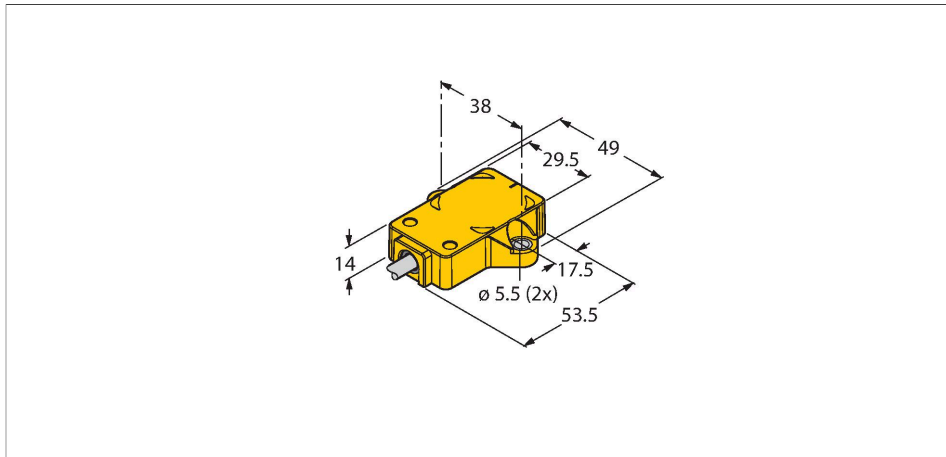


# RI360P2-QR14-LU4X2/S97

## Inductive Angle Sensor – With Analog Output

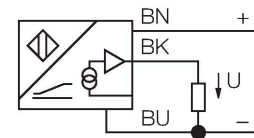
### Premium Line



### Features

- Rectangular, plastic
- Many mounting possibilities
- P2-Ri-QR14 included in delivery
- Measuring range displayed via LED
- Immune to electromagnetic interference
- Resolution, 12-bit
- 3-wire, 8...30 VDC
- Analog output
- 0.5...4.5 V
- Cable connection

### Wiring diagram

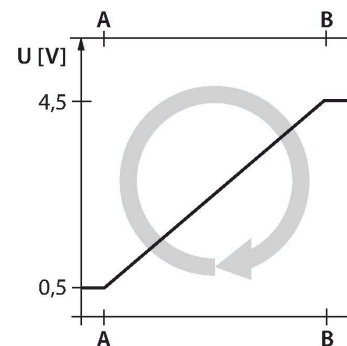


### Technical data

|   |   |
|---|---|
| Type  | RI360P2-QR14-LU4X2/S97                                    |
| ID no.                                      | 1590822   |
| Measuring principle                         | Inductive   |
| Starting torque shaft load (radial / axial) | Not applicable because of contactless measuring principle |
| Resolution                                  | 12 bit  |
| Measuring range                             | 0...360 °   |
| Nominal distance                            | 1.5 mm  |
| Repeat accuracy                             | ≤ 0.025 % of full scale                                   |
| Linearity deviation                         | ≤ 0.3 %f.s.   |
| Temperature drift                           | ≤ ± 0.01 % / K  |
| Ambient temperature                         | -40...+70 °C  |
| Operating voltage                           | 8...30 VDC  |
| Residual ripple                             | ≤ 10 % U <sub>ss</sub>                                    |
| Isolation test voltage                      | ≤ 0.5 kV  |
| Short-circuit protection                    | yes   |
| Wire breakage/Reverse polarity protection   | yes / yes (voltage supply)                                |
| Output type                                 | Absolute singleturn                                       |
| Output function                             | 3-wire, Analog output                                     |
| Voltage output                              | 0.5...4.5 V   |
| Load resistance voltage output              | ≥ 4.7 kΩ  |
| Sample rate                                 | 500 Hz  |
| Current consumption                         | < 100 mA  |

### Functional principle

The measuring principle of inductive angle sensors is based on oscillation circuit coupling between the positioning element and the sensor, whereby an output signal is provided proportional to the angle of the positioning element. The rugged sensors are wear and maintenance-free, thanks to the contactless operating principle. They convince through their excellent repeatability, resolution and linearity within a broad temperature range. The innovative technology ensures a high immunity to electromagnetic DC and AC fields.



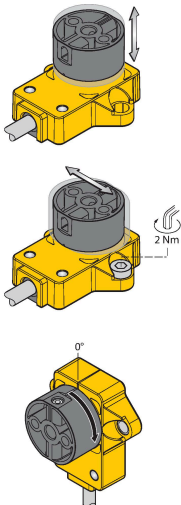
RI360P2-QR14-LU4X2/S97 | 07/22/2021 15-13 | technical changes reserved

## Technical data

|   |  |
|---|--|
| Design                                      | Rectangular, QR14  |
| Dimensions                                  | 53.5 x 49 x 14 mm  |
| Flange type                                 | Flange without mounting element                                      |
| Shaft Type                                  | Blind hole shaft   |
| Shaft diameter D [mm]                       | 6<br>6.35  |
| Housing material                            | Plastic, PBT-GF30-V0   |
| Electrical connection                       | Cable  |
| Cable quality                               | Ø 5.2 mm, Lif32Y32Y, TPE, 2 m  |
| Core cross-section                          | 3 x 0.5 mm <sup>2</sup>  |
| Vibration resistance                        | 55 Hz (1 mm)   |
| Vibration resistance (EN 60068-2-6)         | 20 g; 10...3000 Hz; 50 cycles; 3 axes                                |
| Shock resistance (EN 60068-2-27)            | 100 g; 11 ms ½ sinus; each 3x; 3 axes                                |
| Continuous shock resistance (EN 60068-2-29) | 40 g; 6 ms ½ sinus; each 4000 x; 3 axes                              |
| Protection class                            | IP68<br>IP69K  |
| MTTF  | 222 years acc. to SN 29500 (Ed. 99) 40 °C                            |
| Power-on indication                         | LED, Green   |
| Measuring range display                     | multifunction LED, green<br>green flashing                           |
| Included in delivery                        | positioning element P2-Ri-QR14; for technical details see data sheet |

## Mounting instructions

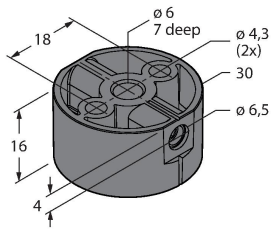
### Mounting instructions/Description



## Accessories

P1-RI-QR14

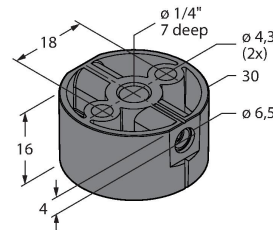
1590812



Positioning element for angle sensors RI-QR14, for Ø 6 mm shafts

P2-RI-QR14

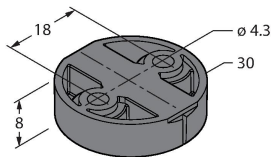
1590819



Positioning element for angle sensors RI-QR14, for Ø 6.35 mm shafts

P3-RI-QR14

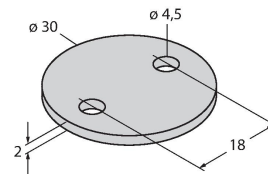
1590865



Positioning element for angle sensors RI-QR14, flat design, using shield plate SP1-QR14 is recommended

SP1-QR14

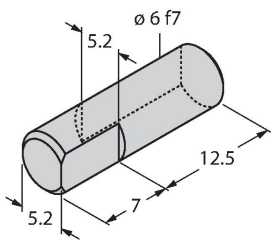
1590873



Shield plate Ø 30 mm, aluminium

HSA-M6-QR14

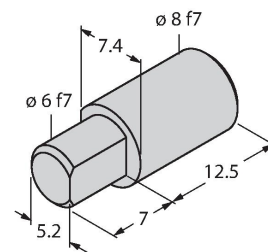
6901051



Adapter for RI-QR14 specific positioning elements, hollow on solid shaft, Ø 6 mm

HSA-M8-QR14

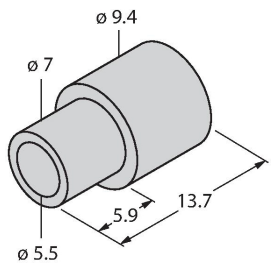
6901052



Adapter for RI-QR14 specific positioning elements, hollow on solid shaft, Ø 8 mm

DS-RI-QR14

1590814



Spacer sleeves for rear mounting of RI-QR14, 2 pcs. per bag