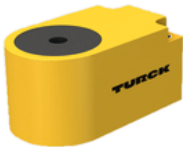
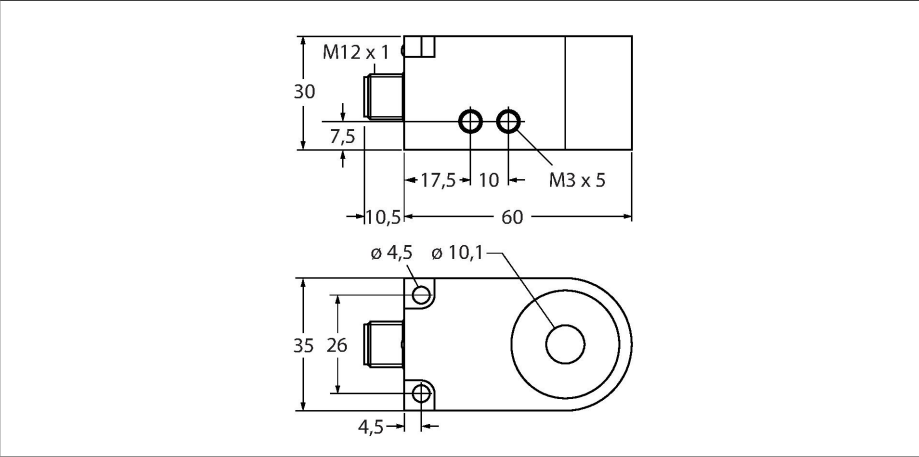


# BI10R-W30-DAP6X-H1141

## Inductive Sensor – Ring Sensor



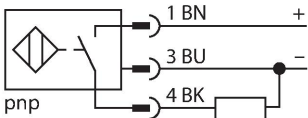
### Technical data

|                                        |                         |
|----------------------------------------|-------------------------|
| Type                                   | BI10R-W30-DAP6X-H1141   |
| ID                                     | 14038                   |
| General data                           |                         |
| Inside ring diameter D                 | 10.1 mm                 |
| Steel ball diameter (DIN 5401)         | ≥ 1 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, PNP |
| 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            |

### Features

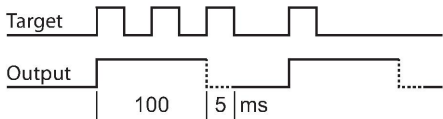
- Rectangular, height 30 mm
- Plastic, PA12-GF30
- Pulse duration 100 ms
- Sensitivity adjusted via potentiometer
- DC 3-wire, 10...30 VDC
- Dynamic output behaviour
- NO contact, PNP output
- M12 x 1 male connector

### Wiring diagram



### Functional principle

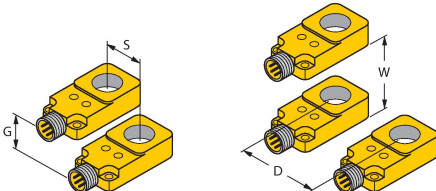
Inductive sensors detect metal objects contactless and wear-free. For this purpose they use a high-frequency electromagnetic AC field that interacts with the target. Inductive ring sensors generate this field through an LC resonant circuit. The target acts as the coil core.



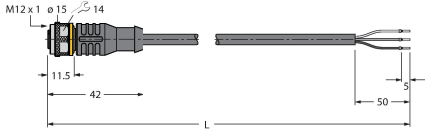
Technical data

| Environmental conditions |                                            |
|--------------------------|--------------------------------------------|
| Ambient temperature      | -25...+70 °C                               |
| Vibration resistance     | 55 Hz (1 mm)                               |
| Shock resistance         | 30 g (11 ms)                               |
| Protection class         | IP67                                       |
| MTTF                     | 2283 years acc. to SN 29500 (Ed. 99) 40 °C |
| Switching state          | LED, Yellow                                |

Mounting instructions

| Mounting instructions/Description                                                 |                  |
|-----------------------------------------------------------------------------------|------------------|
|  | Distance D120 mm |
|                                                                                   | Distance W120 mm |
|                                                                                   | Distance S10 mm  |
|                                                                                   | Distance G120 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 |