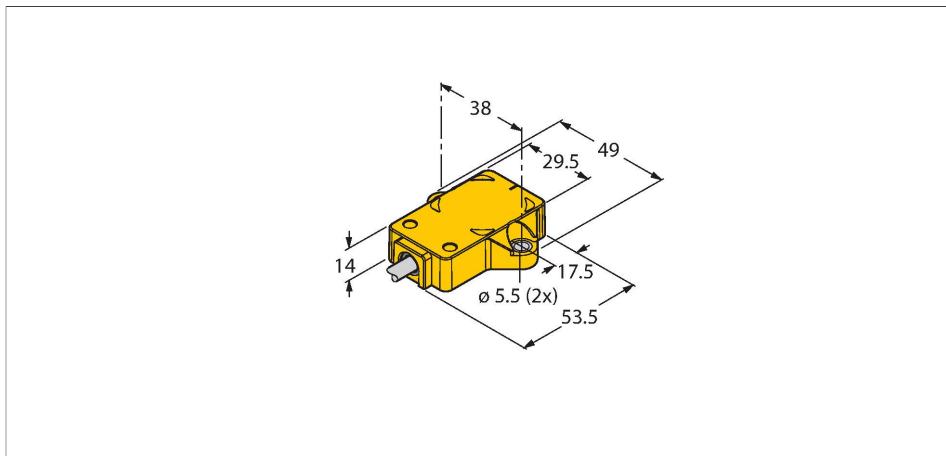


RI360P2-QR14-ESG25X2

Inductive Angle Sensor

Premium Line



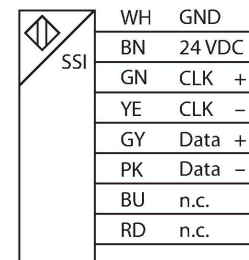
Features

- Rectangular, plastic
- Many mounting possibilities
- P2-Ri-QR14 included in delivery
- Measuring range displayed via LED
- Immune to electromagnetic interference
- Resolution, 16-bit
- 15...30 VDC
- Cable connection, 8-pin
- SSI output
- 25 bit, Gray-coded
- 62.5 kHz ... 1 MHz

Technical data

Type	RI360P2-QR14-ESG25X2
ID	1590827
Measuring principle	Inductive
General data	
Starting torque shaft load (radial / axial)	Not applicable because of contactless measuring principle
Resolution	16 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	≤ ± 0.001 %/K
Output type	Absolute singleturn
Electrical data	
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)
Communication protocol	SSI
Output function	8-pin, 25 Bit, Gray coded
Process data area	Bit 0 ... Bit 15

Wiring diagram



Functional principle

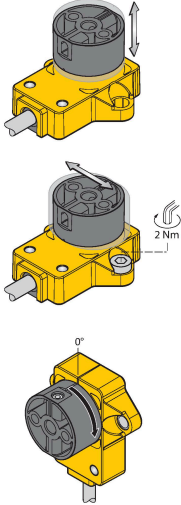
The measuring principle of inductive angle sensors is based on oscillation circuit coupling between the positioning element and the sensor, whereby an output signal is provided proportional to the angle of the positioning element. The rugged sensors are wear and maintenance-free, thanks to the contactless 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

Diagnostic bits	Bit 22: Positioning element is in the measuring range, lower signal quality (e.g. distance too large) Bit 23: Positioning element is outside the measuring range
Sample rate	500 Hz
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	2 m
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 P2-Ri-QR14; for technical details see data sheet

Mounting instructions

Mounting instructions/Description

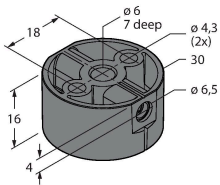


A broad range of accessories allows the device to be mounted in many different ways. Based on the functional principle of RLC coupling, the sensor is immune to magnetized metal splinters and other interferences.

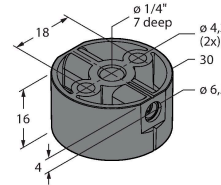
LED indicates measuring range
 green steady: Positioning element is in the measuring range
 yellow steady: Positioning element has reached the end of the measuring range. This is indicated by a lower signal quality, see status bit 22.
 yellow flashing: Positioning element is outside the detection range, see status bit 23
 off: Positioning element is outside the programmed measuring range (only with teachable versions)

Accessories

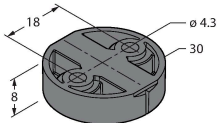
P1-RI-QR14 1590812
 Positioning element for angle sensors RI-QR14, for Ø 6 mm shafts



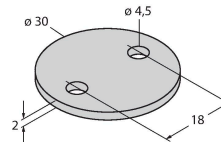
P2-RI-QR14 1590819
 Positioning element for angle sensors RI-QR14, for Ø 6.35 mm shafts



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



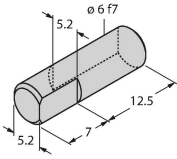
SP1-QR14 1590873
 Shield plate Ø 30 mm, aluminium



HSA-M6-QR14

6901051

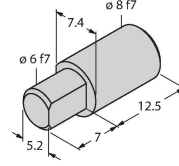
Adapter for RI-QR14 specific positioning elements, hollow on solid shaft, Ø 6 mm



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

