



# POSITAL

## FRABA

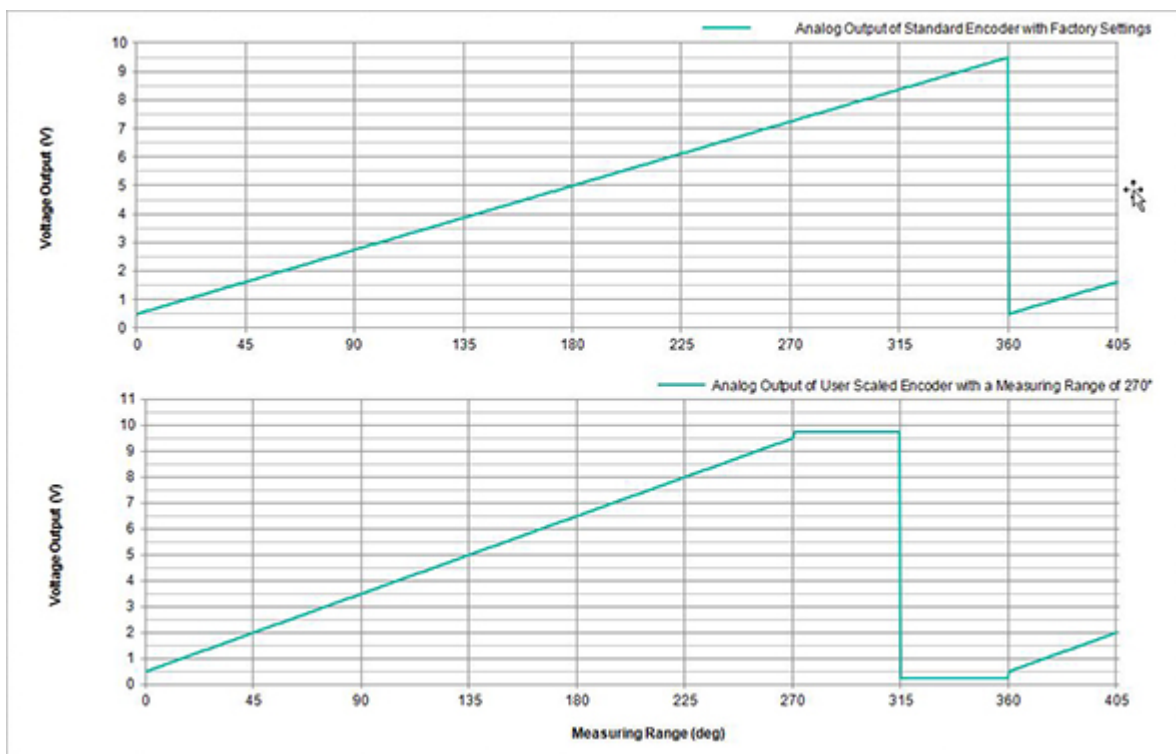
### IXARC Absolute Rotary Encoder

UCD-AV004-0013-VAS0-2AW



#### Interface

|                  |   |
|------------------|---|
| Interface        | Analog Voltage                                      |
| Manual Functions | Start and End point via Cable or Connector          |
| Video Manual     | <a href="#">▶ Watch a simple installation video</a> |



Data Sheet

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### Electrical Data

|                             |  |
|-----------------------------|--|
| Supply Voltage              | 8 - 32 VDC                                   |
| Current Consumption         | Typical 15 mA @24V (no load)                 |
| Start-Up Time               | <500 ms                                      |
| Min. Load Resistance        | 5 kΩ   |
| Analog Accuracy             | @ 10 V = ±10 mV (with an ideal power supply) |
| Linearity                   | 0.15%  |
| Settling Time               | 32 ms (from min value to max value jump)     |
| 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                        | 300.9 years @ 40 °C                          |

### Sensor

|                           |   |
|---------------------------|---|
| Technology                | Magnetic  |
| Resolution Singleturn     | 13 bit  |
| Resolution Multiturn      | 0 bit   |
| Accuracy (INL)            | ±0.0878° (≤ 12 bit)   |
| Sense Signal (Default)    | Counterclockwise shaft movement (front view on shaft)   |
| Code                      | Analog Voltage 0.5 - 4.5 V  |
| Cycle Time Base Sensor    | < 100 μs  |
| Minimum Measurement Range | 0 - 22.5°   |
| Resolution of Output      | Max. 13 bits over entire measuring range<br>(Fractional Turns - Resolution decreases less than 13 bits when measurements range is less than 90 degrees) |
| Multiturn Range           | Singleturn  |

### Environmental Specifications

|                            |   |
|----------------------------|---|
| Protection Class (Shaft)   | IP65  |
| Protection Class (Housing) | IP65  |
| Operating Temperature      | -30 °C fixed (-22 °F), -5 °C flexible (+23 °F) - +80 °C (+176 °F) |
| Humidity                   | 98% RH, no condensation   |

### Mechanical Data



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|                                     |   |
|-------------------------------------|---|
| Housing Material                    | Steel   |
| Housing Coating                     | Cathodic corrosion protection (>720 hrs salt spray resistance)          |
| Flange Type                         | Blind Hollow, $\varnothing$ 36 mm / $\varnothing$ 42 mm                 |
| Flange Material                     | Aluminum  |
| Shaft Type                          | Blind Hollow, Depth = 18 mm   |
| Shaft Diameter                      | $\varnothing$ 10 mm (0.39")   |
| Shaft Material                      | Stainless Steel V2A (1.4305, 303)                                       |
| Friction Torque                     | $\leq$ 3 Ncm @ 20 °C (4.2 oz-in @ 68 °F)                                |
| Max. Permissible Mechanical Speed   | $\leq$ 12000 1/min  |
| Shock Resistance                    | $\leq$ 100 g (half sine 6 ms, EN 60068-2-27)                            |
| Permanent Shock Resistance          | $\leq$ 10 g (half sine 16 ms, EN 60068-2-29)                            |
| Vibration Resistance                | $\leq$ 10 g (10 Hz - 1000 Hz, EN 60068-2-6)                             |
| Length                              | 54,2 mm (2.13")   |
| Weight                              | 255 g (0.56 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 | Axial                                     |
| Cable Length           | 2 m [79"]                                 |
| Wire Cross Section     | 0.14 mm <sup>2</sup> / AWG 26             |
| Material / Type        | PVC                                       |
| Cable Diameter         | 6 mm (0.24 in)                            |
| Minimum Bend Radius    | 46 mm (1.81") fixed, 61 mm (2.4") flexing |

### Certification

|                    |             |
|--------------------|-------------|
| Approval           | CE + cULus  |
| Product Life Cycle | Established |

### Connection Plan

|                |             |
|----------------|-------------|
| SIGNAL         | CABLE COLOR |
| Power Supply   | Red         |
| GND            | Yellow      |
| Analog Output  | Green       |
| Set1/Direction | Brown       |
| Set2/Zero Set  | White       |



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## FRABA

Shielding

Shield

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

[2D Drawing](#)

#### **Accessories**

Clamping Rings

Clamping Ring V12

Displays

AP22-D0 Analog Display (4 dig. o/p)

DiMod-A Analog Display

#### **Contact**



Contact Us

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.

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