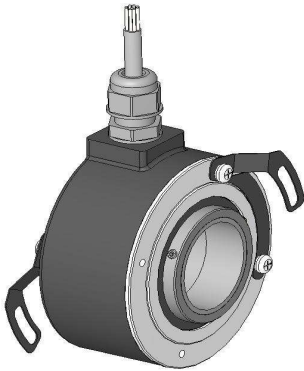


## RCI90B HS

### 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.



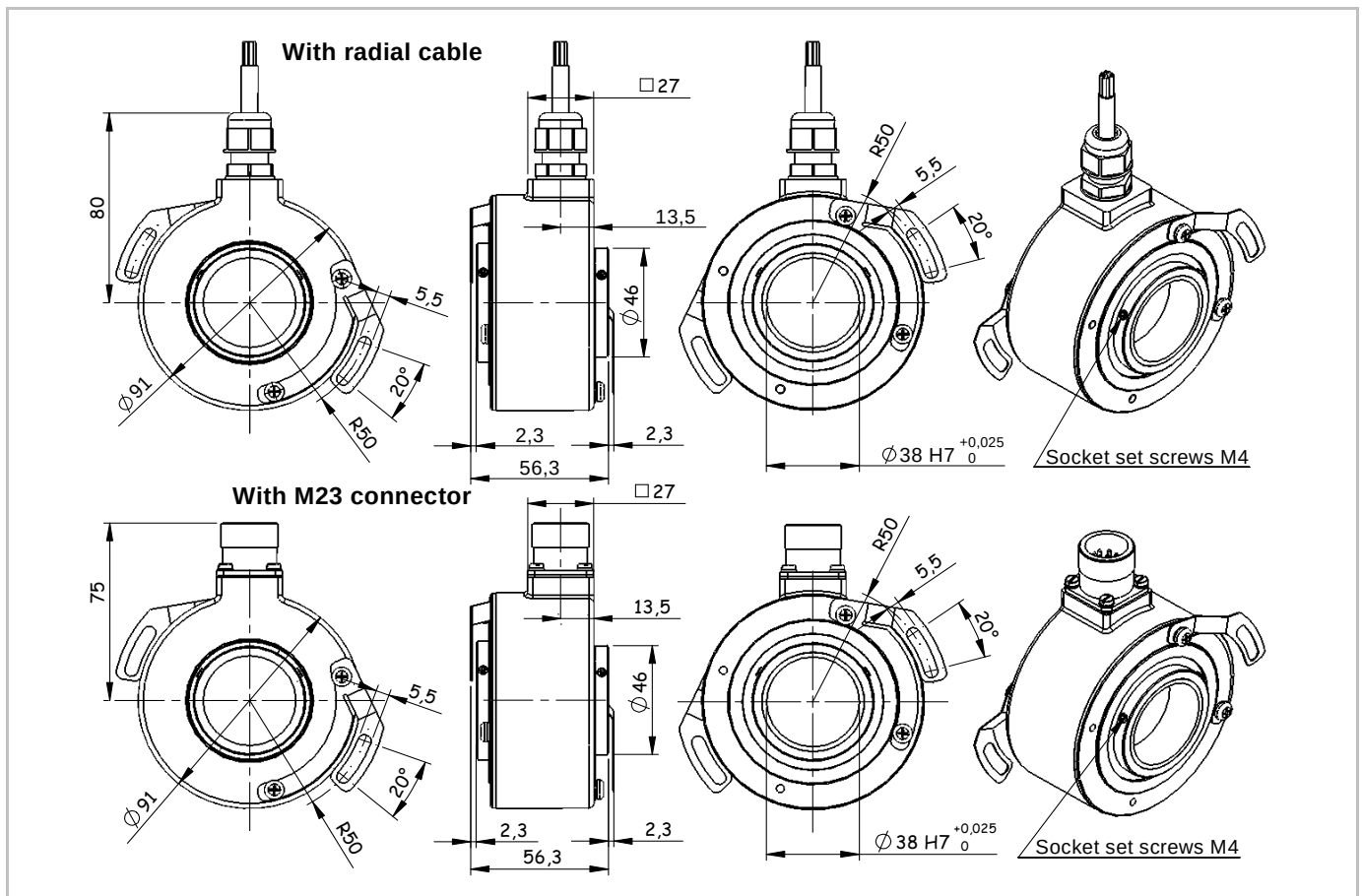
### Main features

- 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



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### Outline drawings



# RCI90B HS

## Hollow Shaft - Incremental Optical Encoder

### 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<br>8 wires | M23 - CW | MS310 | Output waveforms |
|-------------|---------------------|----------|-------|------------------|
| A           | white               | 5        | A     |                  |
| 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.cm<sup>2</sup> 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)



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### Ordering code

# RCI90B-HS30-1-01024-CA01

Ø Spring plate Resolution Connection

- Diameters** 20 (20 mm), 25 (25 mm) 30 (30 mm) U4 (1 inch) with reduction ring  
42 (42 mm)
- Spring plates** 1 ( spring plate with 1 fixation arm) - Additional spring plate can be fitted in the rear (see drawing)
- Available resolutions** 1024 and other resolutions upon request
- Connections** CA01: Cable, one meter standard length. Other lengths on request, from 0,5 to 10 meters  
23C1: M23 connector, 12 pins clockwise (CW)  
MILP: MS310 connector, 10 pins  
Others connections on request

- We reserve the right to modify technical characteristics in the interest of technological advance -