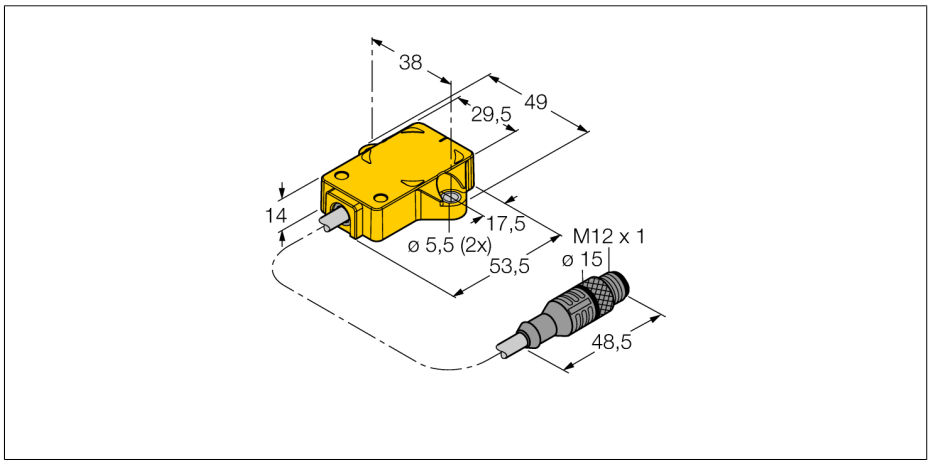
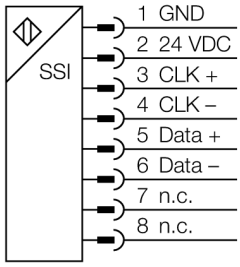
Inductive angle sensor
Ri360P1-QR14-ESG25X2-0,3-RS8



- **Rectangular, plastic**
- **Many mounting possibilities**
- **Positioning element P1-Ri-QR14 included in delivery**
- **Measuring range indication via LED**
- **Immune to electromagnetic interferences**
- **16 bit resolution**
- **15…30 VDC**
- **Cable with male end M12 x 1, 8-pole**
- **SSI output**
- **25 bit, gray coded**
- **62.5 kHz … 1 MHz**

Type	Ri360P1-QR14-ESG25X2-0,3-RS8
Ident-No.	1590808
Measuring range	0…360°
Repeatability	≤ 0.025 % of measuring range IA - BI
Linearity deviation	≤ 0.3 % of full scale
Temperature drift	≤ ± 0.0001 % / K
Ambient temperature	-25…+70 °C
Operating voltage	15…30VDC
Residual ripple	≤ 10 % U_{ss}
Rated insulation voltage	≤ 0.5 kV
Short-circuit protection	yes
Wire breakage / Reverse polarity protection	yes/ yes (voltage supply)
Output function	8-wire, SSi, 25 Bit, Gray coded
Process data area	Bit 1 … Bit 16
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	700 Hz
Current consumption	< 100 mA
Design	rectangular, QR14
Dimensions	53.5 x 49 x 14 mm
Housing material	Plastic, PBT-GF30-V0
Connection	Cable with connector, M12 x 1
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
MTTF	138years acc. to SN 29500 (Ed. 99) 40 °C
Operating voltage	LED green
Measuring range display	Multifunction LED, green
Included in scope of supply	Positioning element P1-Ri-QR14

Wiring diagram



Functional principle

The measuring principle of rotary position sensors is based on oscillation circuit coupling between the transducer and the sensor, whereby an output signal is provided proportional to the angle of the positioning element. Owing to the non-contact principle, the robust sensors are maintenance and wear-free and they excel in terms of optimum repeatability, resolution and linearity within a broad temperature range. Thanks to the innovative technology, electromagnetic interferences have no influence on the measured signal.

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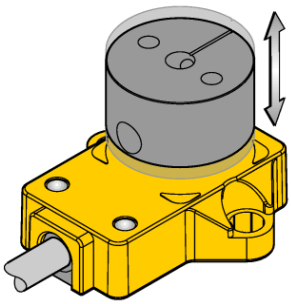
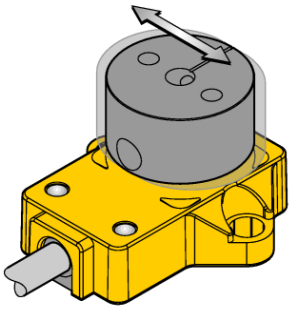
Mounting instructions	





Flexibility provided through adapter pins
Extensive range of mounting accessories to adapt the shaft diameter to all applications.

LED function
Operating voltage
green: Voltage applied
Measuring range
green: Positioning element in the measuring range
green flashing: Positioning element is in the measuring range, lower signal quality (e.g. distance too large)
off: Positioning element is outside the measuring range

Functional safety through inductive measuring principle
Based on the functional principle of oscillation circuit coupling, the sensor operates absolutely wear-free and is immune to magnetized metal splinters and other interferences.
Owing to the differential analysis, the output signal remains almost unchanged, even if the position of the positioning element deviates from the ideal axis of rotation.

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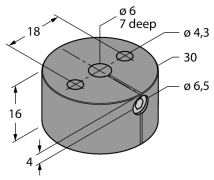
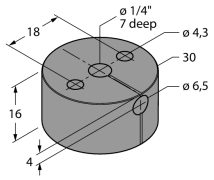
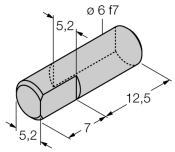
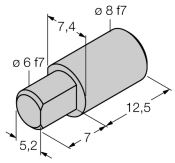
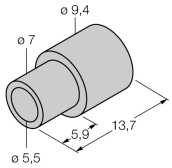
Accessories

Type code	Ident-No.	Short text	Dimension drawing
P1-Ri-QR14	1590812	Positioning element for inductive angle sensors	
P2-Ri-QR14	1590819	Positioning element for inductive angle sensors	
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	Distanzhülsen zur rückwärtigen Montage von Ri-QR14, 2 Stück pro Verpackung	

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