



# POSITAL

## FRABA

### IXARC Absolute Rotary Encoder

### UCD-EC00B-1416-HFS0-PRM



#### Interface

Interface	Ethercat
Profile	CoE (CANopen over EtherCAT, DS-301+DS-406)
Features	Boot-Loader, Round Axis
Transmission Rate	10 / 100 Mbit
Interface Cycle Time	$\geq 80 \mu\text{s}$
Programming Functions	Resolution, preset, counting direction

#### Outputs

Output Driver	Ethernet
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#### Electrical Data

Supply Voltage	10 - 30 VDC
Current Consumption	$\leq 230 \text{ mA @ } 10 \text{ V DC}, \leq 100 \text{ mA @ } 24 \text{ V DC}$
Power Consumption	$\leq 2.5 \text{ W}$
Start-Up Time	$< 1 \text{ s}$
Reverse Polarity Protection	Yes
Short Circuit Protection	Yes
EMC: Emitted Interference	DIN EN 61000-6-4
EMC: Noise Immunity	DIN EN 61000-6-2
Electrical Lifetime	$> 10^5 \text{ h}$



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### Sensor

Technology	Magnetic
Resolution Singleturn	16 bit
Resolution Multiturn	14 bit
Multiturn Technology	Self powered magnetic pulse counter (no battery, no gear)
Accuracy (INL)	$\pm 0.0878^\circ$ ( $\leq 12$ bit)
Code	Binary

### Environmental Specifications

Protection Class (Shaft)	IP65
Protection Class (Housing)	IP66/IP67
Operating Temperature	-40 °C (-40 °F) - +85 °C (+185 °F)
Storage Temperature	-40 °C (-40 °F) - +85 °C (+185 °F)
Humidity	98% RH, no condensation

### Mechanical Data

Housing Material	Steel
Housing Coating	Cathodic corrosion protection (>720 hrs salt spray resistance)
Flange Type	Blind Hollow, $\varnothing$ 58 mm (H)
Flange Material	Aluminum
Shaft Type	Blind Hollow, Depth = 28 mm
Shaft Diameter	$\varnothing$ 15 mm (0.59")
Shaft Material	Stainless Steel V2A (1.4305, 303)
Rotor Inertia	$\leq 30$ gcm <sup>2</sup> [ $\leq 0.17$ oz-in <sup>2</sup> ]
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	87,5 mm (3.44")
Weight	395 g (0.87 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
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Data Sheet

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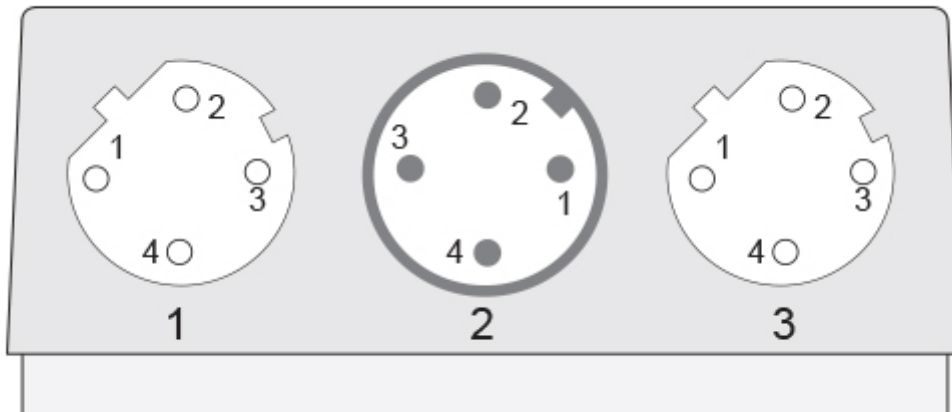
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Connector 1	M12, Female, 4 pin, d coded
Connector 2	M12, Male, 4 pin, a coded
Connector 3	M12, Female, 4 pin, d coded

### Product Life Cycle

Product Life Cycle	Established
Approval	CE + cULus listed, Industrial Control Equipment



### Connection Plan

SIGNAL	CONNECTOR	PIN NUMBER
Tx+	Connector 1	1
Rx+	Connector 1	2
Tx-	Connector 1	3
Rx-	Connector 1	4
Power Supply	Connector 2	1
Not Connected	Connector 2	2
GND	Connector 2	3
Not Connected	Connector 2	4
Tx+	Connector 3	1
Rx+	Connector 3	2
Tx-	Connector 3	3
Rx-	Connector 3	4

### Connector-View on Encoder Dimensional Drawing

[2D Drawing](#)

### Accessories

#### Connectors & Cables

10m PUR Cable, 5pin, A-Coded, f

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2m PUR Cable, 5pin, A-Coded, f  
5m PUR Cable, 5pin, A-Coded, f  
2m PUR Cable, 4pin, D-Coded, m  
M12, 4pin A-Coded, Female  
10m PUR Cable, 4pin, D-Coded, m  
10m PVC Cable, 4pin, D-Coded, m  
2m PVC Cable, 4pin, D-Coded, m  
5m PVC Cable, 4pin, D-Coded, m  
M12, 4pin D-Coded, Male  
M12, 5pin A-Coded, Female  
5m PUR Cable, 4pin, D-Coded, m  
More  
Clamping Rings  
Clamping Ring B15

### 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.