



### IXARC Absolute Rotary Encoder

### OCD-EM00B-1416-C10S-PRM



#### Interface

Interface	Ethernet ModbusTCP
Profile	TCP/IP, UDP, Modbus TCP (IEC 61158)
Features	Boot-Loader, Web-Applet
Transmission Rate	10 / 100 Mbit
Interface Cycle Time	≥ 10 ms
Programming Functions	Resolution, preset, complement, transmission mode: polled mode, cyclic mode, change of state

#### Outputs

Output Driver	Ethernet
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#### Electrical Data

Supply Voltage	10 - 30 VDC
Current Consumption	≤ 230 mA @ 10 V DC, ≤ 100 mA @ 24 V DC
Power Consumption	≤ 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
MTTF	134 years @ 60 °C

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### 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	0 °C (32 °F) - +60 °C (+140 °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	Clamp, $\varnothing$ 58 mm (C)
Flange Material	Aluminum
Shaft Type	Solid, Single Flat, Length = 20 mm
Shaft Diameter	$\varnothing$ 10 mm (0.39")
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)	430 (20 N / 40 N), 150 (40 N / 60 N), 100 (40 N / 80 N), 55 (40 N / 110 N)
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	88,2 mm (3.47")
Weight	475 g (1.05 lb)

### Electrical Connection

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Connection Orientation	Radial
Connector 1	M12, Male, 5 pin, a coded
Connector 2	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
Power Supply	Connector 1	1
Power Supply	Connector 1	2
GND	Connector 1	3
GND	Connector 1	4
PE	Connector 1	5
Tx+	Connector 2	1
Rx+	Connector 2	2
Tx-	Connector 2	3
Rx-	Connector 2	4

Connector-View on Encoder

### Dimensional Drawing

[2D Drawing](#)

### Accessories

#### Connectors & Cables

10m PUR Cable, 5pin, A-Coded, f  
2m PUR Cable, 5pin, A-Coded, f  
5m PUR Cable, 5pin, A-Coded, f  
2m PUR Cable, 4pin, D-Coded, m  
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

Couplings

Coupling Disc Type-10-12

Coupling Bellow Type-10-10

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Coupling Bellow Type-06-10  
Coupling Bellow Type-08-10  
Coupling Bellow Type-10-12  
Coupling Bellow Type-10-(1/4")  
Coupling Bellow Type-10-(3/8")  
Coupling Jaw Type-06-10  
Coupling Jaw Type-08-10  
Coupling Jaw Type-10-12  
Coupling Jaw Type-10-(1/4")  
Coupling Jaw Type-10-(3/8")  
Coupling Jaw Type-10-10  
Coupling Disc Type-06-10  
Coupling Disc Type-10-10  
More  
Adapter Flanges  
Mounting Bracket for Clamping Flange w/ fixtures  
L Mounting Bracket w/ screws  
Mounting Bracket Spring Loaded f. Clamping Flange  
Clamping Rings  
Clamp Disc w/ Eccentric Hole-4pcs  
Clamp Disc w/ Centred Hole-4pcs

### 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.