



IXARC Absolute Rotary Encoder

OCD-DPC1B-1412-B12S-H3P



Interface

| | |
|-----------------------|--|
| Interface | Profibus DP |
| Profile | DPV0, DPV1 and DPV2 Class 2 (EN50170 + EN50254) |
| Diagnostics | Memory |
| Manual Functions | Address selector switch 0-99 and terminal resistor (with connection cap) |
| Features | Round Axis |
| Transmission Rate | ≤12 Mbaud |
| Interface Cycle Time | ≥ 1 ms |
| Programming Functions | Resolution, gearing factor (physical resolution) , velocity scaling + filter, preset (zero point), counting direction, limit switches , node number, teach-in, diagnosis |

Outputs

| | |
|---------------|--|
| Output Driver | Profibus Data Interface, galvanically isolated via opto-couplers |
|---------------|--|

Electrical Data

| | |
|---------------------|---------------------------------------|
| Supply Voltage | 10 - 30 VDC |
| Current Consumption | ≤ 115 mA @ 10 V DC, ≤ 50 mA @ 30 V DC |
| Power Consumption | ≤ 1.5 W |
| Start-Up Time | < 1 s |

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| | |
|-----------------------------|--------------------|
| 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 | 13.5 years @ 40 °C |

Sensor

| | |
|-----------------------|--|
| Technology | Optical |
| Resolution Singleturn | 12 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

| | |
|-----------------------------------|---|
| Connection Cap Material | Aluminum |
| Housing Material | Steel |
| Housing Coating | Wet coating (RAL 9006 White Aluminium) + Cathodic corrosion protection (>720 h salt spray 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 gcm ² [≤ 0.17 oz-in ²] |
| 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) |

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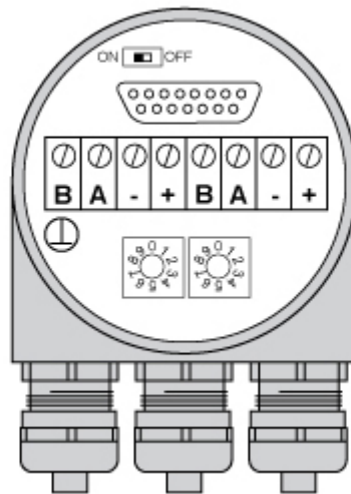
| | |
|-------------------------------------|---|
| Vibration Resistance | ≤ 10 g (10 Hz - 1000 Hz, EN 60068-2-6) |
| Length | 99 mm (3.90") |
| Weight | 485 g (1.07 lb) |
| Maximum Axial / Radial Misalignment | Static ± 0.3 mm /± 0.5 mm; Dynamic ± 0.1 mm /± 0.2 mm |

Electrical Connection

| | |
|------------------------|---|
| Connection Orientation | Radial |
| Connection Type | 3 x Cable Gland |
| Connection Cap Type | Removable for easy replacing encoder without new installation of cable, Rotary switches with visible node number, No active components, Terminal resistor switch cut the outgoing bus too, Big spring clips |

Product Life Cycle

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



Connection Plan

| SIGNAL | PIN NUMBER |
|----------------------|------------|
| Bus line B (Bus in) | B |
| Bus line A (Bus in) | A |
| GND | - |
| Power Supply | + |
| Bus line B (Bus out) | B |
| Bus line A (Bus out) | A |

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| | |
|--------------|---|
| GND | - |
| Power Supply | + |

Connector-View on Encoder **Dimensional Drawing**

[2D Drawing](#)

Accessories

Clamping Rings
Clamping Ring B15

Contact

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