



# POSITAL

## FRABA

### IXARC Absolute Rotary Encoder

#### UCD-CA01B-1412-HCS0-PRV

This product is a prototype

#### Interface

|                       |                                                                                                                               |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Interface             | CANopen                                                                                                                       |
| Profile               | DS-406                                                                                                                        |
| Programming Functions | Resolution, preset, 2 limit switches, 8 CAMS, baud rate, CAN-Identifier, bootloader, transmission modes: polled, cyclic, sync |
| Features              | Round Axis                                                                                                                    |
| Transmission Rate     | min. 20 kBaud, max. 1 MBaud                                                                                                   |
| Interface Cycle Time  | $\geq 1$ ms                                                                                                                   |
| Video Manual          | <a href="#">▶ Watch a simple installation video</a>                                                                           |

#### Outputs

|               |                                                                 |
|---------------|-----------------------------------------------------------------|
| Output Driver | Transceiver (ISO 11898), Galvanically Isolated by Opto-Couplers |
|---------------|-----------------------------------------------------------------|

#### Electrical Data

|                             |                   |
|-----------------------------|-------------------|
| Supply Voltage              | 9 – 30 VDC        |
| Power Consumption           | $\leq 1.2$ W      |
| 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                        | 240 years @ 40 °C |

#### Sensor

|                       |                                                           |
|-----------------------|-----------------------------------------------------------|
| Technology            | Magnetic                                                  |
| Resolution Singleturn | 12 bit                                                    |
| Resolution Multiturn  | 14 bit                                                    |
| Multiturn Technology  | Self powered magnetic pulse counter (no battery, no gear) |
| Accuracy (INL)        | $\pm 0.0878^\circ$ ( $\leq 12$ bit)                       |
| Code                  | Binary                                                    |



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### 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           | None                                                                                                  |
| 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 (H)                                                                             |
| Flange Material                   | Aluminum                                                                                              |
| Shaft Type                        | Blind Hollow, Depth = 28 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                   | ≤ 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                            | 71,2 mm (2.80")                                                                                       |
| Weight                            | 370 g (0.82 lb)                                                                                       |

### Electrical Connection

|                        |                                     |
|------------------------|-------------------------------------|
| Connection Orientation | Radial                              |
| Connection Type        | Cable / Connector                   |
| Connector              | M12, Male, 5 pin, a coded, with LED |

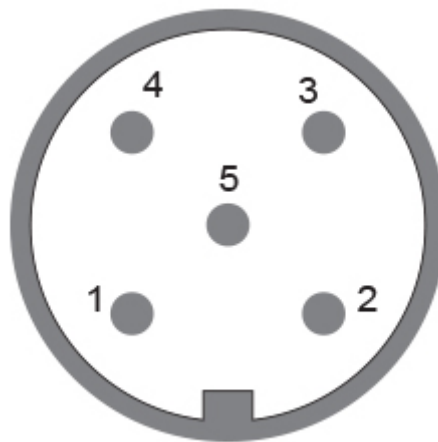
### Certification

|                    |                                                      |
|--------------------|------------------------------------------------------|
| Approval           | CE + cULus listed, Industrial Control Equipment + E1 |
| Product Life Cycle | Prototype                                            |



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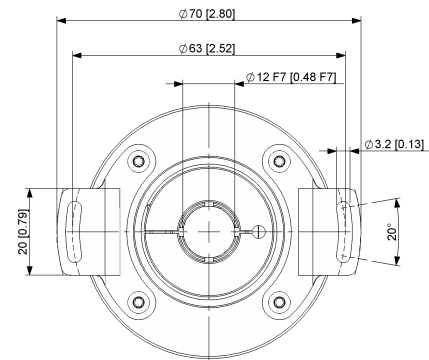
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### Connection Plan

| SIGNAL       | PIN NUMBER |
|--------------|------------|
| Power Supply | 2          |
| GND          | 3          |
| CAN High     | 4          |
| CAN Low      | 5          |
| CAN GND      | 1          |

Connector-View on Encoder  
**Dimensional Drawing**



## Accessories

10m PUR Cable, 5pin, A-Coded, f  
2m PUR Cable, 5pin, A-Coded, f  
5m PUR Cable, 5pin, A-Coded, f  
M12, 5pin A-Coded, Female  
More

## Clamping Ring Hollow Shaft T120

## Contact



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The picture and drawing are for general presentation purposes only. Please refer to the "Download" section for detailed technical drawings.  
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Specifications are subject to change without notice.