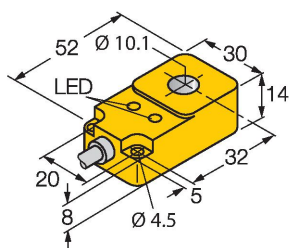


# BI10R-Q14-AN6X2

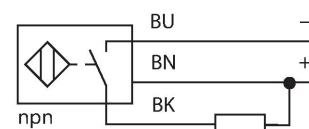
## Inductive Sensor – Ring Sensor



### 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, NPN output
- Cable connection

### 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.

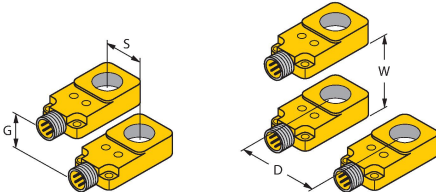
### Technical data

|                                        |                               |
|----------------------------------------|-------------------------------|
| Type                                   | BI10R-Q14-AN6X2               |
| ID                                     | 1406120                       |
| General data                           |                               |
| Inside ring diameter D                 | 10.1 mm                       |
| Steel ball diameter (DIN 5401)         | ≥ 2 mm                        |
| Fly-by speed                           | 1...28 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, NPN       |
| Switching frequency                    | 0.008 kHz                     |
| Mechanical data                        |                               |
| Design                                 | Ring sensor, Q14              |
| Dimensions                             | 52 x 30 x 14 mm               |
| Housing material                       | Plastic, PBT-GF30-V0          |
| Electrical connection                  | Cable                         |
| Cable quality                          | Ø 5.2 mm, LifYY-11Y, PUR, 2 m |
| Core cross-section                     | 3 x 0.34 mm <sup>2</sup>      |

Technical data

|                          |                                            |
|--------------------------|--------------------------------------------|
| 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 |
| 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 |