

RCI444R FS

RE.0444 Flange – 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.

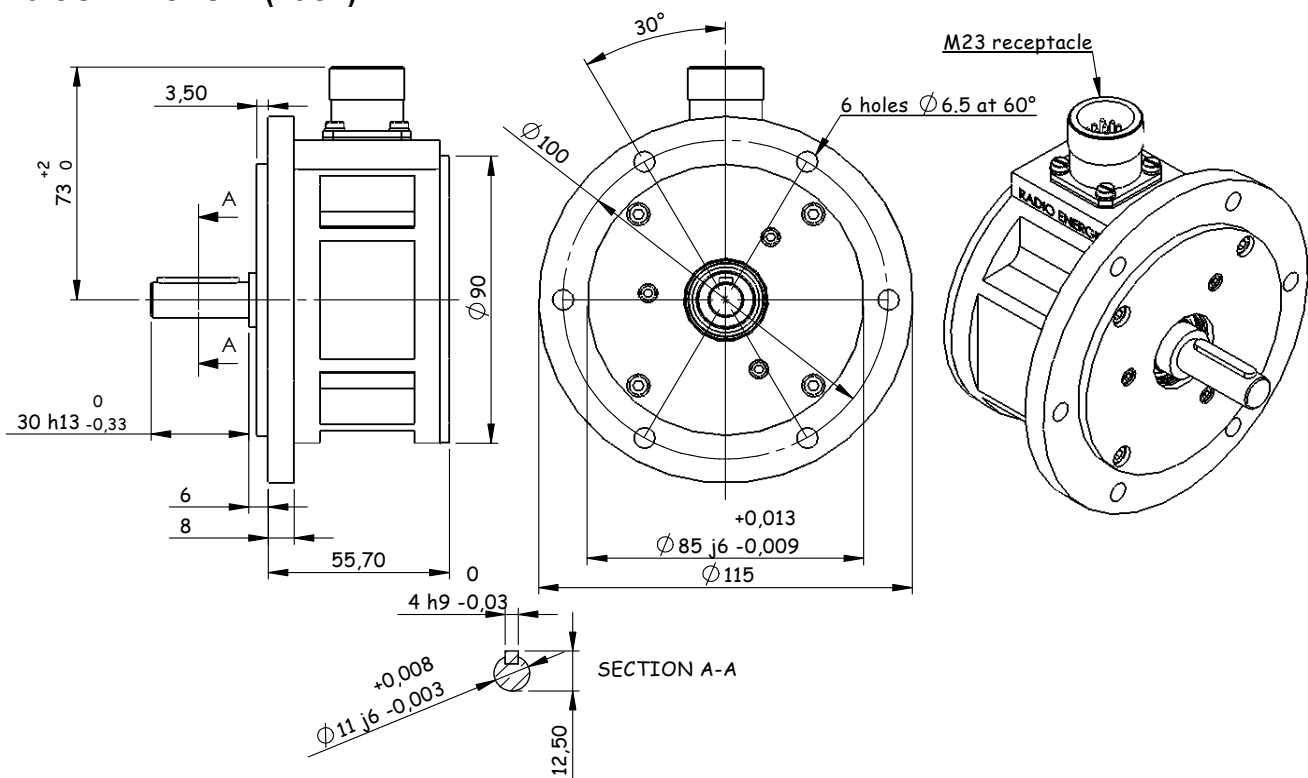


Main features

- Shaft type Full shaft \varnothing 7 and 11 mm
- Housing diameter 115 mm
- Fixation Standard RE0 444 flange
- Body Aluminium
- Shaft Stainless steel
- Pulses per turn 1024 or 2048 as standard. All others upon request
- Output signals A & B with gated Z
- Termination M23 connector 12 pins - Cable - Junction Box – MS310 connector 10 pins
- Operating T° range - 25°C / + 85°C

Outline drawings

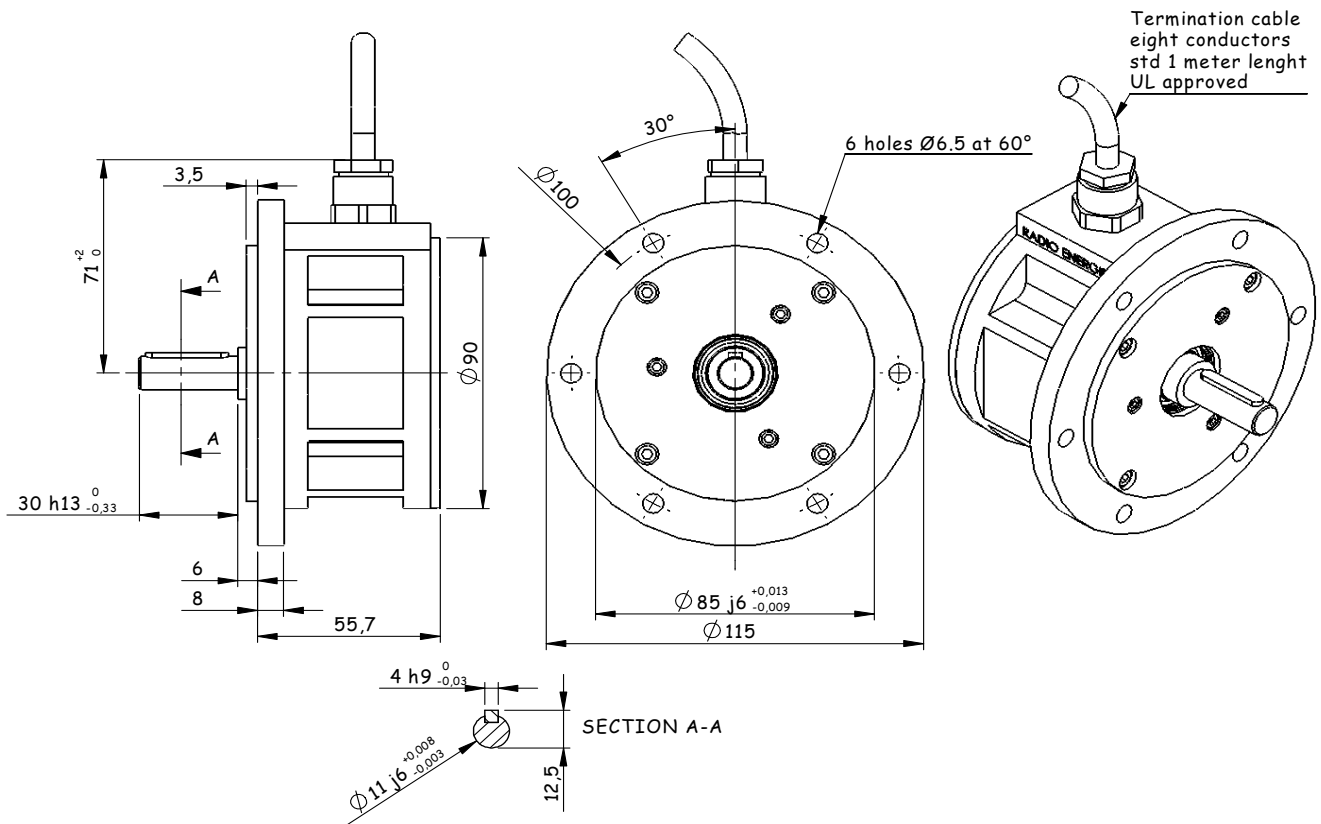
M23 CONNECTOR (23C1)



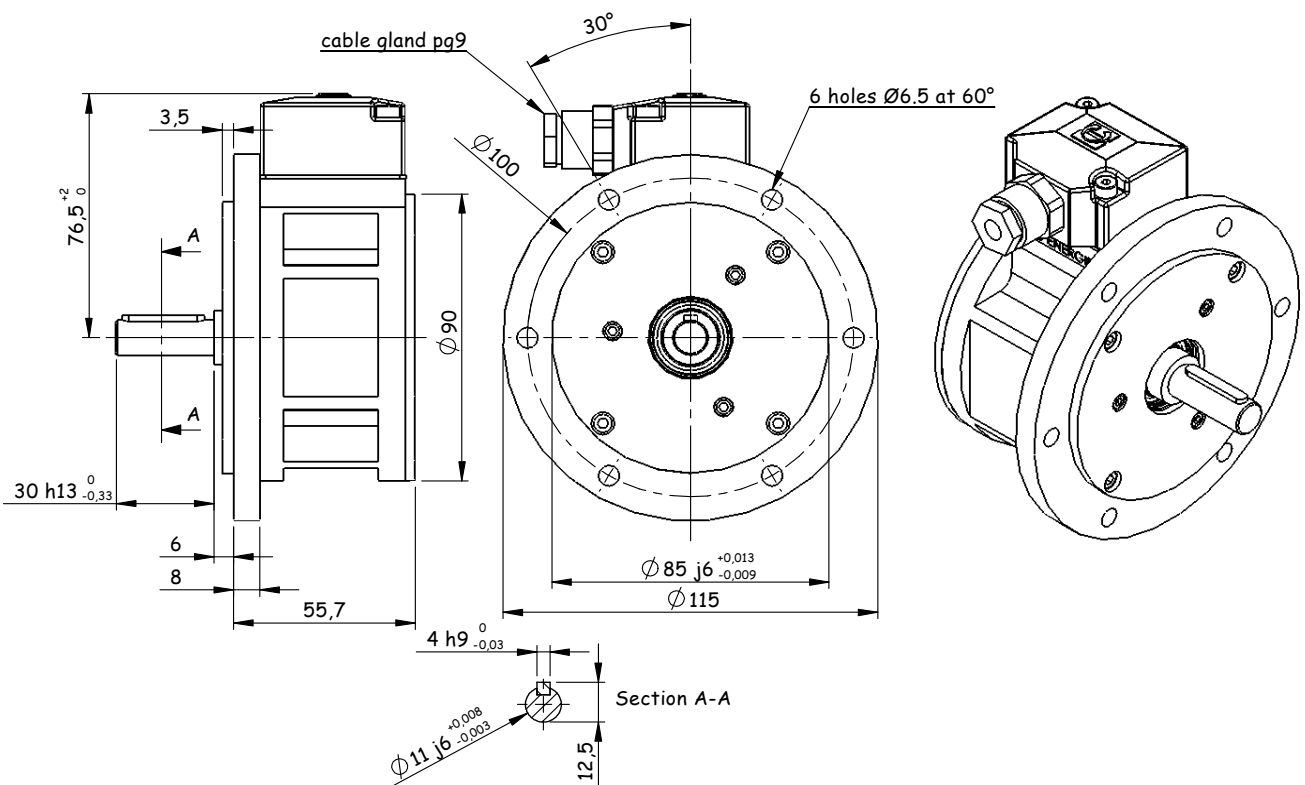
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CABLE (CA01)



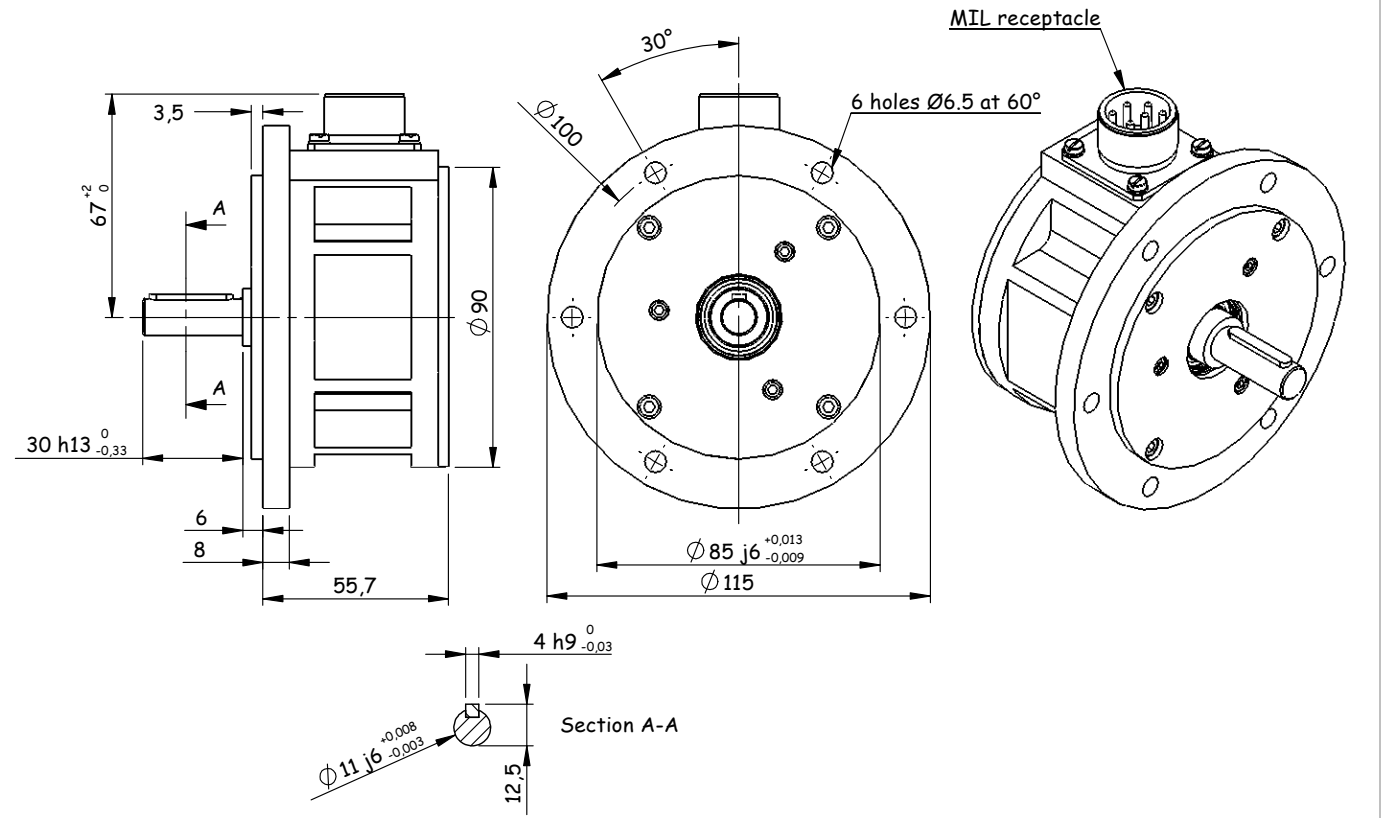
JUNCTION BOX (JBX1)



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MS310 CONNECTOR (MILP)



Electrical characteristics

- Supply voltage 4,5 to 30 Vdc
- 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 20 mA max per channel
- EMC According to EN 61000-6-2 and EN 61000-6-4

Connections

| | Cable UL - 8 wires | M23 – CW | MS310 | Junction box | Output waveforms |
|-------------|-----------------------|-------------|-------|-----------------|------------------|
| A | white | 5 | A | 3 | |
| A/ | yellow | 6 | H | 6 | |
| B | blue | 8 | B | 4 | |
| B/ | orange | 1 | I | 7 | |
| Z | green | 3 | C | 5 | |
| Z/ | brown | 4 | J | 8 | |
| Vcc (+) | red | 12 | D | 2 | |
| Gnd (-) | black | 10 | F | 1 | |
| Ground case | Drain | 9 | G | | |

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Mechanical characteristics

- Max continuous speed 10 000 min⁻¹
- Starting torque ≤ 0.5 N.cm
- Shaft Inertia 70 gr.cm²
- Weight 700 gr
- Protection IP 65 (IEC 60529) and IP64 at shaft end
- Max shock 30 g, 11 ms (IEC 68-2-27)
- Max vibrations 10 g, 10-2000 Hz (IEC 68-2-6)

Ordering code

RCI444R-FS11-4-1024-23C1

∅ Resolution Connection

- **RCI 444R** **RADIO-ENERGIE Incremental encoder** dedicated to **Robust environments**
- **Shaft Diameters** 11 (11 mm) mostly used, 07 (7 mm) standard too
- **Electronics** 4 (Push-Pull), 3 (RS422)
- **Standard resolutions** 1024, 2048 standard
Others resolutions upon request
- **Connections**
 - Connector M23**
 - 23C1** : M23 connector, 12 pins clockwise (CW), channel A before B - standard
 - 23C0** : M23 connector, 12 pins clockwise (CW), channel B before A
 - 23A1** : M23 connector, 12 pins counter-clockwise (CCW), channel A before B
 - 23A0** : M23 connector, 12 pins clockwise (CW), channel B before A
 - Junction Box**
 - JBX1**: Junction Box, channel A before B - standard
 - JBX0**: Junction Box, channel B before A
 - Câble**
 - CA01**: cable one meter - standard
 - CA02**: cable two meters **CA10**: cable ten meters (maximum length)
 - Connector MS310**
 - MILP**: MS310 connector, 10 pins
 - Other connections on request**

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