



# POSITAL

## FRABA

### IXARC Absolute Rotary Encoder

#### UCD-C901B-1213-D10D-2RV

#### 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)	IP68/IP69K
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Data Sheet

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Protection Class (Housing)	IP68/IP69K
Operating Temperature	-40 °C fixed (-40 °F), -30 °C flexible (-22 °F) - +80 °C (+176 °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	Synchro, ø 36 mm Heavy Duty
Flange Material	Aluminum
Shaft Type	Solid, Length = 20 mm
Shaft Diameter	ø 10 mm (0.39")
Shaft Material	Stainless Steel V4A (1.4112, 440 B), hardened
Max. Shaft Load	Axial 180 N, Radial 180 N
Minimum Mechanical Lifetime (10 <sup>8</sup> revolutions with Fa/Fr)	10 (180 N / 180 N), 15 (150 N,150 N), 30 (100 N / 100 N)
Friction Torque	≤ 5 Ncm @ 20 °C, (7.1 oz-in @ 68 °F)
Max. Permissible Mechanical Speed	≤ 6000 1/min
Shock Resistance	≤ 200 g (half sine 11 ms, EN 60068-2-27)
Permanent Shock Resistance	≤ 30 g (half sine 16 ms, EN 60068-2-29)
Vibration Resistance	≤ 30 g (10 Hz - 1000 Hz, EN 60068-2-6)
Length	56 mm (2.20")
Weight	445 g (0.98 lb)

### Electrical Connection

Connection Orientation	Radial
Connection Type	Cable / Connector
Cable Length	2 m [79"]
Wire Cross Section	0.34 mm <sup>2</sup> / AWG 22
Material / Type	PUR / PU
Cable Diameter	7.5 mm (0.30 in)
Minimum Bend Radius	56 mm (2.2") fixed, 75 mm (3") flexing

### Certification

Approval	CE + cULus
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Product Life Cycle New

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### Connection Plan

SIGNAL	CABLE COLOR
Power Supply	Red
GND	Yellow
CAN High	White
CAN Low	Brown
CAN GND	Green

Connector-View on Encoder  
**Dimensional Drawing**

[2D Drawing](#)

### Accessories

#### Couplings

- Coupling Disc Type-10-12
  - Coupling Bellow Type-10-10
  - Coupling Bellow Type-06-10
  - Coupling Bellow Type-08-10
  - Coupling Bellow Type-10-12
  - Coupling Bellow Type-10-(1/4")
  - Coupling Bellow Type-10-(3/8")
  - Coupling Jaw Type-06-10
  - Coupling Jaw Type-08-10
  - Coupling Jaw Type-10-12
  - Coupling Jaw Type-10-(1/4")
  - Coupling Jaw Type-10-(3/8")
  - Coupling Jaw Type-10-10
  - Coupling Disc Type-06-10
  - Coupling Disc Type-10-10
- More

### Contact



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Contact Us

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.