	Connector, M12 x 1
Coil body	plastic, POM

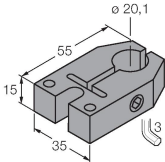
Technical data

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
Switching state	LED, Yellow

Mounting instructions

Mounting instructions/Description	
	Distance D 120 mm
	Distance W 120 mm
	Distance S 20 mm
	Distance G 120 mm

Accessories

BS-BI20R-W30	6900401
	
Mounting bracket for ring sensors for direct mounting on the pipe or tube; clamping range 19...20 mm; material: POM	

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