

Your Global Automation Partner

TURCK

Ri360-QR20 Miniature Encoder



Ideal for Mobile Machinery

Turck's compact and wear-free Ri360-QR20 miniature encoder is especially designed for use in mobile machinery. The new encoder series with IP68/IP69K protection exceeds the e1/E1 requirements and comes in a compact 71 x 64 x 20 mm housing. It is based on the contactless resonator measuring principle like its "big brother", the QR24.

And the highlight: The housing fully surrounds the positioning element and provides full protection from the outside environment. Alternatively, the positioning element can also be positioned above the sensor. This design principle allows not only a high mounting flexibility, but also offers mechanical protection, as well as protection from dust and moisture. The housing is also permanently sealed. Even the often problematic potential points of

leakage such as LED lenses are eliminated since the QR20 fully consists of a translucent plastic, where status LEDs are still visible.

The encoder offers very high interference immunity and is protected from line-conducted interference, the so-called load dump. Salt spray or rapid temperature changes, as well as diesel, kerosene or vibrations have no effect on the device. With a temperature range from -40 to +85 °C there are virtually no climatic conditions that could be critical for the QR20. The Ri360-QR20 offers a 12-bit resolution on the output side, corresponding to around 0.09 degrees. The output signal ranges from 0.5 to 4.5 VDC (LU4). If the sensor does not detect a positioning element, the value jumps to 5 volts.

Your Benefits

- Maintenance-free
- No additional protection or auxiliary constructions needed
- Simple diagnostics
- Highest mounting flexibility

Miniature Encoder for Mobile Machinery

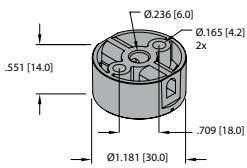
Ri...-QR20

| Dimensions | Type designation for 6 mm shaft | Type designation for 1/4" shaft | Measuring range |
|----------------------------------|----------------------------------|----------------------------------|-----------------|
| | RI360P1-QR20-LU4X2-0.15-DT04-3P | RI360P2-QR20-LU4X2-0.15-DT04-3P | 0...360° |
| | RI20P1-QR20-LU4X2-0.15-DT04-3P | RI20P2-QR20-LU4X2-0.15-DT04-3P | -10...+10° |
| | RI40P1-QR20-LU4X2-0.15-DT04-3P | RI40P2-QR20-LU4X2-0.15-DT04-3P | -20...+20° |
| | RI60P1-QR20-LU4X2-0.15-DT04-3P | RI60P2-QR20-LU4X2-0.15-DT04-3P | -30...+30° |
| | RI90P1-QR20-LU4X2-0.15-DT04-3P | RI90P2-QR20-LU4X2-0.15-DT04-3P | -45...+45° |
| | RI120P1-QR20-LU4X2-0.15-DT04-3P | RI120P2-QR20-LU4X2-0.15-DT04-3P | -60...+60° |
| | RI240P1-QR20-LU4X2-0.15-DT04-3P | RI240P2-QR20-LU4X2-0.15-DT04-3P | -120...+120° |
| | RI360P1-QR20-LU4X2 | RI360P2-QR20-LU4X2 | 0...360° |
| | RI20P1-QR20-LU4X2 | RI20P2-QR20-LU4X2 | -10...+10° |
| | RI40P1-QR20-LU4X2 | RI40P2-QR20-LU4X2 | -20...+20° |
| | RI60P1-QR20-LU4X2 | RI60P2-QR20-LU4X2 | -30...+30° |
| | RI90P1-QR20-LU4X2 | RI90P2-QR20-LU4X2 | -45...+45° |
| | RI120P1-QR20-LU4X2 | RI120P2-QR20-LU4X2 | -60...+60° |
| | RI240P1-QR20-LU4X2 | RI240P2-QR20-LU4X2 | -120...+120° |
| | RI360P1-QR20-LU4X2-0.24-AMP01-3P | RI360P2-QR20-LU4X2-0.24-AMP01-3P | 0...360° |
| | RI20P1-QR20-LU4X2-0.24-AMP01-3P | RI20P2-QR20-LU4X2-0.24-AMP01-3P | -10...+10° |
| | RI40P1-QR20-LU4X2-0.24-AMP01-3P | RI40P2-QR20-LU4X2-0.24-AMP01-3P | -20...+20° |
| | RI60P1-QR20-LU4X2-0.24-AMP01-3P | RI60P2-QR20-LU4X2-0.24-AMP01-3P | -30...+30° |
| | RI90P1-QR20-LU4X2-0.24-AMP01-3P | RI90P2-QR20-LU4X2-0.24-AMP01-3P | -45...+45° |
| | RI120P1-QR20-LU4X2-0.24-AMP01-3P | RI120P2-QR20-LU4X2-0.24-AMP01-3P | -60...+60° |
| RI240P1-QR20-LU4X2-0.24-AMP01-3P | RI240P2-QR20-LU4X2-0.24-AMP01-3P | -120...+120° | |
| | RI360P1-QR20-LU4X2-H1141 | RI360P2-QR20-LU4X2-H1141 | 0...360° |
| | RI20P1-QR20-LU4X2-H1141 | RI20P2-QR20-LU4X2-H1141 | -10...+10° |
| | RI40P1-QR20-LU4X2-H1141 | RI40P2-QR20-LU4X2-H1141 | -20...+20° |
| | RI60P1-QR20-LU4X2-H1141 | RI60P2-QR20-LU4X2-H1141 | -30...+30° |
| | RI90P1-QR20-LU4X2-H1141 | RI90P2-QR20-LU4X2-H1141 | -45...+45° |
| | RI120P1-QR20-LU4X2-H1141 | RI120P2-QR20-LU4X2-H1141 | -60...+60° |
| | RI240P1-QR20-LU4X2-H1141 | RI240P2-QR20-LU4X2-H1141 | -120...+120° |

Positioning element included in scope of delivery

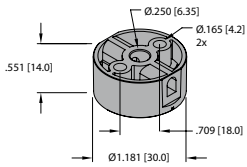
Accessories

Dimensions

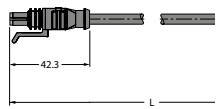


Type designation

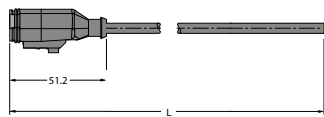
Positioning element P1-RI-QR20, operating at a distance of 0-5 mm to the sensor surface. Nominal distance is 1 mm.



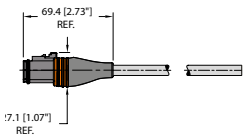
Positioning element P2-RI-QR20, operating at a distance of 0-5 mm to the sensor surface. Nominal distance is 1 mm.



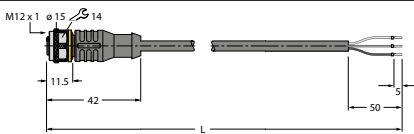
AMP connector cable TSS-3S-A-2/TXL



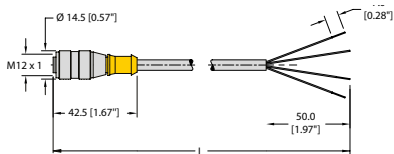
Deutsch connector cable DT06-3S-A-2/TXL



Overmolded Deutsch connector cable for the US, DT06-3S-1876-*M



M12 connector cordset RKS 4.4T-2/TXL



M12 connector cordset for the US, RK 4.4T-*/S618