



POSITAL

FRABA

IXARC Absolute Rotary Encoder

UCD-AV003-0013-V8S0-2AW



Interface

Interface

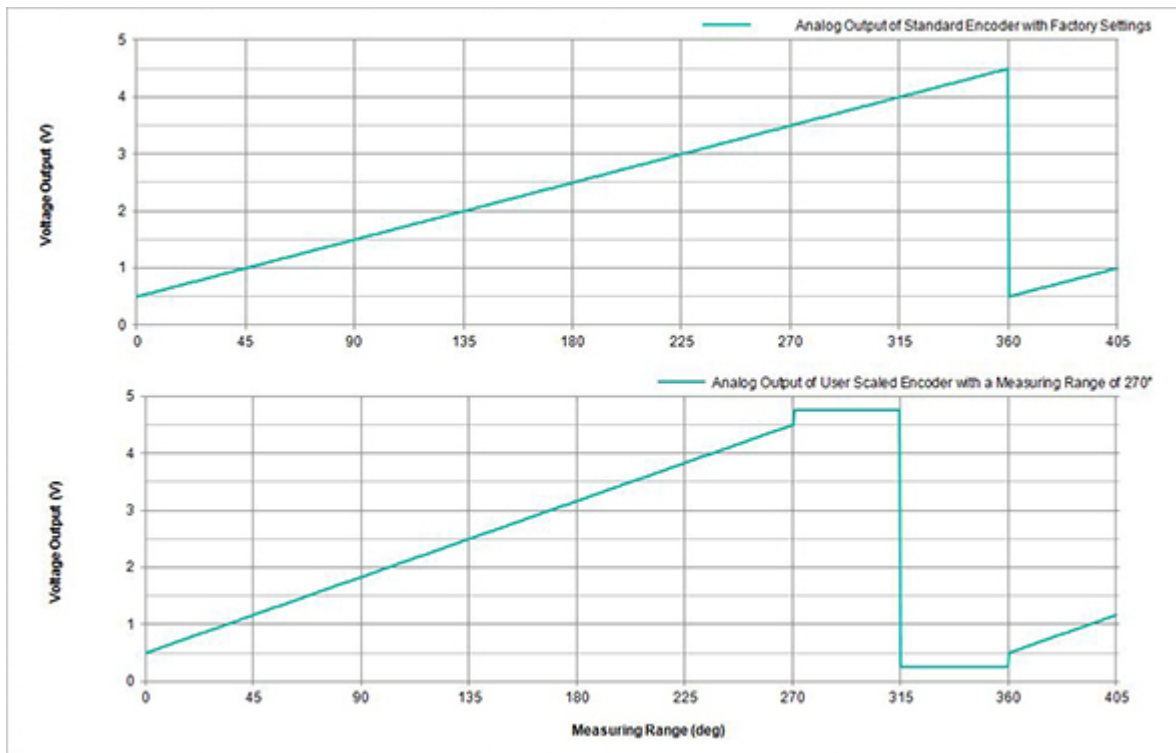
Analog Voltage

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)	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

Housing Material	Steel
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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	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 ² / 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
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.