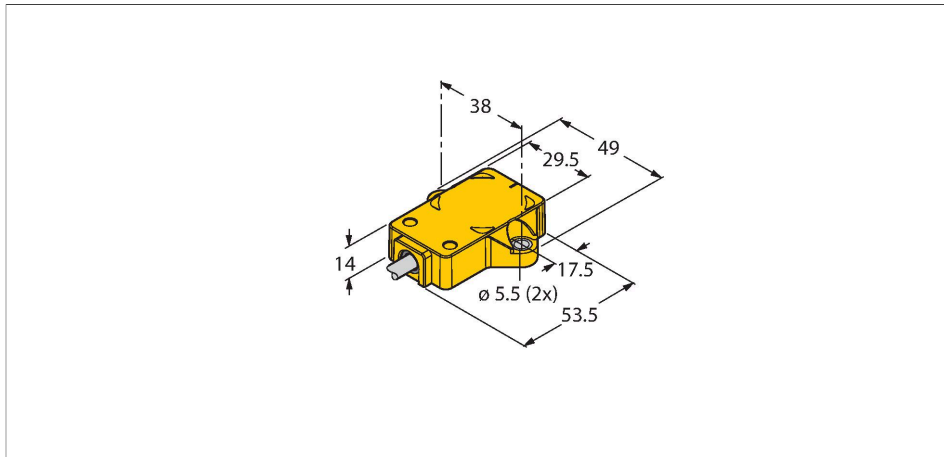


RI180P1-QR14-LIU5X2

Inductive Angle Sensor – With Analog Output

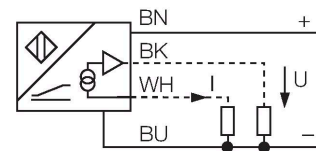
Premium Line



Features

- Rectangular, plastic
- Many mounting possibilities
- P1-Ri-QR14 included in delivery
- Measuring range displayed via LED
- Immune to electromagnetic interference
- Resolution, 12-bit
- 4-wire, 15...30 VDC
- Analog output
- 0...10 V and 4...20 mA
- Cable connection

Wiring diagram

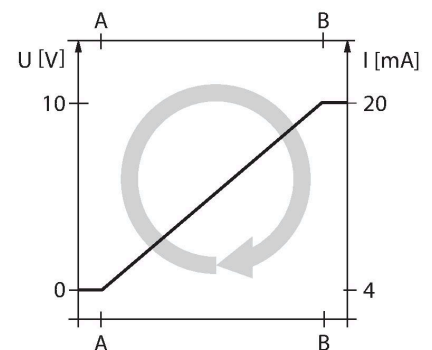


Technical data

| | |
|---|---|
| Type | RI180P1-QR14-LIU5X2 |
| ID no. | 1590829 |
| Measuring principle | Inductive |
| Starting torque shaft load (radial / axial) | Not applicable because of contactless measuring principle |
| Resolution | 0.09° |
| Measuring range | 0...180 ° |
| Nominal distance | 1.5 mm |
| Linearity deviation | ≤ 0.3 %f.s. |
| Temperature drift | ≤ ± 0.01 % / K |
| Ambient temperature | -25...+70 °C |
| Operating voltage | 15...30 VDC |
| Residual ripple | ≤ 10 % U _{ss} |
| 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 | 4-wire, Analog output |
| Voltage output | 0...10 V |
| Current output | 4...20 mA |
| Load resistance voltage output | ≥ 4.7 kΩ |
| Load resistance, current output | ≤ 0.4 kΩ |
| Sample rate | 500 Hz |

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.

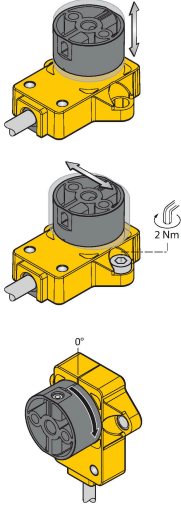


Technical data

| | |
|---|--|
| Current consumption | < 100 mA |
| 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 6.35 |
| Housing material | Plastic, PBT-GF30-V0 |
| Electrical connection | Cable |
| Cable quality | Ø 5.2 mm, Gray, LifYY, PVC, 2 m |
| Core cross-section | 4 x 0.34 mm ² |
| 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 IP69K |
| MTTF | 138 years acc. to SN 29500 (Ed. 99) 40 °C |
| Power-on indication | LED, Green |
| Measuring range display | multifunction LED, green green flashing |
| Included in delivery | positioning element P1-Ri-QR14; for technical details see data sheet |

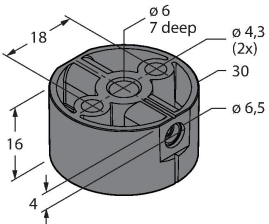
Mounting instructions

Mounting instructions/Description

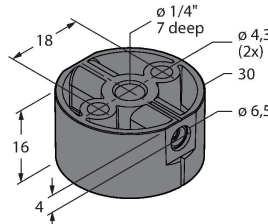


Accessories

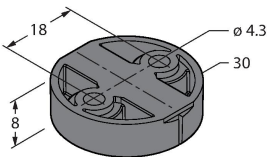
P1-RI-QR14 1590812
Positioning element for angle sensors RI-QR14, for Ø 6 mm shafts



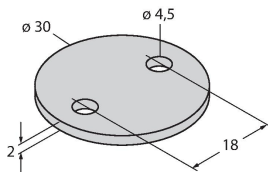
P2-RI-QR14 1590819
Positioning element for angle sensors RI-QR14, for Ø 6.35 mm shafts



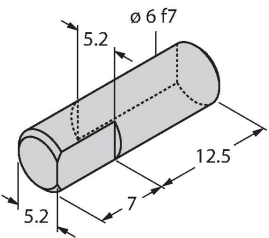
P3-RI-QR14 1590865
Positioning element for angle sensors RI-QR14, flat design, using shield plate SP1-QR14 is recommended



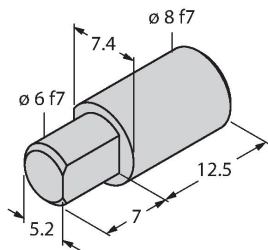
SP1-QR14 1590873
Shield plate Ø 30 mm, aluminium



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

