



POSITAL

FRABA

IXARC Absolute Rotary Encoder

UCD-AV004-0013-RA10-PRM



Interface

Interface

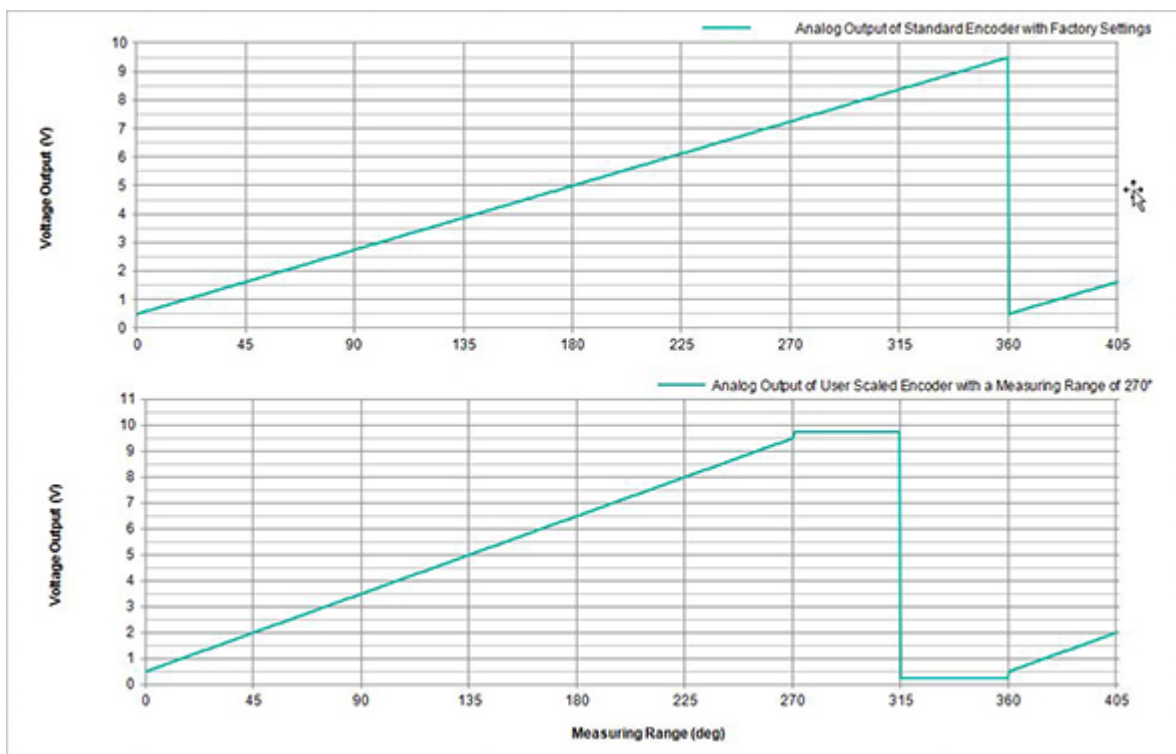
Analog Voltage

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
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 (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	-40 °C (-40 °F) - +85 °C (+185 °F)
Humidity	98% RH, no condensation

Mechanical Data

Housing Material	Steel
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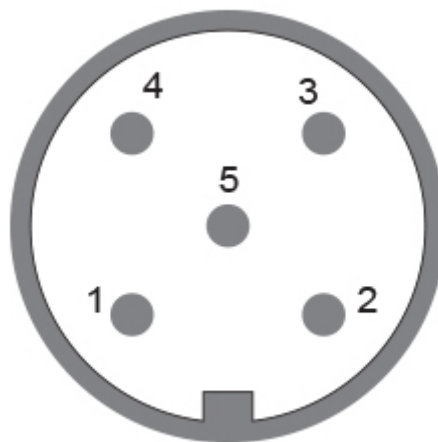
Housing Coating	Cathodic corrosion protection (>720 hrs salt spray resistance)
Flange Type	Synchro, \varnothing 36 mm
Flange Material	Aluminum
Shaft Type	Solid, Length = 11.5 mm
Shaft Diameter	\varnothing 6 mm (0.24")
Shaft Material	Stainless Steel V2A (1.4305, 303)
Max. Shaft Load	Axial 40 N, Radial 110 N
Minimum Mechanical Lifetime (10 ⁸ 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	180 g (0.40 lb)

Electrical Connection

Connection Orientation	Radial
Connector	M12, Male, 5 pin, a coded

Certification

Approval	CE + cULus
Product Life Cycle	Established





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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

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

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Contact



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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.