



IXARC Absolute Rotary Encoder

OCD-DPC1B-0016-B060-H72



Interface

Interface	Profibus DP
Profile	DPV0, DPV1 and DPV2 Class 2 (EN50170 + EN50254)
Diagnostics	Memory
Programming Functions	Resolution, gearing factor (physical resolution) , velocity scaling + filter, preset (zero point), counting direction, limit switches , node number, teach-in, diagnosis
Manual Functions	Address selector switch 0-99 and terminal resistor (with connection cap)
Features	Round Axis
Transmission Rate	≤12 Mbaud
Interface Cycle Time	≥ 1 ms

Outputs

Output Driver	Profibus Data Interface, galvanically isolated via opto-couplers
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Electrical Data

Supply Voltage	10 - 30 VDC
Current Consumption	≤ 115 mA @ 10 V DC, ≤ 50 mA @ 30 V DC
Power Consumption	≤ 1.5 W
Start-Up Time	< 1 s

Data Sheet

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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	13.5 years @ 40 °C

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

Connection Cap Material	Aluminum
Housing Material	Steel
Housing Coating	Cathodic corrosion protection (>720 hrs salt spray resistance)
Flange Type	Blind Hollow, $\varnothing$ 58 mm (B)
Flange Material	Aluminum
Shaft Type	Blind Hollow, Depth = 30 mm
Shaft Diameter	$\varnothing$ 6 mm (0.24")
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	88 mm (3.46")
Weight	500 g (1.10 lb)

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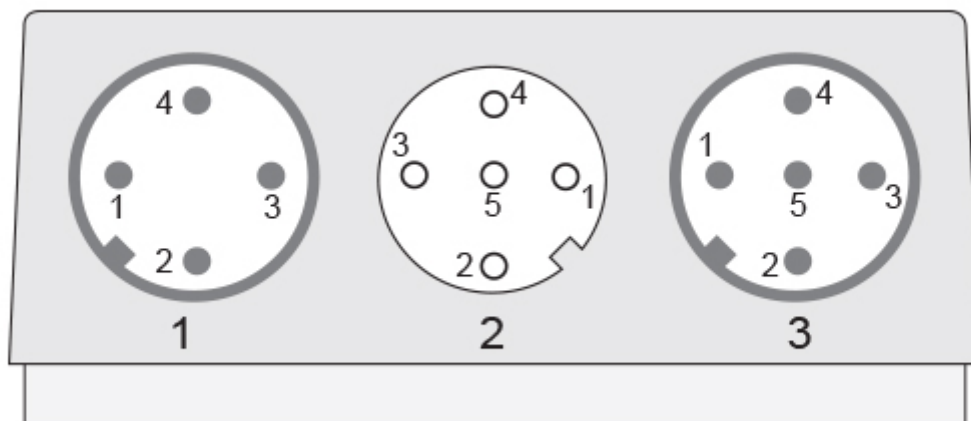


Electrical Connection

Connection Orientation	Radial
Connection Type	3 x M12 Connector (Profibus)
Connection Cap Type	Rotary switches with visible node number, No active components, Terminal resistor switch cut the outgoing bus too
Connector 1	M12, Male, 4 pin, a coded
Connector 2	M12, Female, 5 pin, b coded
Connector 3	M12, Male, 5 pin, b coded

Certification

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



Connection Plan

SIGNAL	CONNECTOR	PIN NUMBER
Power Supply	Connector 1	1
Not Connected	Connector 1	2
GND	Connector 1	3
Not Connected	Connector 1	4
Not Connected	Connector 2	1
Bus line A (Bus out)	Connector 2	2
Not Connected	Connector 2	3
Bus line B (Bus out)	Connector 2	4
Not Connected	Connector 2	5
Not Connected	Connector 3	1
Bus line A (Bus in)	Connector 3	2
Not Connected	Connector 3	3
Bus line B (Bus in)	Connector 3	4
Not Connected	Connector 3	5

Connector-View on Encoder

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Clamping Ring B15

Contact



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