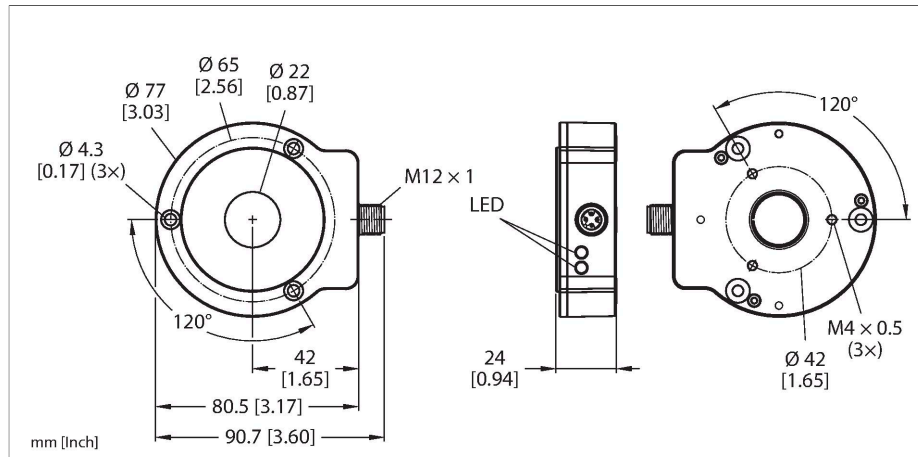


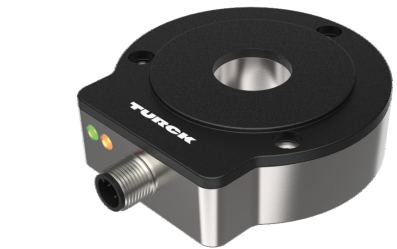
RI360P0-EQR24M0-IOLX2-H1141

Contactless Encoder with Stainless Steel Housing – IO-Link Premium Line



Technical data

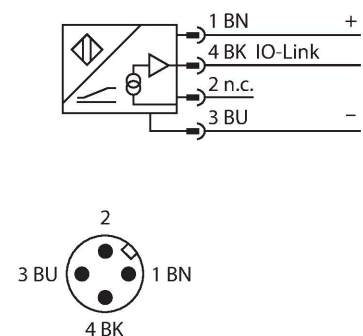
| | |
|---|---|
| Type | RI360P0-EQR24M0-IOLX2-H1141 |
| ID | 1590978 |
| Measuring principle | Inductive |
| General data | |
| Max. rotational speed | 800 rpm |
| | Determined with standardized construction, with a steel shaft Ø 20 mm, L = 50 mm and reducer Ø 20 mm. |
| Starting torque shaft load (radial / axial) | not applicable, because of contactless measuring principle |
| Measuring range | 0...360 ° |
| Nominal distance | 1.5 mm |
| Repeat accuracy | ≤ 0.01 % of full scale |
| Linearity deviation | ≤ 0.05 % f.s. |
| Temperature drift | ≤ ± 0.003 %/K |
| Output type | Absolute semi-multiturn |
| Resolution singleturn | 16 bit/65,536 units per revolution |
| Resolution multiturn | 13 bit/8192 revolutions |
| Number of diagnostic bits | 3 Bit |
| Electrical data | |
| Operating voltage U_B | 15...30 VDC |
| Ripple U_{ss} | ≤ 10 % U_{Bmax} |
| Isolation test voltage | 0.5 kV |
| Wire break/reverse polarity protection | yes (voltage supply) |
| Communication protocol | IO-Link |
| Sample rate | 1000 Hz |
| Current consumption | < 50 mA |



Features

- Compact, rugged housing
- Active face, plastic PA12-GF30
- Housing, stainless steel V4A (1.4404)
- Status displayed via LED
- Immune to electromagnetic interference
- 16 bits singleturn
- Process value in 32 bit IO-Link telegram
- 3 error bits
- 16 bits singleturn
- 13 bits multiturn
- 15...30 VDC
- M12 × 1 male connector, 4-pin

Wiring diagram



Functional principle

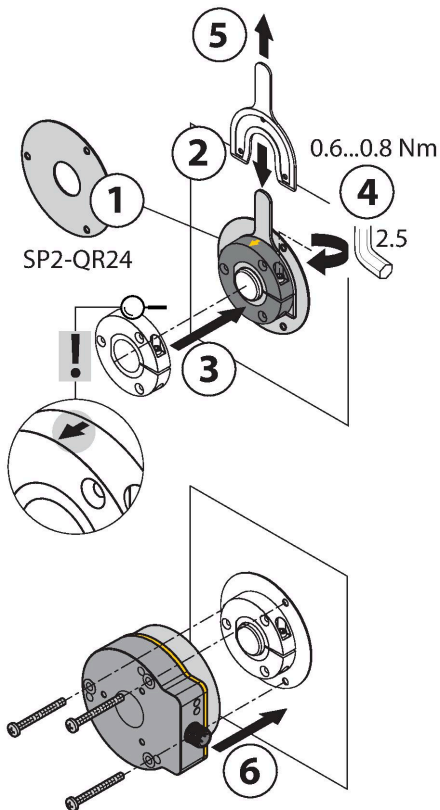
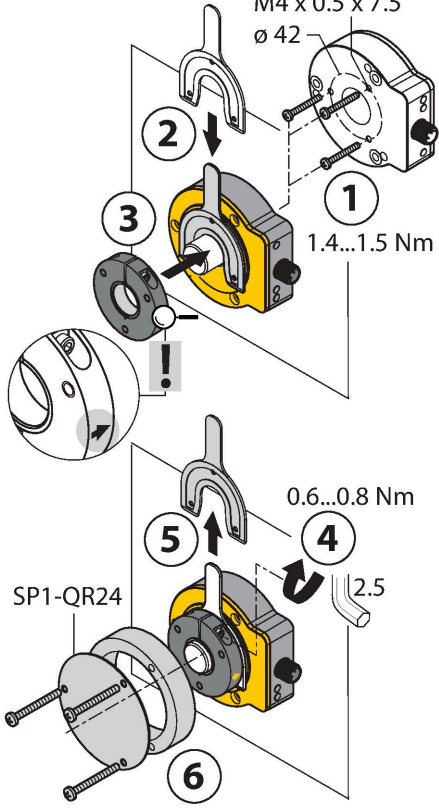
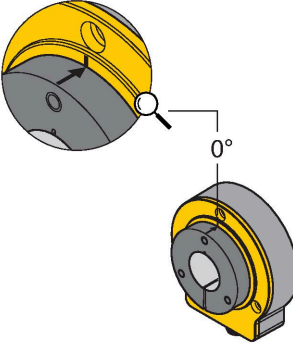
The measuring principle of inductive encoders is based on oscillation circuit coupling between the positioning element and the sensor, whereby an output signal is provided proportional to the angle of the positioning element. Turck refers to semi-multiturn because the multiturn process data is calculated internally from the number

Technical data

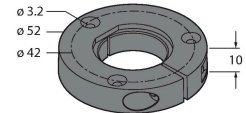
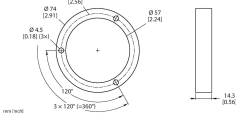
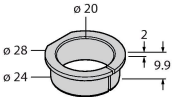
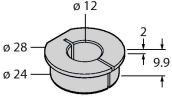
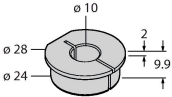
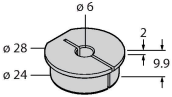

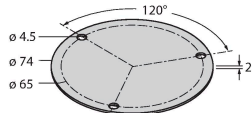
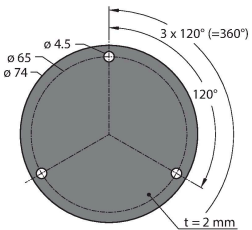
| | |
|---|---|
| IO-Link | |
| IO-Link specification | V 1.1 |
| Programming | FDT/DTM |
| Communication mode | COM 2 (38.4 kBaud) |
| Process data width | 32 bit |
| Minimum cycle time | 3 ms |
| Function pin 4 | IO-Link |
| Included in the SIDI GSDML | Yes |
| Mechanical data | |
| Design | EQR24 |
| Dimensions | 81 x 78 x 24 mm |
| Flange type | Flange without mounting element |
| Shaft Type | Hollow shaft |
| Shaft diameter D (mm) | 6 6.35 9.525 10 12 12.7 14 15.875 19.05 20 |
| Housing material | Stainless-steel/Plastic, 1.4404 (AISI 316L)/PA12-GF30 |
| Electrical connection | Connector |
| Environmental conditions | |
| Ambient temperature | -25...+85 °C |
| | Acc. to UL approval to +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 | LED, yellow, yellow flashing |
| Included in delivery | Adapter sleeve MT-QR24 |
| UL certificate | E210608 |

of single-turn zero passes. Because the sensor does not detect any revolutions when not supplied with power, the plausibility of the multiturn process data is indicated by a diagnostic bit. The rugged sensors are maintenance- and wear-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 high immunity to electromagnetic DC and AC fields.

Mounting instructions

| Mounting instructions/Description | |
|--|---|
| <div><p>A</p></div> | <div><p>B</p></div> <p>Default: 0°</p>  |

Accessories

| | | | | | |
|---|-----------|--|--|-----------|--|
| PE1-EQR24 | 1590966 | Positioning element with stainless steel compression fitting, without adapter sleeve | M5-QR24 | 1590965 | Plastic protecting ring for encoders RI-EQR24 |
|  | | |  | | |
| RA1-EQR24 | 1593019 | Stainless steel adapter sleeve, for Ø 20 mm shafts | RA3-EQR24 | 1593020 | Stainless steel adapter sleeve, for Ø 12 mm shafts |
|  | | |  | | |
| RA4-EQR24 | 1593023 | Stainless steel adapter sleeve, for Ø 10 mm shafts | RA5-EQR24 | 100000375 | Stainless steel adapter sleeve, for Ø 6 mm shafts |
|  | | |  | | |
| RA8-EQR24 | 100000289 | Stainless steel plug for mounting option C | SP1-EQR24 | 1590979 | Shield plate Ø 74 mm, stainless steel |
|  | | |  | | |
| SP5-QR24 | 100003689 | Protective plate Ø 74 mm, plastic | | | |
|  | | | | | |

Accessories

| Dimension drawing | Type | ID | |
|---|-------------|---------|--|
|  | RKC4T-2/TXL | 6627934 | Connection cable, M12 female connector, straight, 3-pin, cable length: 2 m, jacket material: PUR, black; stainless steel coupling nut; cULus approval |
|  | RKH4-2/TFG | 6934384 | Connection cable, M12 female connector, straight, 3-pin, stainless steel coupling nut, cable length: 2 m, jacket material: TPE, gray; temperature range: -40...+105 °C |