



### IXARC Absolute Rotary Encoder

### OCD-DPC1B-1413-B12V-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 | 13 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           | Stainless Steel V2A (1.4305; 303)                  |
| Housing Material                  | Stainless Steel V2A (1.4305, 303)                  |
| Housing Coating                   | No Coating   |
| Flange Type                       | Blind Hollow, ø 58 mm (B)                          |
| Flange Material                   | Stainless steel V2A (1.4305; 303)                  |
| 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 <sup>2</sup> [≤ 0.17 oz-in <sup>2</sup> ] |
| 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                            | 100 mm (3.94")                                     |

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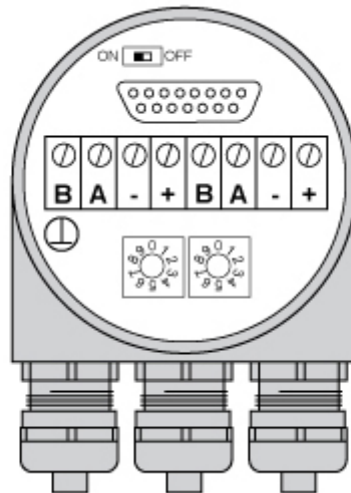
|                                     |   |
|-------------------------------------|---|
| Weight                              | 1060 g (2.34 lb)  |
| Maximum Axial / Radial Misalignment | Static $\pm 0.3$ mm / $\pm 0.5$ mm; Dynamic $\pm 0.1$ mm / $\pm 0.2$ mm |

### 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-VA

#### **Contact**

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