

IXARC Absolute Rotary Encoder

TCR-CA01B-1213-C12S-PRK



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, Single Flat, Length = 20 mm
Shaft Diameter	\varnothing 12 mm (0.47")
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 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	320 g (0.71 lb)

Electrical Connection

Connection Orientation	Radial
Connection Type	Cable / Connector

Certification

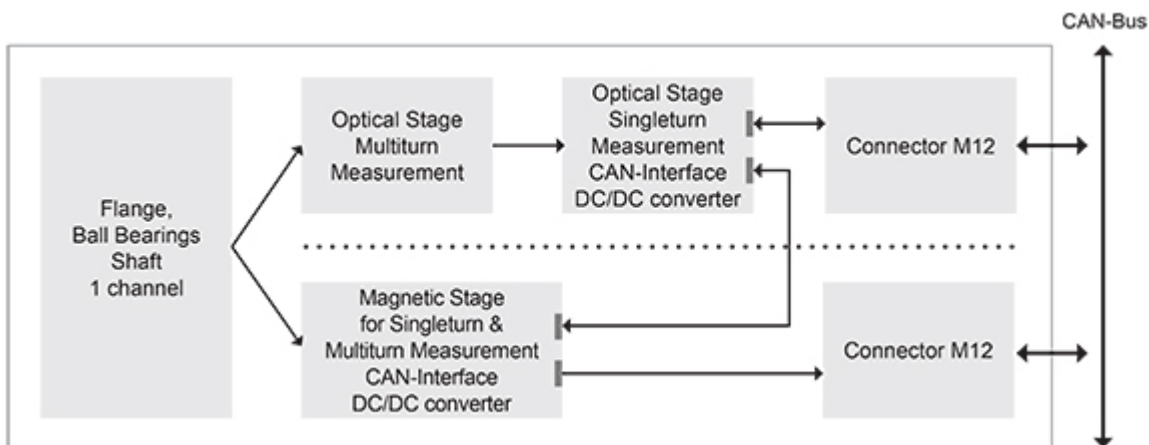
Approval	CE
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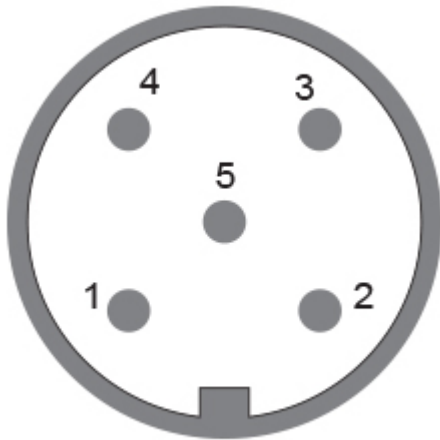
Safety Data

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

Connector-View on Encoder

Dimensional 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
 10m PUR Cable, 5pin, A-Coded, f IP69K
 M12, 5pin A-Coded, Female

More

Couplings

Coupling Disc Type-10-12
 Coupling Bellow Type-10-12
 Coupling Jaw Type-06-12
 Coupling Jaw Type-10-12
 Coupling Disc Type-12-12
 Coupling Jaw Type-12-12

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Coupling Jaw Type-12-3/8"

More

Adapter Flanges

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.