



IXARC Absolute Rotary Encoder

OCD-EIB1B-1216-B120-PRM



Interface

| | |
|-----------------------|---|
| Interface | Profinet |
| Profile | Profidrive Profile 4.x, Encoder Profile 4.x |
| Diagnostics | Memory |
| Features | Boot-Loader, Round Axis, Flashing LEDs |
| Transmission Rate | 10 / 100 Mbit |
| Interface Cycle Time | ≥ 1 ms |
| Programming Functions | Resolution, time base and filter for velocity, preset, counting direction, IP-Address |

Outputs

| | |
|---------------|----------|
| Output Driver | Ethernet |
|---------------|----------|

Electrical Data

| | |
|-----------------------------|--|
| Supply Voltage | 10 - 30 VDC |
| Current Consumption | ≤ 230 mA @ 10 V DC, ≤ 100 mA @ 24 V DC |
| Power Consumption | ≤ 2.5 W |
| Start-Up Time | < 1 s |
| Reverse Polarity Protection | Yes |
| Short Circuit Protection | Yes |
| EMC: Emitted Interference | DIN EN 61000-6-4 |
| EMC: Noise Immunity | DIN EN 61000-6-2 |

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MTTF 65 years @ 40 °C

Sensor

| | |
|-----------------------|---|
| Technology | Optical |
| Resolution Singleturn | 16 bit |
| Resolution Multiturn | 12 bit |
| Multiturn Technology | Mechanical Gearing (no Battery) |
| Accuracy (INL) | $\pm 0.0220^\circ$ (14 - 16 bit), $\pm 0.0439^\circ$ (≤ 13 bit) |
| Code | Binary |

Environmental Specifications

| | |
|----------------------------|------------------------------------|
| Protection Class (Shaft) | IP65 |
| Protection Class (Housing) | IP65 |
| Operating Temperature | -40 °C (-40 °F) - +85 °C (+185 °F) |
| Storage 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 (B) |
| Flange Material | Aluminum |
| Shaft Type | Blind Hollow, Depth = 30 mm |
| Shaft Diameter | \varnothing 12 mm (0.47") |
| Shaft Material | Stainless Steel V2A (1.4305, 303) |
| Rotor Inertia | $\leq 30 \text{ gcm}^2$ [$\leq 0.17 \text{ oz-in}^2$] |
| Friction Torque | $\leq 3 \text{ Ncm}$ @ 20 °C (4.2 oz-in @ 68 °F) |
| Max. Permissible Mechanical Speed | $\leq 12000 \text{ 1/min}$ |
| Shock Resistance | $\leq 100 \text{ g}$ (half sine 6 ms, EN 60068-2-27) |
| Permanent Shock Resistance | $\leq 10 \text{ g}$ (half sine 16 ms, EN 60068-2-29) |
| Vibration Resistance | $\leq 10 \text{ g}$ (10 Hz - 1000 Hz, EN 60068-2-6) |
| Length | 98,5 mm (3.88") |
| Weight | 375 g (0.83 lb) |
| Maximum Axial / Radial Misalignment | Static $\pm 0.3 \text{ mm}$ / $\pm 0.5 \text{ mm}$; Dynamic $\pm 0.1 \text{ mm}$ / $\pm 0.2 \text{ mm}$ |

Data Sheet
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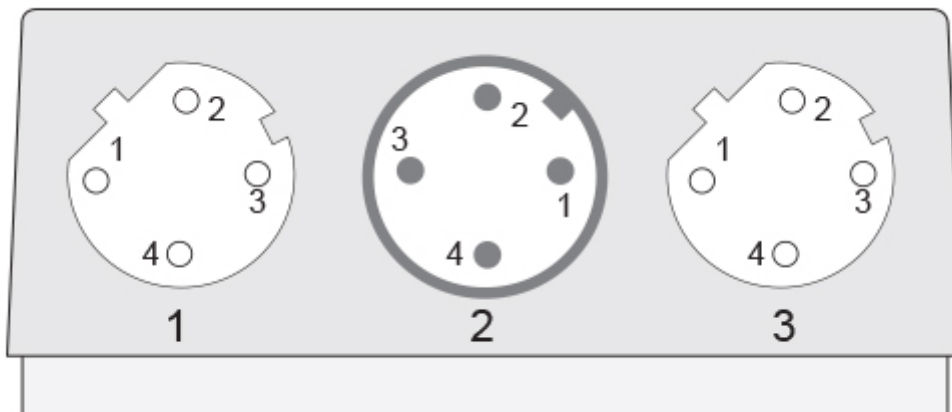


Electrical Connection

| | |
|------------------------|-----------------------------|
| Connection Orientation | Radial |
| Connector 1 | M12, Female, 4 pin, d coded |
| Connector 2 | M12, Male, 4 pin, a coded |
| Connector 3 | M12, Female, 4 pin, d coded |

Product Life Cycle

| | |
|--------------------|-------------|
| Product Life Cycle | Established |
| Approval | CE |



Connection Plan

| SIGNAL | CONNECTOR | PIN NUMBER |
|---------------|-------------|------------|
| Tx+ | Connector 1 | 1 |
| Rx+ | Connector 1 | 2 |
| Tx- | Connector 1 | 3 |
| Rx- | Connector 1 | 4 |
| Power Supply | Connector 2 | 1 |
| Not Connected | Connector 2 | 2 |
| GND | Connector 2 | 3 |
| Not Connected | Connector 2 | 4 |
| Tx+ | Connector 3 | 1 |
| Rx+ | Connector 3 | 2 |
| Tx- | Connector 3 | 3 |
| Rx- | Connector 3 | 4 |

Connector-View on Encoder Dimensional Drawing

[2D Drawing](#)

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Accessories

Connectors & Cables

2m PUR Cable, 4pin, D-Coded, m
M12, 4pin A-Coded, Female
10m PUR Cable, 4pin, D-Coded, m
10m PVC Cable, 4pin, D-Coded, m
2m PVC Cable, 4pin, D-Coded, m
5m PVC Cable, 4pin, D-Coded, m
POS M12 5pin-A Female+5m PUR Cable
POS M12 5pin-A Female+2m PUR Cable
POS M12 5pin-A Female+10m PUR Cable
M12, 4pin D-Coded, Male
M12, 5pin A-Coded, Female
5m PUR Cable, 4pin, D-Coded, m
More
Clamping Rings
Clamping Ring B15

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