



# POSITAL

## FRABA

### IXARC Absolute Rotary Encoder

UCD-AV003-0413-RA10-2RW



#### Interface

Interface

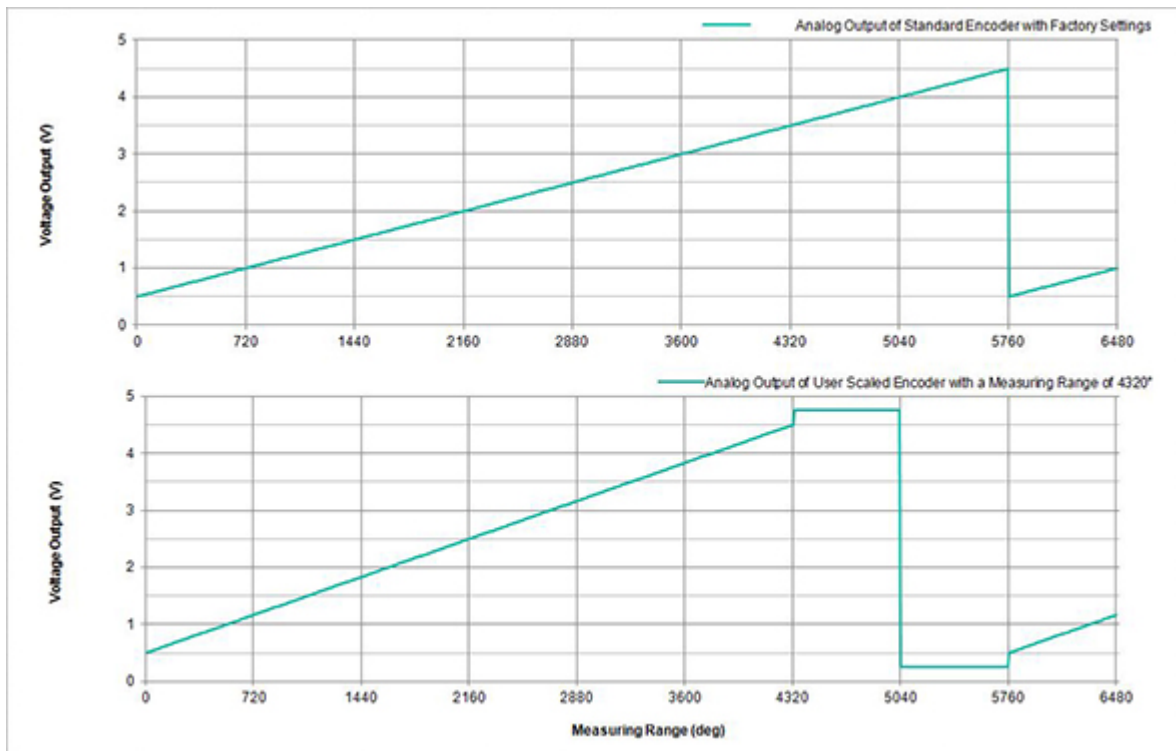
Analog Voltage

Manual Functions

Start and End point via Cable or Connector

Video Manual

[▶ Watch a simple installation video](#)



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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	257.6 years @ 40 °C

### Sensor

Technology	Magnetic
Resolution Singleturn	13 bit
Resolution Multiturn	4 bit
Multiturn Technology	Self powered magnetic pulse counter (no battery, no gear)
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	16 turn (default setting). User can use the scaling functionality to measure up to 65536 turns.

### 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

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### Mechanical Data

Housing Material	Steel
Housing Coating	Cathodic corrosion protection (>720 hrs salt spray resistance)
Flange Type	Synchro, $\varnothing$ 36 mm
Flange Material	Aluminum
Shaft Type	Solid, Length = 11.5 mm
Shaft Diameter	$\varnothing$ 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)	40 (20 N / 40 N), 14 (40 N / 60 N), 10 (40 N / 80 N), 6 (40 N / 110 N)
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	39 mm (1.54")
Weight	290 g (0.64 lb)

### Electrical Connection

Connection Orientation	Radial
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



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Set1/Direction	Brown
Set2/Zero Set	White
Shielding	Shield

### 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

##### Clamping Rings

Clamp Disc w/ Eccentric Hole-4pcs

Clamp Disc w/ Centred Hole-4pcs

##### 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.