## IXARC Absolute Rotary Encoder

## OCD-EIC1B-1416-B12S-PRM

| **Interface** | |
|---|---|
| Interface | Profinet |
| Speed | Real Time (RT), Isochronous Real Time (IRT) |
| Profile | Profidrive Profile 4.x, Encoder Profile 4.0, 4.1, 4.2 |
| Diagnostics | Different faults and warnings for Memory, Temperature, Synchronization, Commissioning diagnostics, Commissioning invalid scaling, Communication, Master’s sign of life |
| Features | Boot-Loader, Round Axis, Flashing LEDs, MRP, MRPD, Acceleration values |
| Transmission Rate | 100 Mbit |
| Interface Cycle Time | ≥ 125 µs |
| Programming Functions | Resolution, time base and filter for velocity, preset, counting direction, IP-Address, Fractional scaling, Encoder parameter control via GSDML or Non-Volatile memory |

| **Outputs** | |
|---|---|
| Output Driver | Ethernet |

| **Electrical Data** | |
|---|---|
| Supply Voltage | 10 – 32 VDC |
| Power Consumption | ≤ 3 W |
| Start-Up Time | < 15 s |

| | |
|---|---|
| Max. Permissable Electric Speed | 12000 1/min (12bit), 1000 1/min (16bit) |
| Reverse Polarity Protection | Yes |
| Short Circuit Protection | Yes |
| EMC: Emitted Interference | DIN EN 61000-6-4 |
| EMC: Noise Immunity | DIN EN 61000-6-2 |
| MTTF | 95 years @ 40 °C |

**Sensor**

| | |
|---|---|
| Technology | Optical |
| Resolution Singleturn | 16 bit |
| Resolution Multiturn | 14 bit |
| Multiturn Technology | Mechanical Gearing (no Battery) |
| Accuracy (INL) | ±0.0220° (14 – 16 bit), ±0.0439° (≤13 bit) |
| Code | Binary |

**Environmental Specifications**

| | |
|---|---|
| Protection Class (Shaft) | IP66/IP67 |
| Protection Class (Housing) | IP66/IP67 |
| 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 spay resistance) |
| Flange Type | Blind Hollow, ø 58 mm (B) |
| Flange Material | Aluminum |
| Shaft Type | Blind Hollow, Depth = 30 mm |
| Shaft Diameter | ø 12 mm (0.47") |
| Shaft Material | Stainless Steel V2A (1.4305, 303) |
| Rotor Inertia | ≤ 30 gcm² [≤ 0.17 oz-in²] |
| Friction Torque | ≤ 5 Ncm @ 20 °C, (7.1 oz-in @ 68 °F) |
| Max. Permissible Mechanical Speed | ≤ 3000 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 | 98,5 mm (3.88") |
| Weight | 380 g (0.84 lb) |
| Maximum Axial / Radial Misalignment | Static ± 0.3 mm /± 0.5 mm; Dynamic ± 0.1 mm /± 0.2 mm |

**Electrical Connection**

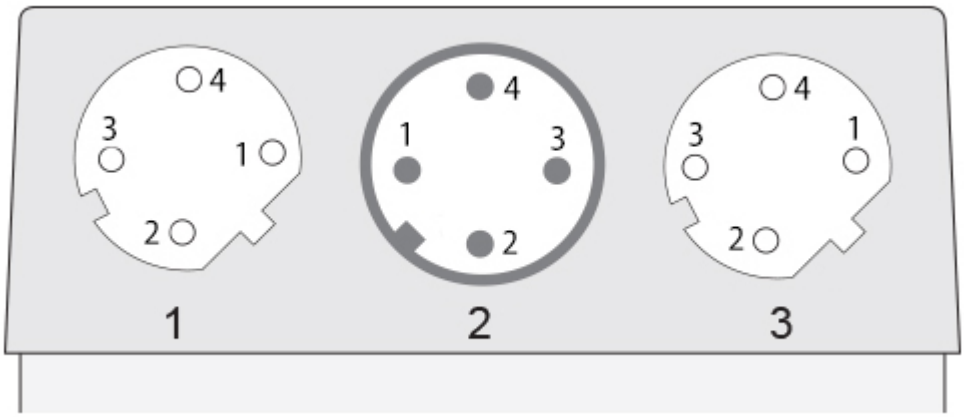
| | |
|---|---|
| Connection Orientation | Radial |
| Connector 1 | M12, Female, 4 pin, d coded |
| Connector 2 | M12, Male, 4 pin, a coded |
| Connector 3 | M12, Female, 4 pin, d coded |

**Certification**

| | |
|---|---|
| Approval | CE |

**Product Life Cycle**

| | |
|---|---|
| Product Life Cycle | New |




**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

### 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

**Got questions? Need an individual solution? We are here to help!**

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