

IXARC Absolute Rotary Encoder

TCR-CA01B-1213-C06S-PRX



Interface

Interface	CANopen
Profile	DS-406
Manual Functions	Programmable
Features	Round Axis
Transmission Rate	min. 20 kBaud, max. 1 MBaud
Interface Cycle Time	≥ 1 ms
Programming Functions	Resolution, preset, 2 limit switches, 8 CAMS, baud rate, CAN-Identifier, bootloader, transmission modes: polled, cyclic, sync

Outputs

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

Supply Voltage	10 - 30 VDC
Power Consumption	≤ 3.7 W
Reverse Polarity Protection	Yes
Short Circuit Protection	Yes
EMC: Emitted Interference	DIN EN 61000-6-4
EMC: Noise Immunity	EN 61000-6-2 EN 61326-3-2 & EN 61000-6-7

Data Sheet

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MTTF	100 years @ 40°C (based on EN ISO 13849-1)
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Sensor

Technology	Optical + Magnetic
Resolution Singleturn	13 bit
Resolution Multiturn	12 bit
Multiturn Technology	Mechanical gearing (no battery, optical scanning) + Self powered magnetic pulse counter (no battery, no gear)
Accuracy (INL)	13 bit: $\pm 0.1317^\circ + 1$ LSB quantization @ R_T 16 bit: $\pm 0.1098^\circ + 1$ LSB quantization @ R_T
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

Connection Cap Material	None
Housing Material	Aluminum
Housing Coating	No Coating
Flange Type	Clamp, \varnothing 58 mm (C)
Flange Material	Aluminum
Shaft Type	Solid, Length = 10 mm
Shaft Diameter	\varnothing 6 mm (0.24")
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)	530 (20 N / 40 N), 185 (40 N / 60 N), 130 (40 N / 80 N), 80 (40 N / 110 N)
Rotor Inertia	≤ 30 gcm ² [≤ 0.17 oz-in ²]
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)

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Length	72,5 mm (2.85")
Weight	305 g (0.67 lb)

Electrical Connection

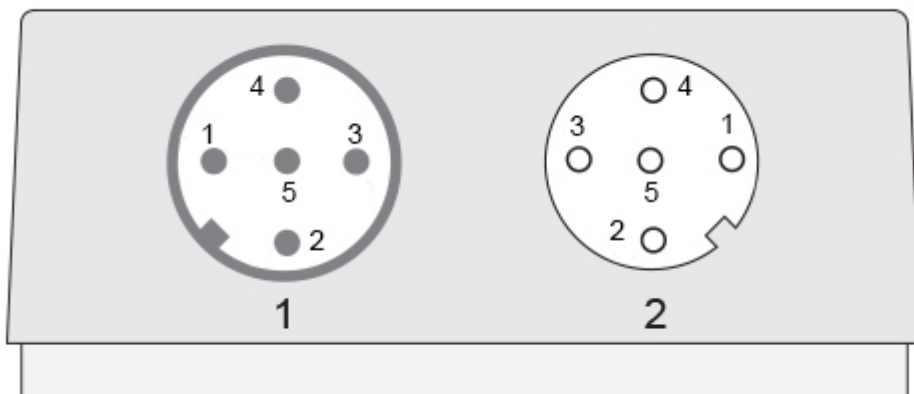
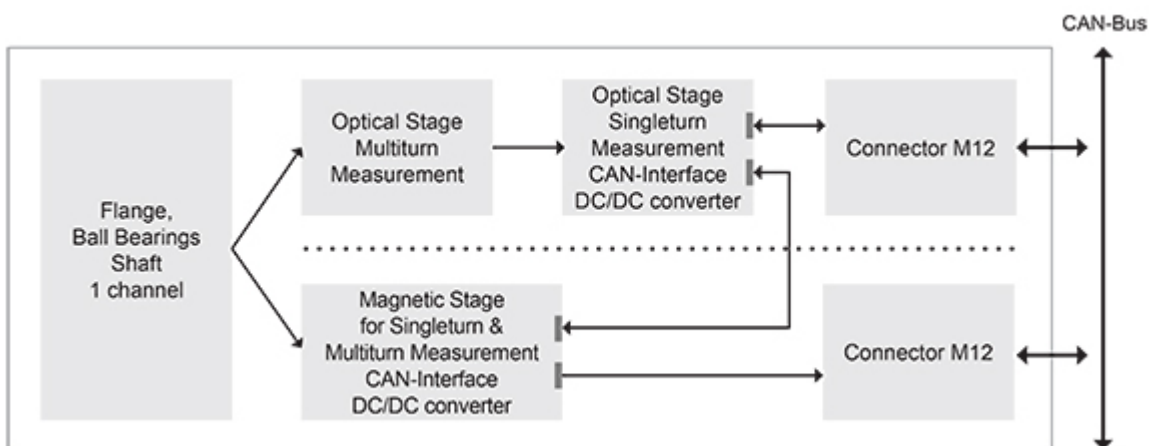
Connection Orientation	Radial
Connection Type	Cable / Connector

Safety Data

Safety Performance Level	Capable PL d, encoder shall be connected to a safety PLC for verification of both encoder channels
Safety Category	Cat 3, encoder shall be connected to a safety PLC for

Product Life Cycle

Product Life Cycle	New
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Connection Plan

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

**Connector-View on Encoder
Dimensional Drawing**
Accessories
Connectors & Cables

M12, 5pin A-Coded, Male

2m PUR Cable, 5pin, A-Coded, m

5m PUR Cable, 5pin, A-Coded, m

POS M12 5pin-A Female+5m PUR Cable

10m PUR Cable, 5pin, A-Coded, m

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-06-06

Coupling Bellow Type-06-10

Coupling Bellow Type-06-08

Coupling Bellow Type-06-(3/8")

Coupling Bellow Type-06-(1/4")

Coupling Jaw Type-06-06

Coupling Jaw Type-06-10

Coupling Jaw Type-06-08

Coupling Jaw Type-06-12

Coupling Jaw Type-06-(1/4")

Coupling Jaw Type-06-(3/8")

Coupling Disc Type-06-06

Coupling Disc Type-06-10

More

Adapter Flanges

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Mounting Bracket for Clamping Flange w/ fixtures
L Mounting Bracket w/ screws
Mounting Bracket Spring Loaded f. Clamping Flange
Spring Loaded Pivot Arm 58mm
More
Clamping Rings
Clamp Disc w/ Eccentric Hole-4pcs
Clamp Disc w/ Centred Hole-4pcs

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. © FRABA B.V., All rights reserved. We do not assume responsibility for technical inaccuracies or omissions. Specifications are subject to change without notice.