



IXARC Absolute Rotary Encoder

OCD-EC00B-0016-S060-PRM



Interface

Interface	Ethercat
Profile	CoE (CANopen over EtherCAT, DS-301+DS-406)
Diagnostics	OptoAsic, Memory, LED
Features	Boot-Loader, Round Axis
Transmission Rate	10 / 100 Mbit
Interface Cycle Time	$\geq 62.5 \mu\text{s}$
Programming Functions	Resolution, preset, counting direction

Outputs

Output Driver	Ethernet
---------------	----------

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	$> 10^5 \text{ h}$

Data Sheet

Printed at 6-10-2020 20:10

POSITAL

FRABA



Sensor

Technology	Optical
Resolution Singleturn	16 bit
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	-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	Synchro, \varnothing 58 mm (S)
Flange Material	Aluminum
Shaft Type	Solid, Length = 10 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)	550 (20 N / 40 N), 195 (40 N / 60 N), 135 (40 N / 80 N), 85 (40 N / 110 N)
Rotor Inertia	≤ 30 gcm ² [≤ 0.17 oz-in ²]
Friction Torque	≤ 3 Ncm @ 20 °C (4.2 oz-in @ 68 °F)
Max. Permissible Mechanical Speed	≤ 12000 1/min
Shock Resistance	≤ 100 g (half sine 6 ms, EN 60068-2-27)
Permanent Shock Resistance	≤ 10 g (half sine 16 ms, EN 60068-2-29)
Vibration Resistance	≤ 10 g (10 Hz - 1000 Hz, EN 60068-2-6)
Length	73 mm (2.87")
Weight	345 g (0.76 lb)

Electrical Connection

Connection Orientation	Radial
Connector 1	M12, Female, 4 pin, d coded

POSITAL

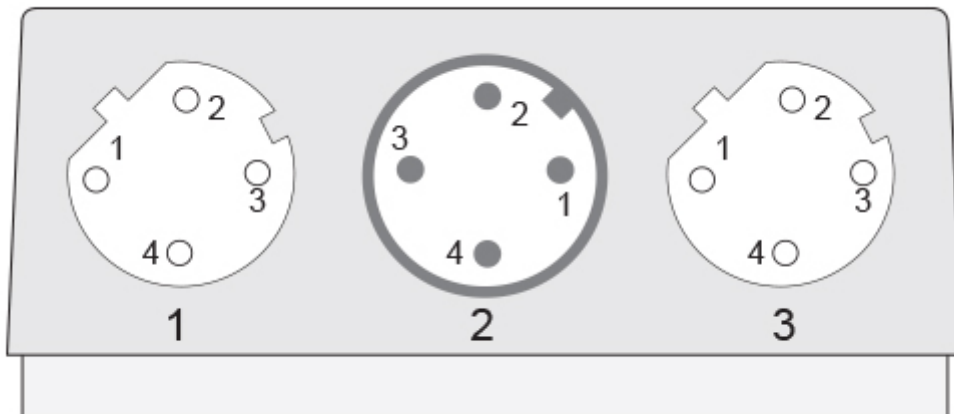
FRABA



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](#)

Accessories

Connectors & Cables
 2m PUR Cable, 4pin, D-Coded, m
 M12, 4pin A-Coded, Female

Data Sheet
 Printed at 6-10-2020 20:10

POSITAL

FRABA



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

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

Adapter Flanges

Mounting Bracket for Synchro Flange w/ fixtures

Clamping Rings

Clamp Disc w/ Eccentric Hole-4pcs

Clamp Disc w/ Centred Hole-4pcs

Contact

Sold & Serviced By:



Canadian and International Sales

ELECTROMATE

877-737-8698

sales@electromate.com

www.electromate.com

U.S. Sales

SERVO2GO.com

877-378-0240

sales@servo2go.com

www.servo2go.com

POSITAL

FRABA



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.