



POSITAL

FRABA

IXARC Absolute Rotary Encoder

UCD-S101B-1216-HES0-PRQ



Interface

| | |
|-------------------------|---|
| Interface | SSI with Preset |
| Programming Functions | Absolute: Resolution, Revolution, Code, Preset |
| Manual Functions | Preset + complement via cable or connector |
| Interface Cycle Time | ≥ 25 μs |
| Number of Preset Cycles | 5,100,000 |
| SSI Format | MMMMMMMMMMMMSSSSSSSSSSSSSSSS00 |
| Video Manual | ▶ Watch a simple installation video |

Outputs

| | |
|---------------|-------|
| Output Driver | RS422 |
|---------------|-------|

Electrical Data

| | |
|-----------------------------|-------------------------|
| Supply Voltage | 4.5 - 30 VDC |
| Current Consumption | Typical 50 mA |
| Power Consumption | ≤ 1.0 W |
| Start-Up Time | < 250 ms |
| Clock Input | RS 422, via Optocoupler |
| Clock Frequency | 100 kHz - 2 MHz |
| Reverse Polarity Protection | Yes |
| Short Circuit Protection | Yes |
| EMC: Emitted Interference | DIN EN 61000-6-4 |

Data Sheet

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| | |
|---------------------|-------------------|
| EMC: Noise Immunity | DIN EN 61000-6-2 |
| MTTF | 350 years @ 40 °C |

Sensor

| | |
|------------------------|---|
| Technology | Magnetic |
| Resolution Singleturn | 16 bit |
| Resolution Multiturn | 12 bit |
| Multiturn Technology | Self powered magnetic pulse counter (no battery, no gear) |
| Accuracy (INL) | $\pm 0.0878^\circ$ (≤ 12 bit) |
| Sense Signal (Default) | Clockwise shaft movement (front view on shaft) |
| Code | Binary |

Environmental Specifications

| | |
|----------------------------|------------------------------------|
| Protection Class (Shaft) | IP65 |
| Protection Class (Housing) | IP66/IP67 |
| Operating Temperature | -40 °C (-40 °F) - +85 °C (+185 °F) |
| Humidity | 98% RH, no condensation |

Mechanical Data

| | |
|-----------------------------------|---|
| Housing Material | Steel |
| Housing Coating | Wet coating (RAL 9006 White Aluminium) + Cathodic corrosion protection (>720 h salt spray resistance) |
| Flange Type | Blind Hollow, \varnothing 58 mm (H) |
| Flange Material | Aluminum |
| Shaft Type | Blind Hollow, Depth = 28 mm |
| Shaft Diameter | \varnothing 14 mm (0.55") |
| Shaft Material | Stainless Steel V2A (1.4305, 303) |
| Rotor Inertia | ≤ 30 gcm ² [≤ 0.17 oz-in ²] |
| Friction Torque | ≤ 3 Ncm @ 20 °C (4.2 oz-in @ 68 °F) |
| Max. Permissible Mechanical Speed | ≤ 12000 1/min |
| Shock Resistance | ≤ 100 g (half sine 6 ms, EN 60068-2-27) |
| Permanent Shock Resistance | ≤ 10 g (half sine 16 ms, EN 60068-2-29) |
| Vibration Resistance | ≤ 10 g (10 Hz - 1000 Hz, EN 60068-2-6) |
| Length | 71,2 mm (2.80") |
| Weight | 320 g (0.71 lb) |



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Electrical Connection

| | |
|------------------------|---------------------------|
| Connection Orientation | Radial |
| Connector | M12, Male, 8 pin, a coded |

Certification

| | |
|--------------------|---|
| Approval | CE + cULus listed, Industrial Control Equipment |
| Product Life Cycle | Established |



Connection Plan

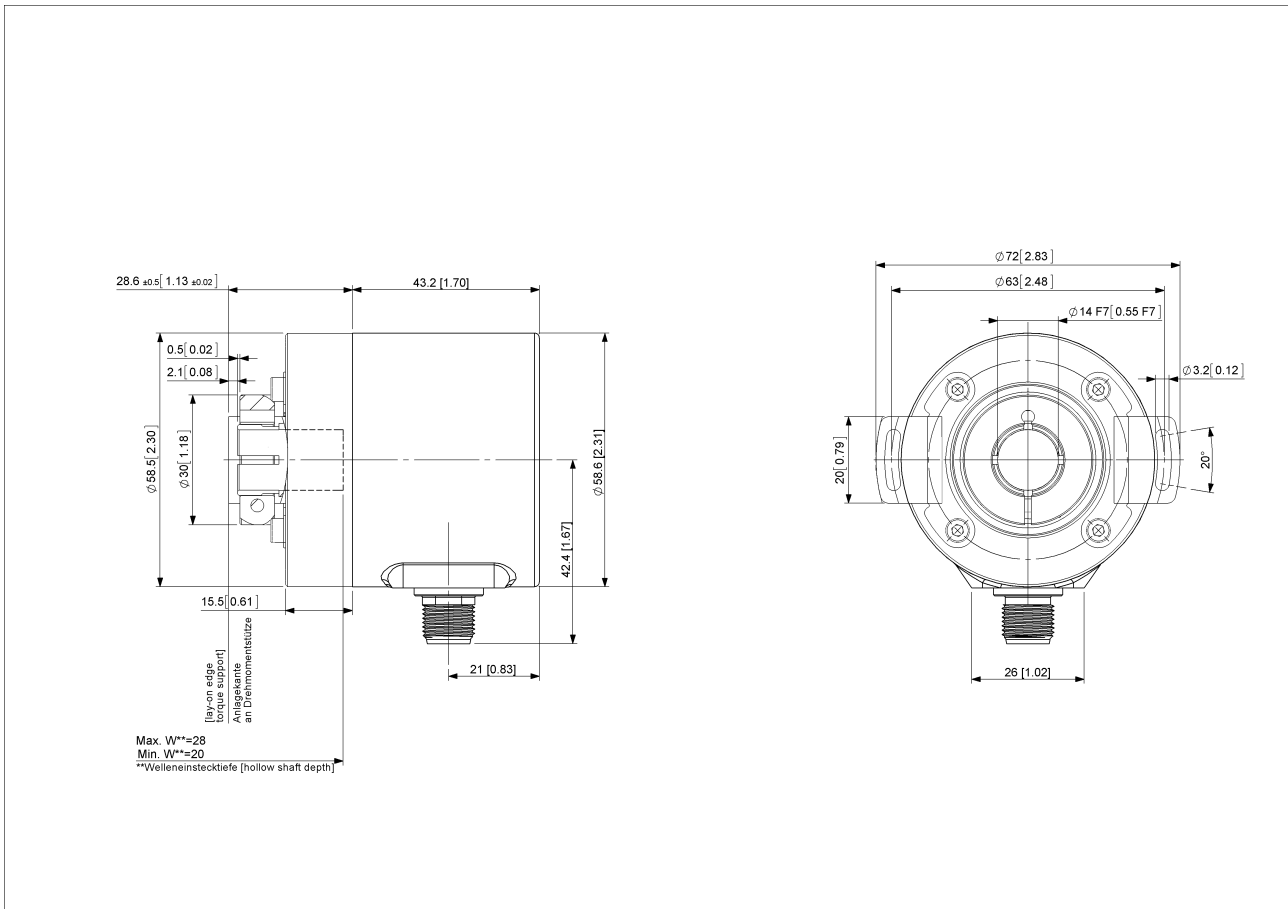
| SIGNAL | PIN NUMBER |
|--------------|-------------------|
| Power Supply | 2 |
| GND | 1 |
| Data+ | 5 |
| Data- | 6 |
| Clock+ | 3 |
| Clock- | 4 |
| Preset | 7 |
| DIR | 8 |
| Shielding | Connector Housing |

Connector-View on Encoder
Rotation Clockwise (seen on shaft)



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[2D Drawing](#)

Accessories

Connectors & Cables

- 5m PUR Cable, 8pin, A-Coded, f
- 10m PUR Cable, 8pin, A-Coded, f
- 2m PUR Cable, 8pin, A-Coded, f
- 10m PUR Cable, 8pin, A-Coded, f
- M12, 8pin A-Coded, Female
- More

Clamping Ring B15

Contact

Data Sheet

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The picture and drawing are for general presentation purposes only. Please refer to the "Download" section for detailed technical drawings. All dimension in [inch] mm. © FRABA B.V., All rights reserved. We do not assume responsibility for technical inaccuracies or omissions. Specifications are subject to change without notice.