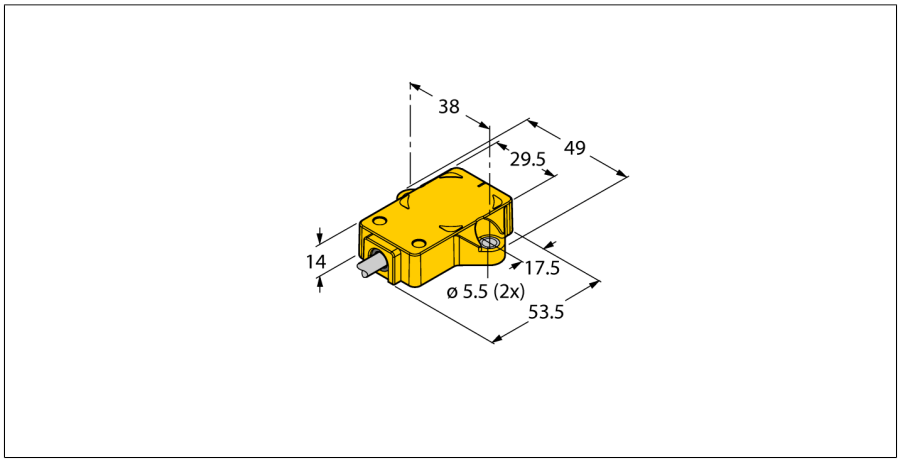
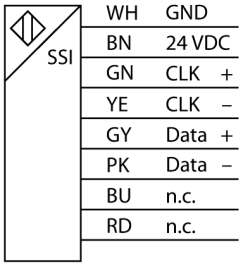
Inductive Angle Sensor
Premium Line
RI360P2-QR14-ESG25X2



- 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

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 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)
Communication protocol	SSi
Output function	8-pin, 25 Bit, Gray coded
Process data area	Bit 0 … Bit 15
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

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.

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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 mm 6.35 mm
Housing material	Plastic, PBT-GF30-V0
Electrical connection	Cable

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
Included in delivery	positioning element P2-Ri-QR14; for technical details see data sheet

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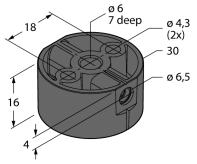
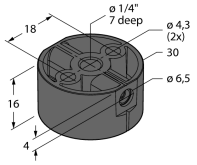
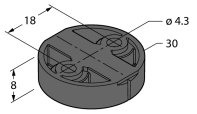
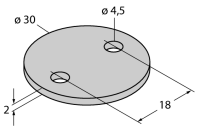
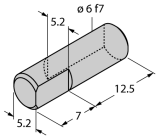
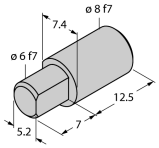
Accessories

Type code	Ident-No.		Dimension drawing
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	

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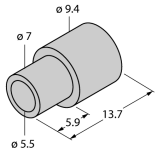
Accessories

Type code	Ident-No.		Dimension drawing
DS-RI-QR14	1590814	Spacer sleeves for rear mounting of RI-QR14, 2 pcs. per bag	

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