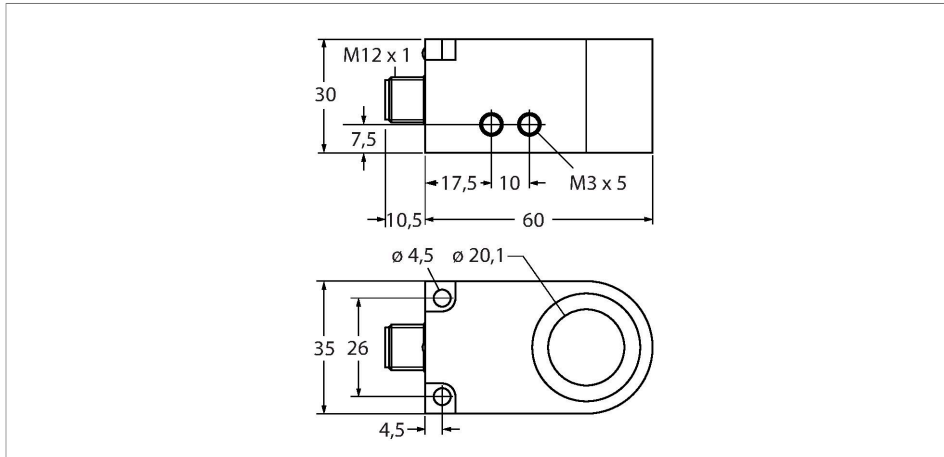


BI20R-W30-DAP6X-H1141

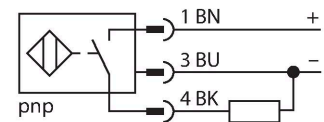
Inductive Sensor – Ring Sensor



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, PNP output
- M12 x 1 male connector

Wiring diagram

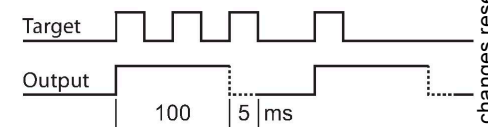


Technical data

| | |
|---|-------------------------|
| Type | BI20R-W30-DAP6X-H1141 |
| ID | 14042 |
| 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 | 10...30 VDC |
| Residual ripple | ≤ 10 % U _{ss} |
| DC rated operational current | ≤ 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 breakage/Reverse polarity protection | yes / Complete |
| Output function | 3-wire, NO contact, PNP |
| Switching frequency | 0.008 kHz |
| Mechanical data | |
| Design | Ring sensor, W30 |
| Dimensions | 60 x 35 x 30 mm |
| Housing material | Plastic, PA12-GF30 |

Functional principle

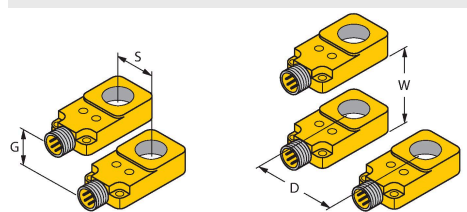
Inductive sensors detect metal objects contactless and wear-free. For this purpose they use a high-frequency electromagnetic AC field that interacts with the target. Inductive ring sensors generate this field through an LC resonant circuit. The target acts as the coil core.



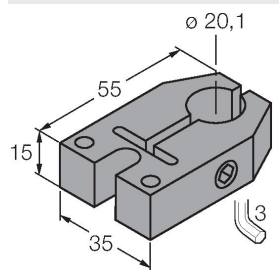
Technical data

| | |
|---------------------------------|--|
| 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 |
| 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 |
|  | <p>Mounting bracket for ring sensors for direct mounting on the pipe or tube; clamping range 19...20 mm; material: POM</p> |

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 www.turck.com |