



POSITAL

FRABA

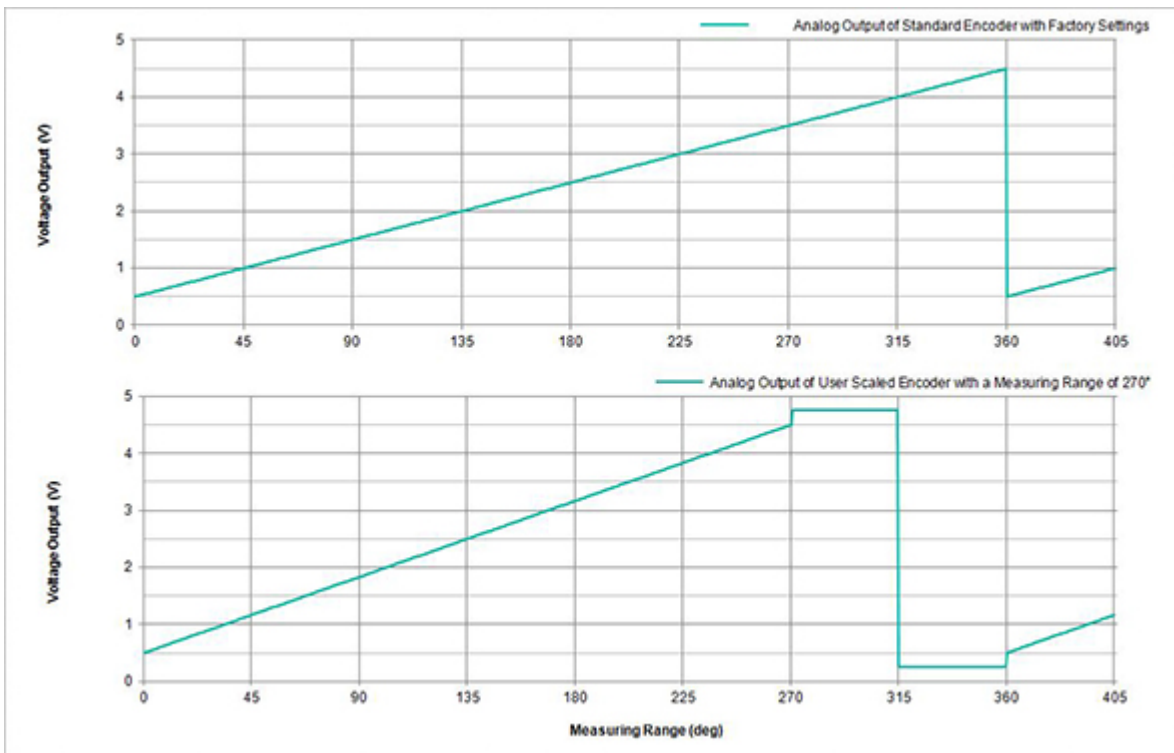
IXARC Absolute Rotary Encoder

UCD-AV003-0013-D10D-2AW



Interface

| | |
|------------------|---|
| Interface | Analog Voltage |
| Manual Functions | Start and End point via Cable or Connector |
| Video Manual | ▶ Watch a simple installation video |



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 |
| 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 (Fractional Turns - Resolution decreases less than 13 bits when measurements range is less than 90 degrees) |
| Multiturn Range | Singleturn |

Environmental Specifications

| | |
|----------------------------|--|
| Protection Class (Shaft) | IP68/IP69K |
| Protection Class (Housing) | IP68/IP69K |
| Operating Temperature | -40 °C fixed (-40 °F), -30 °C flexible (-22 °F) - +80 °C (+176 °F) |
| Humidity | 98% RH, no condensation |

Mechanical Data

| | |
|------------------|-------|
| Housing Material | Steel |
|------------------|-------|

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| | |
|--|--|
| Housing Coating | Cathodic corrosion protection (>720 hrs salt spray resistance) |
| Flange Type | Synchro, ø 36 mm Heavy Duty |
| Flange Material | Aluminum |
| Shaft Type | Solid, Length = 20 mm |
| Shaft Diameter | ø 10 mm (0.39") |
| Shaft Material | Stainless Steel V4A (1.4112, 440 B), hardened |
| Max. Shaft Load | Axial 180 N, Radial 180 N |
| Minimum Mechanical Lifetime (10 ⁸ revolutions with Fa/Fr) | 10 (180 N / 180 N), 15 (150 N,150 N), 30 (100 N / 100 N) |
| Friction Torque | ≤ 5 Ncm @ 20 °C, (7.1 oz-in @ 68 °F) |
| Max. Permissible Mechanical Speed | ≤ 6000 1/min |
| Shock Resistance | ≤ 200 g (half sine 11 ms, EN 60068-2-27) |
| Permanent Shock Resistance | ≤ 30 g (half sine 16 ms, EN 60068-2-29) |
| Vibration Resistance | ≤ 30 g (10 Hz - 1000 Hz, EN 60068-2-6) |
| Length | 56 mm (2.20") |
| Weight | 360 g (0.79 lb) |

Electrical Connection

| | |
|------------------------|--|
| Connection Orientation | Axial |
| Cable Length | 2 m [79"] |
| Wire Cross Section | 0.34 mm ² / AWG 22 |
| Material / Type | PUR / PU |
| Cable Diameter | 7.5 mm (0.30 in) |
| Minimum Bend Radius | 56 mm (2.2") fixed, 75 mm (3") flexing |

Certification

| | |
|--------------------|-------------|
| Approval | CE |
| 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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Shielding

Shield

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

Displays

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

DiMod-A Analog Display

Contact



Contact Us

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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.