POSITAL
FRABA

## IXARC Absolute Rotary Encoder

## OCD-DPC1B-1413-C100-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 |

| | |
|---|---|
| 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) | IP65 |
| 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 spay resistance) |
| Flange Type | Clamp, ø 58 mm (C) |
| Flange Material | Aluminum |
| Shaft Type | Solid, Single Flat, Length = 20 mm |
| Shaft Diameter | ø 10 mm (0.39") |
| Shaft Material | Stainless Steel V2A (1.4305, 303) |
| Max. Shaft Load | Axial 40 N, Radial 110 N |
| Minimum Mechanical Lifetime (10^8 revolutions with Fa/Fr) | 430 (20 N / 40 N), 150 (40 N / 60 N), 100 (40 N / 80 N), 55 (40 N / 110 N) |
| Rotor Inertia | ≤ 30 gcm² [≤ 0.17 oz-in²] |
| Friction Torque | ≤ 3 Ncm @ 20 °C (4.2 oz-in @ 68 °F) |
| Max. Permissible Mechanical Speed | ≤ 12000 1/min |

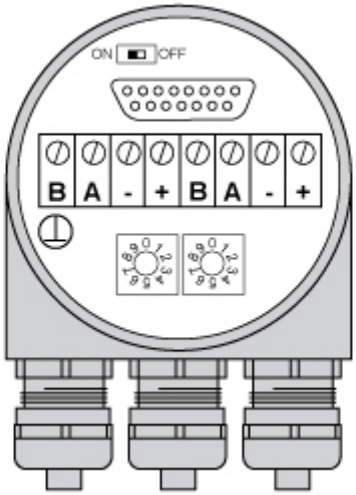
| | |
|---|---|
| Shock Resistance | ≤ 100 g (half sine 6 ms, EN 60068-2-27) |
| Permanent Shock Resistance | ≤ 10 g (half sine 16 ms, EN 60068-2-29) |
| Vibration Resistance | ≤ 10 g (10 Hz – 1000 Hz, EN 60068-2-6) |
| Length | 80,5 mm (3.17") |
| Weight | 475 g (1.05 lb) |

**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 |

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

Connector-View on Encoder

**Dimensional Drawing**

2D Drawing

**Accessories**

Couplings
Coupling Disc Type-10-12
Coupling Bellow Type-10-10
Coupling Bellow Type-06-10
Coupling Bellow Type-08-10
Coupling Bellow Type-10-12
Coupling Bellow Type-10-(1/4")
Coupling Bellow Type-10-(3/8")
Coupling Jaw Type-06-10
Coupling Jaw Type-08-10
Coupling Jaw Type-10-12
Coupling Jaw Type-10-(1/4")
Coupling Jaw Type-10-(3/8")
Coupling Jaw Type-10-10
Coupling Disc Type-06-10
Coupling Disc Type-10-10
More
Adapter Flanges
Mounting Bracket for Clamping Flange w/ fixtures
L Mounting Bracket w/ screws
Mounting Bracket Spring Loaded f. Clamping Flange
Clamping Rings
Clamp Disc w/ Eccentric Hole-4pcs
Clamp Disc w/ Centred Hole-4pcs

**Contact**

POSITAL

FRABA

Sold & Serviced By:

Canadian and International Sales
ELECTROMATE
877-737-8698
sales@electromate.com
www.electromate.com

U.S. Sales
SERVO2GO.com
877-378-0240
sales@servo2go.com
www.servo2go.com

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.