



# POSITAL

## FRABA

### IXARC Absolute Rotary Encoder

UCD-AV003-0413-V8S0-PRM



#### Interface

Interface

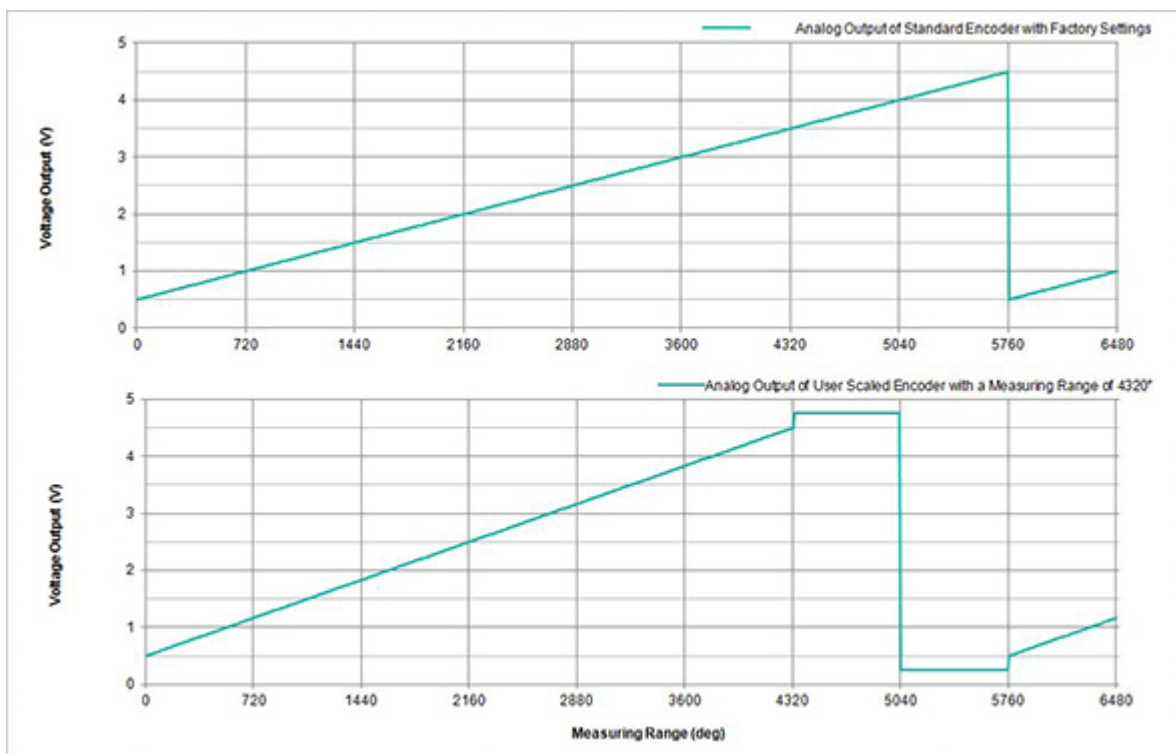
Analog Voltage

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 k $\Omega$
Analog Accuracy	@ 10 V = $\pm$ 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)	$\pm$ 0.0878° ( $\leq$ 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 $\mu$ s
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	-40 °C (-40 °F) - +85 °C (+185 °F)
Humidity	98% RH, no condensation

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### Mechanical Data

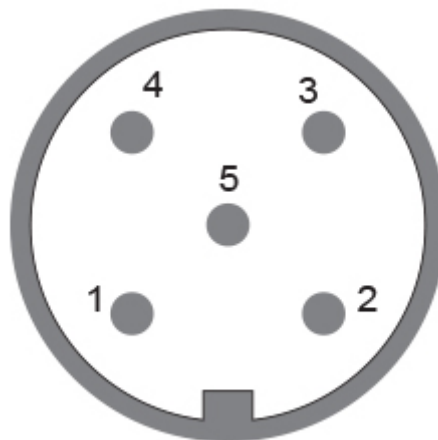
Housing Material	Steel
Housing Coating	Cathodic corrosion protection (>720 hrs salt spray resistance)
Flange Type	Blind Hollow, $\varnothing$ 36 mm / $\varnothing$ 42 mm
Flange Material	Aluminum
Shaft Type	Blind Hollow, Depth = 18 mm
Shaft Diameter	$\varnothing$ 8 mm (0.31")
Shaft Material	Stainless 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	50,2 mm (1.98")
Weight	180 g (0.40 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	Radial
Connector	M12, Male, 5 pin, a coded

### Certification

Approval	CE + cULus
Product Life Cycle	Established



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### Connection Plan

SIGNAL	CONNECTOR	PIN NUMBER
Power Supply	Connector 1	2
GND	Connector 1	3
Analog Output	Connector 1	1
Set1/Direction	Connector 1	5
Set2/Zero Set	Connector 1	4

### Connector-View on Encoder Dimensional Drawing

#### [2D Drawing](#)

### Accessories

#### Connectors & Cables

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

More

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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