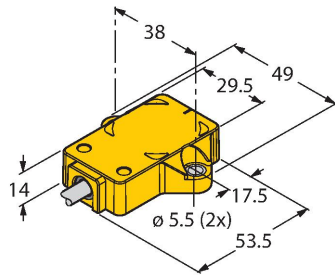


RI180P1-QR14-LIU5X2

Inductive Angle Sensor – With Analog Output

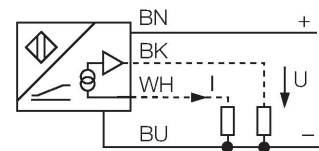
Premium Line



Features

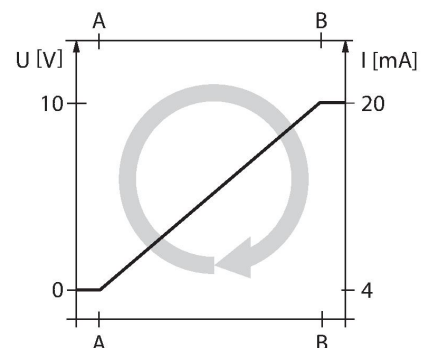
- Rectangular, plastic
- Many mounting possibilities
- P1-Ri-QR14 included in delivery
- Measuring range displayed via LED
- Immune to electromagnetic interference
- Resolution, 12-bit
- 4-wire, 15...30 VDC
- Analog output
- 0...10 V and 4...20 mA
- Cable connection

Wiring diagram



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

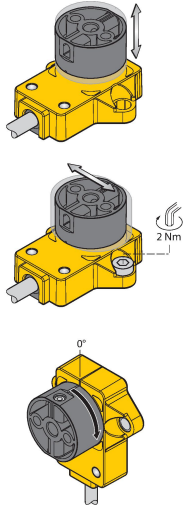
Type	RI180P1-QR14-LIU5X2
ID	1590829
Measuring principle	Inductive
General data	
Starting torque shaft load (radial / axial)	Not applicable because of contactless measuring principle
Measuring range	0...180 °
Nominal distance	1.5 mm
Linearity deviation	≤ 0.3 % f.s.
Temperature drift	≤ ± 0.01 %/K
Output type	Absolute singleturn
Electrical data	
Operating voltage U_B	15...30 VDC
Ripple U_{ss}	≤ 10 % U_{Bmax}
Isolation test voltage	0.5 kV
Short-circuit protection	yes
Wire break/reverse polarity protection	yes/yes (voltage supply)
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

Technical data

Current consumption	< 100 mA
Mechanical 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 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
Environmental conditions	
Ambient temperature	-25...+70 °C
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 sine; 3 × each; 3 axes
Continuous shock resistance (EN 60068-2-29)	40 g; 6 ms ½ sine; 4000 × each; 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

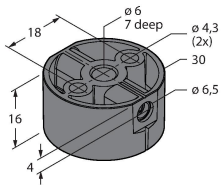


Accessories

P1-RI-QR14

1590812

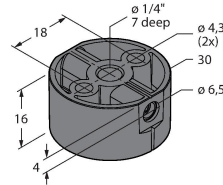
Positioning element for angle sensors RI-QR14, for Ø 6 mm shafts



P2-RI-QR14

1590819

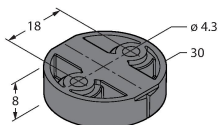
Positioning element for angle sensors RI-QR14, for Ø 6.35 mm shafts



P3-RI-QR14

1590865

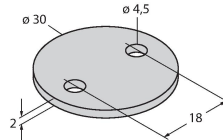
Positioning element for angle sensors RI-QR14, flat design, using shield plate SP1-QR14 is recommended



SP1-QR14

1590873

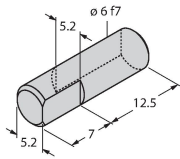
Shield plate Ø 30 mm, aluminium



HSA-M6-QR14

6901051

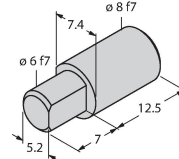
Adapter for RI-QR14 specific positioning elements, hollow on solid shaft, Ø 6 mm



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

