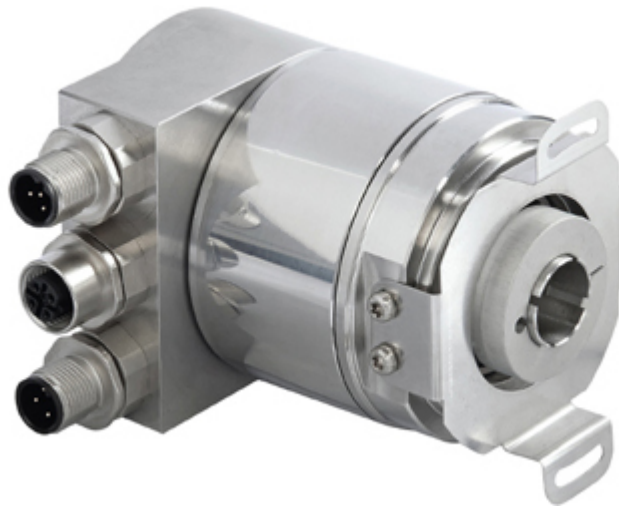




IXARC Absolute Rotary Encoder

OCD-EC00B-0016-B12V-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
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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	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)	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	Stainless Steel V2A (1.4305, 303)
Housing Coating	No Coating
Flange Type	Blind Hollow, \varnothing 58 mm (B)
Flange Material	Stainless steel V2A (1.4305; 303)
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	87,5 mm (3.44")
Weight	875 g (1.93 lb)
Maximum Axial / Radial Misalignment	Static $\pm 0.3 \text{ mm}$ / $\pm 0.5 \text{ mm}$; Dynamic $\pm 0.1 \text{ mm}$ / $\pm 0.2 \text{ mm}$

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

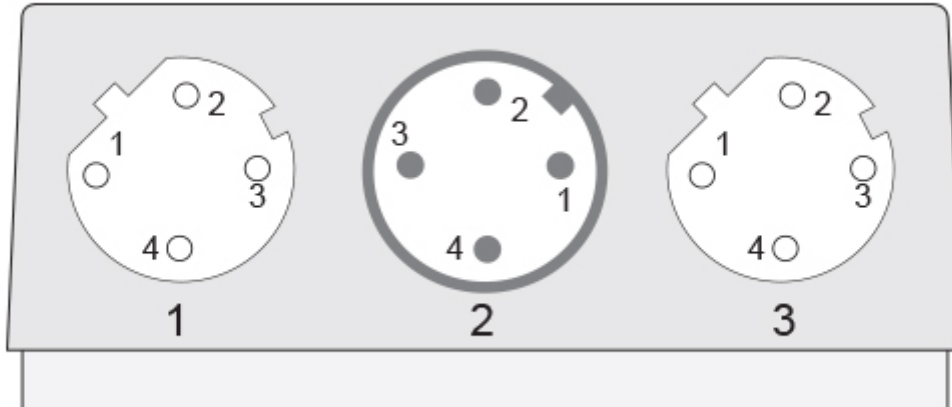
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Product Life Cycle

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

10m PUR Cable, 4pin, D-Coded, m

10m PVC Cable, 4pin, D-Coded, m

2m PVC Cable, 4pin, D-Coded, m

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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-VA

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