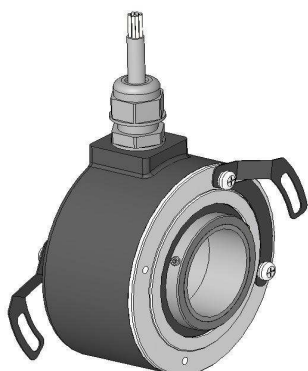


RCI90B HS

Hollow Shaft - Incremental Optical Encoder



PRECILEC optical incremental encoders are designed for accurately measuring speed and position of rotating shafts in industrial environment: machine tools, motor drives ...

They use a differential optical measurement and a ratio-metric processing of the signal for minimizing the temperature and photodiode aging effects.

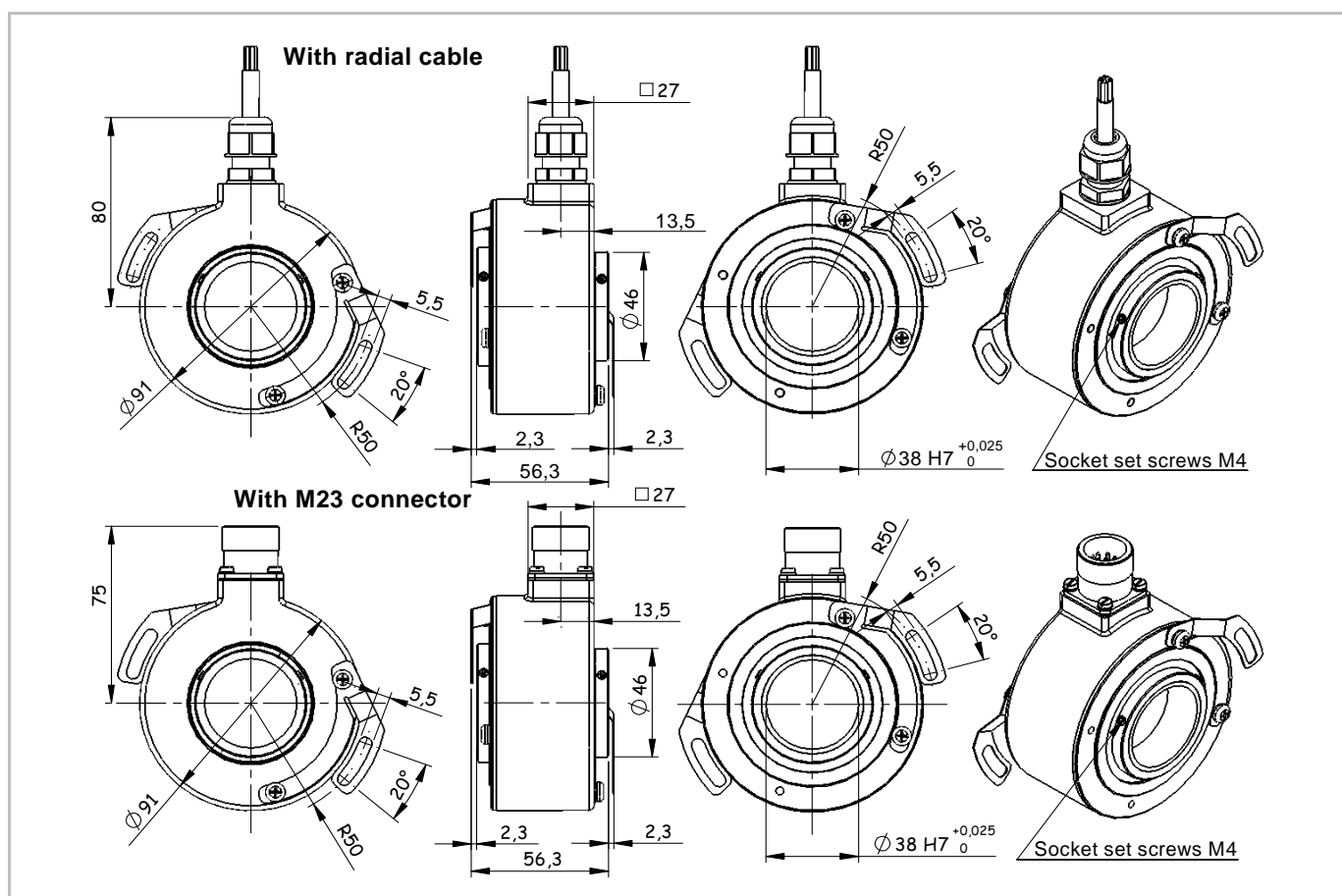
Their universal complementary push-pull output interface and their large supply voltage range make them very easy to connect to most of electronic control units with high noise immunity.



Main features

- | | |
|-------------------------|---|
| • Shaft type | Hollow shaft $\varnothing 42$ mm, and others diameters available (20, 25, 30 mm & 1 inch) with reduction ring |
| • Housing diameter | 91 mm |
| • Fixation | 1 spring plate |
| • Body - Cover | Aluminium - Zinc alloy |
| • Shaft | Stainless steel |
| • Pulses per turn | Standard 1024, others on request |
| • Output signals | A & B with gated Z |
| • Connections | Radial cable, M23 (CW), or MS310 |
| • Operating temp. range | - 25°C / + 85°C |

Outline drawings



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Electrical characteristics

- Supply voltage 4,5 to 30 Vdc with reverse polarity protection
- No load supply current 100 mA under 4,5V – 25 mA under 24V
- Output signals Universal complementary push-pull (short circuit protected, 7272)
RS422 compatible with 5 V supply voltage
- Max output frequency 300 kHz
- Max load current / channel 20 mA
- EMC According to EN 61000-6-2 and EN 61000-6-4

Connections

| | Cable UL 8 wires | M23 - CW | MS310 | Output waveforms |
|-------------|---------------------|----------|-------|----------------------------|
| A | white | 5 | A | <p>Seen from the shaft</p> |
| A / | yellow | 6 | H | |
| B | blue | 8 | B | |
| B / | orange | 1 | I | |
| Z | green | 3 | C | |
| Z / | brown | 4 | J | |
| Vcc (+) | red | 12 | D | |
| Gnd (-) | black | 10 | F | |
| Ground case | Drain | 9 | G | |

Mechanical characteristics

- Max continuous speed 3 000 rpm
- Starting torque ≤ 30 N.cm
- Shaft Inertia 970 gr.cm² without reducing ring
- Weight 560 gr without reducing ring
- Protection IP 65 at housing (EN 60529) and IP64 at shaft inlet
- Max shock 100 g, 6 ms (IEC 68-2-27)
- Max vibrations 10 g, 10-2000 Hz (IEC 68-2-6)