



IXARC Absolute Rotary Encoder

OCD-EM00B-1416-B100-PRM



Interface

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

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	< 250 ms
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

Data Sheet

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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), $\pm 0.0439^\circ$ (≤ 13 bit)
Code	Binary

Environmental Specifications

Protection Class (Shaft)	IP65
Protection Class (Housing)	IP65
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	Blind Hollow, $\varnothing$ 58 mm (B)
Flange Material	Aluminum
Shaft Type	Blind Hollow, Depth = 30 mm
Shaft Diameter	$\varnothing$ 10 mm (0.39")
Shaft Material	Stainless Steel V2A (1.4305, 303)
Rotor Inertia	$\leq 30 \text{ gcm}^2$ [$\leq 0.17 \text{ oz-in}^2$]
Friction Torque	$\leq 3 \text{ Ncm}$ @ 20 °C (4.2 oz-in @ 68 °F)
Max. Permissible Mechanical Speed	$\leq 12000 \text{ 1/min}$
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	106,7 mm (4.20")
Weight	480 g (1.06 lb)

Electrical Connection

Connection Orientation	Radial
Connector 1	M12, Male, 5 pin, a coded

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M12, Female, 4 pin, d coded

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

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

Technical drawing of the 1000 series motor, showing side and front views with dimensions in mm and inches.

Side View Dimensions:

- Overall length: 78.7 [3.10]
- Distance from mounting flange to centerline: 28.7 [1.13]
- Flange thickness: 4.2 [0.17]
- Flange inner diameter: $\phi 30$ [1.18]
- Flange outer diameter: $\phi 58.5$ [2.30]
- Flange to motor body distance: 2.7 [0.11]
- Motor body diameter: $\phi 58.6$ [2.31]
- Motor body length: 35.7 [1.41]
- Motor body to base distance: 51.2 [2.01]
- Base diameter: $\phi 67$ [2.64]
- Base to mounting flange distance: 24.5 [0.96]

Front View Dimensions:

- Overall width: 72 [2.83]
- Mounting flange diameter: $\phi 63$ [2.48]
- Mounting flange hole diameter: $\phi 10$ F7 [0.39]
- Mounting flange to motor body distance: 3.2 [0.13]
- Motor body diameter: $\phi 58.6$ [2.31]
- Motor body length: 35.7 [1.41]
- Motor body to base distance: 51.2 [2.01]
- Base diameter: $\phi 67$ [2.64]
- Base to mounting flange distance: 24.5 [0.96]
- Base to mounting flange distance (bottom): 40 [1.57]
- Base to mounting flange distance (bottom): 60 [2.36]
- Base to mounting flange distance (bottom): 20 [0.79]
- Base to mounting flange distance (bottom): 20°

Notes:

- lay-on edge [orque support]
- an Drehmomentslutze
- Max. W**=30
- Min. W**=15
- **Welleneinstecktiefe [hollow shaft depth]

- 3 / 4 -



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

Clamping Ring B15

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.