IXARC Absolute Rotary Encoder

UCD-DPC1B-0012-5A7A-PAM

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

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

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	200 years @ 40 °C
Electrical Lifetime	$>10^5$ h

Sensor

Technology	Magnetic
Resolution Singleturn	12 bit
Accuracy (INL)	±0.0878° (≤ 12 bit)
Code	Binary

Environmental Specifications

Protection Class (Shaft)	IP65
Protection Class (Housing)	IP54
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	None
Housing Material	Steel
Housing Coating	Wet coating (RAL 9006 White Aluminium) + Cathodic corrosion protection (>720 h salt spay resistance)
Flange Type	Square, □ 2.5" (5)
Flange Material	Aluminum
Shaft Type	Solid, Single Flat, Length = 22.4 mm
Shaft Diameter	ø 9.52 mm (3/8")
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	≤ 30 gcm² [≤ 0.17 oz-in²]
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	52,7 mm (2.07")
Weight	430 g (0.95 lb)

Electrical Connection

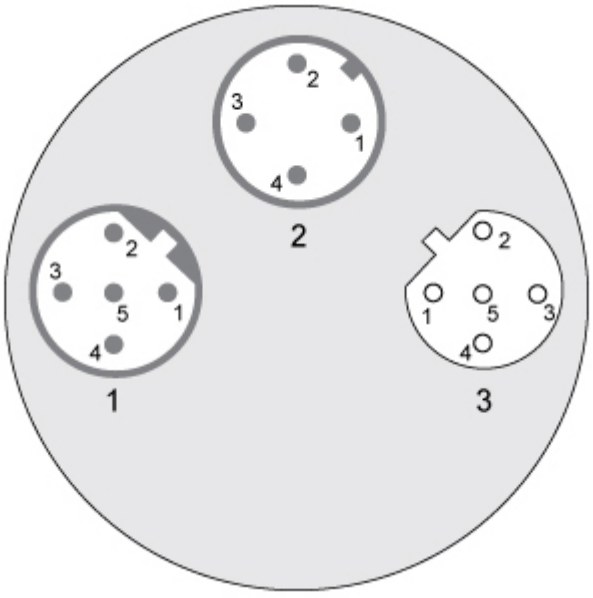
Connection Orientation	Axial
Connection Type	Cable / Connector
Connector 1	M12, Male, 5 pin, b coded
Connector 2	M12, Male, 4 pin, a coded
Connector 3	M12, Female, 5 pin, b coded

Certification

Approval	CE + cULus

Product Life Cycle

Product Life Cycle	Established



Connection Plan

SIGNAL	CONNECTOR	PIN NUMBER
Not Connected	Connector 1	1
Bus line A (Bus in)	Connector 1	2
Not Connected	Connector 1	3
Bus line B (Bus in)	Connector 1	4

Not Connected	Connector 1	5
Power Supply	Connector 2	1
Not Connected	Connector 2	2
GND	Connector 2	3
Not Connected	Connector 2	4
Power Supply Termination Resistor	Connector 3	1
Bus line A (Bus out)	Connector 3	2
GND Termination Resistor	Connector 3	3
Bus line B (Bus out)	Connector 3	4
Not Connected	Connector 3	5

Connector-View on Encoder

Dimensional Drawing

Accessories

Connectors & Cables
M12, 4pin A-Coded, Female
Profibus Termination Resistor-M12S-M04B-PL
Profibus Termination Resistor-M12S-M04B-PL
M12, 5pin B-Coded, Female
M12, 5pin B-Coded, Male
2m PUR Cable, 5pin, B-Coded, m
5m PUR Cable, 5pin, B-Coded, m
10m PUR Cable, 5pin, B-Coded, m
POS M12 5pin-A Female+5m PUR Cable
2m PUR Cable, 5pin, B-Coded, f
5m PUR Cable, 5pin, B-Coded, f
10m PUR Cable, 5pin, B-Coded, f
POS M12 5pin-A Female+2m PUR Cable
POS M12 5pin-A Female+10m PUR Cable
More
Couplings
Coupling Bellow Type-10-(3/8")
Coupling Bellow Type-06-(3/8")
Coupling Jaw Type-10-(3/8")
Coupling Jaw Type-06-(3/8")
Coupling Jaw Type-12-3/8"
More

Got questions? Need an individual solution? We are here to help!

Contact Us

If the drawings are not available please refer to the "Download" section.The picture and drawing are for general presentation purposes only. All dimension in [inch] mm. We do not assume responsibility for technical inaccuracies or omissions. Specifications are subject to change without notice.