



### IXARC Absolute Rotary Encoder

### OCD-DPC1B-1412-S060-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

Printed at 7-10-2020 19:10

# POSITAL

## FRABA



|                             |                    |
|-----------------------------|--------------------|
| 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)   | 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  | Wet coating (RAL 9006 White Aluminium) + Cathodic corrosion protection (>720 h salt spray resistance) |
| Flange Type  | Synchro, ø 58 mm (S)  |
| Flange Material  | Aluminum  |
| Shaft Type   | Solid, Length = 10 mm   |
| Shaft Diameter   | ø 6 mm (0.24")  |
| Shaft Material   | Stainless Steel V2A (1.4305, 303)   |
| Max. Shaft Load  | Axial 40 N, Radial 110 N  |
| Minimum Mechanical Lifetime (10 <sup>8</sup> revolutions with Fa/Fr) | 550 (20 N / 40 N), 195 (40 N / 60 N), 135 (40 N / 80 N), 85 (40 N / 110 N)                            |
| Rotor Inertia  | ≤ 30 gcm <sup>2</sup> [≤ 0.17 oz-in <sup>2</sup> ]  |
| Friction Torque  | ≤ 3 Ncm @ 20 °C (4.2 oz-in @ 68 °F)   |
| Max. Permissible Mechanical Speed                                    | ≤ 12000 1/min   |

Data Sheet

Printed at 7-10-2020 19:10

# POSITAL

## FRABA



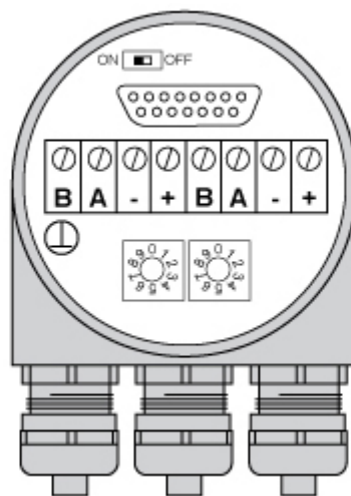
|                            |   |
|----------------------------|---|
| Shock Resistance           | ≤ 100 g (half sine 6 ms, EN 60068-2-27) |
| Permanent Shock Resistance | ≤ 10 g (half sine 16 ms, EN 60068-2-29) |
| Vibration Resistance       | ≤ 10 g (10 Hz - 1000 Hz, EN 60068-2-6)  |
| Length                     | 84,5 mm (3.33")                         |
| Weight                     | 460 g (1.01 lb)                         |

### 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          |

Data Sheet

Printed at 7-10-2020 19:10

# POSITAL

---

## FRABA



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

### Connector-View on Encoder **Dimensional Drawing**

[2D Drawing](#)

#### **Accessories**

##### Couplings

Coupling Bellow Type-06-06

Coupling Bellow Type-06-10

Coupling Bellow Type-06-08

Coupling Bellow Type-06-(3/8")

Coupling Bellow Type-06-(1/4")

Coupling Jaw Type-06-06

Coupling Jaw Type-06-10

Coupling Jaw Type-06-08

Coupling Jaw Type-06-12

Coupling Jaw Type-06-(1/4")

Coupling Jaw Type-06-(3/8")

Coupling Disc Type-06-06

Coupling Disc Type-06-10

More

Adapter Flanges

Mounting Bracket for Synchro Flange w/ fixtures

Clamping Rings

Clamp Disc w/ Eccentric Hole-4pcs

Clamp Disc w/ Centred Hole-4pcs

#### **Contact**

**Sold & Serviced By:**



Canadian and International Sales

**ELECTROMATE**

877-737-8698

[sales@electromate.com](mailto:sales@electromate.com)

[www.electromate.com](http://www.electromate.com)

U.S. Sales

**SERVO2GO.com**

877-378-0240

[sales@servo2go.com](mailto:sales@servo2go.com)

[www.servo2go.com](http://www.servo2go.com)

Data Sheet

Printed at 7-10-2020 19:10

# POSITAL

---

## FRABA



The picture and drawing are for general presentation purposes only. Please refer to the "Download" section for detailed technical drawings. All dimension in [inch] mm. © FRABA B.V., All rights reserved. We do not assume responsibility for technical inaccuracies or omissions. Specifications are subject to change without notice.