

## IXARC Absolute Rotary Encoder

### UCD-C901B-1213-4A7S-PRV

#### Interface

Interface	SAE J1939
Profile	J1939 specific
Manual Functions	Programmable
Features	Round Axis
Transmission Rate	min. 20 kBaud, max. 1 MBaud
Interface Cycle Time	≥ 1 ms
Programming Functions	Resolution, preset, direction, node ID, baud rate

#### Outputs

Output Driver	Transceiver (ISO 11898), Galvanically Isolated by Opto-Couplers
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#### Electrical Data

Supply Voltage	9 - 30 VDC
Power Consumption	≤ 1.2 W
Start-Up Time	<500 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	240 years @ 40 °C

#### Sensor

Technology	Magnetic
Resolution Singleturn	13 bit
Resolution Multiturn	12 bit
Multiturn Technology	Self powered magnetic pulse counter (no battery, no gear)
Accuracy (INL)	±0.0878° (≤ 12 bit)
Code	Binary

#### Environmental Specifications

Protection Class (Shaft)	IP66/IP67
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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

Connection Cap Material	None
Housing Material	Steel
Housing Coating	Cathodic corrosion protection (>720 hrs salt spray resistance)
Flange Type	Square, □ 2.5" (4)
Flange Material	Aluminum
Shaft Type	Solid, Single Flat, Length = 22.4 mm
Shaft Diameter	∅ 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 <sup>8</sup> 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 gcm <sup>2</sup> [≤ 0.17 oz-in <sup>2</sup> ]
Friction Torque	≤ 5 Ncm @ 20 °C, (7.1 oz-in @ 68 °F)
Max. Permissible Mechanical Speed	≤ 3000 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	41,5 mm (1.63")
Weight	340 g (0.75 lb)

### Electrical Connection

Connection Orientation	Radial
Connection Type	Cable / Connector
Connector	M12, Male, 5 pin, a coded, with LED

### Product Life Cycle

Product Life Cycle	New
Approval	CE + cULus

### Connection Plan



SIGNAL	PIN NUMBER
Power Supply	2
GND	3
CAN High	4
CAN Low	5
CAN GND	1

Connector-View on Encoder  
**Dimensional Drawing**

[2D Drawing](#)

**Accessories**

Connectors & Cables

- 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, 5pin A-Coded, Female
- 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!**

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The picture and drawing are for general presentation purposes only. Please refer to the "Download" section for detailed technical drawings.

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