



IXARC Absolute Rotary Encoder

OCD-DPC1B-0016-B120-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 |

Data Sheet

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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 | 16 bit |
| 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

| | |
|-----------------------------------|--|
| Connection Cap Material | Aluminum |
| Housing Material | Steel |
| Housing Coating | Cathodic corrosion protection (>720 hrs 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 | 88 mm (3.46") |
| Weight | 470 g (1.04 lb) |

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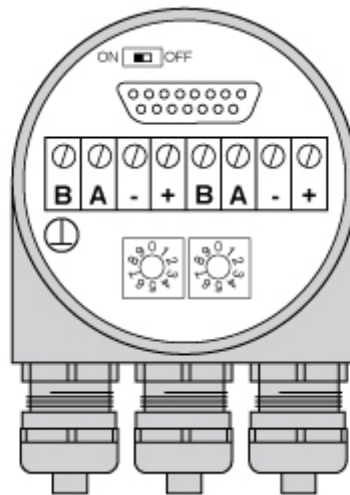
Maximum Axial / Radial Misalignment Static ± 0.3 mm / ± 0.5 mm; Dynamic ± 0.1 mm / ± 0.2 mm

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

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Connector-View on Encoder **Dimensional Drawing**

[2D Drawing](#)

Accessories

Clamping Rings
Clamping Ring B15

Contact

Sold & Serviced By:



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