



### IXARC Absolute Rotary Encoder

### OCD-EIB1B-1416-B12S-PRM



#### Interface

Interface	Profinet
Profile	Profidrive Profile 4.x, Encoder Profile 4.x
Diagnostics	Memory
Features	Boot-Loader, Round Axis, Flashing LEDs
Transmission Rate	10 / 100 Mbit
Interface Cycle Time	$\geq 1$ ms
Programming Functions	Resolution, time base and filter for velocity, preset, counting direction, IP-Address

#### Outputs

Output Driver	Ethernet
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#### Electrical Data

Supply Voltage	10 - 30 VDC
Current Consumption	$\leq 230$ mA @ 10 V DC, $\leq 100$ mA @ 24 V DC
Power Consumption	$\leq 2.5$ W
Start-Up Time	$< 1$ 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

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MTTF 65 years @ 40 °C

### Sensor

Technology	Optical
Resolution Singleturn	16 bit
Resolution Multiturn	14 bit
Multiturn Technology	Mechanical Gearing (no Battery)
Accuracy (INL)	$\pm 0.0220^\circ$ (14 - 16 bit), $\pm 0.0439^\circ$ ( $\leq 13$ bit)
Code	Binary

### Environmental Specifications

Protection Class (Shaft)	IP66/IP67
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	Wet coating (RAL 9006 White Aluminium) + Cathodic corrosion protection (>720 h salt spray resistance)
Flange Type	Blind Hollow, $\varnothing$ 58 mm (B)
Flange Material	Aluminum
Shaft Type	Blind Hollow, Depth = 30 mm
Shaft Diameter	$\varnothing$ 12 mm (0.47")
Shaft Material	Stainless Steel V2A (1.4305, 303)
Rotor Inertia	$\leq 30 \text{ gcm}^2$ [ $\leq 0.17 \text{ oz-in}^2$ ]
Friction Torque	$\leq 5 \text{ Ncm}$ @ 20 °C, (7.1 oz-in @ 68 °F)
Max. Permissible Mechanical Speed	$\leq 3000 \text{ 1/min}$
Shock Resistance	$\leq 100 \text{ g}$ (half sine 6 ms, EN 60068-2-27)
Permanent Shock Resistance	$\leq 10 \text{ g}$ (half sine 16 ms, EN 60068-2-29)
Vibration Resistance	$\leq 10 \text{ g}$ (10 Hz - 1000 Hz, EN 60068-2-6)
Length	98,5 mm (3.88")
Weight	380 g (0.84 lb)
Maximum Axial / Radial Misalignment	Static $\pm 0.3 \text{ mm}$ / $\pm 0.5 \text{ mm}$ ; Dynamic $\pm 0.1 \text{ mm}$ / $\pm 0.2 \text{ mm}$

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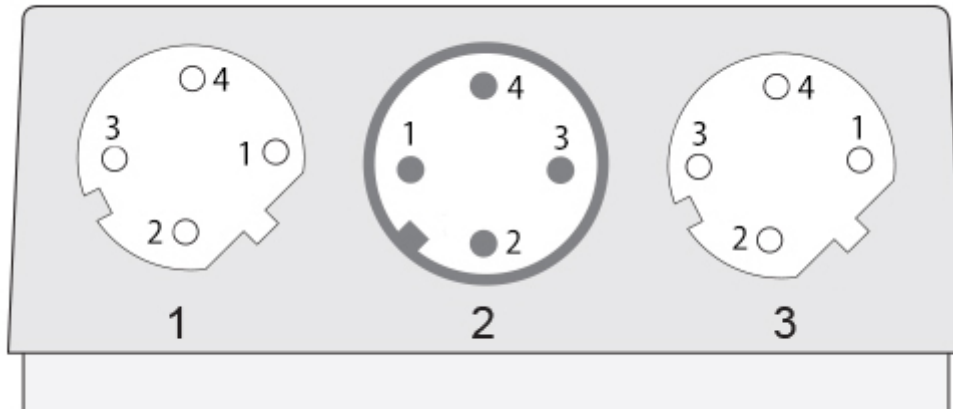


### Electrical Connection

Connection Orientation	Radial
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



### 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](#)

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### Accessories

#### Connectors & Cables

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

**Got questions? Need an individual solution? We are here to help!**



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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