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IXARC Absolute Rotary Encoder

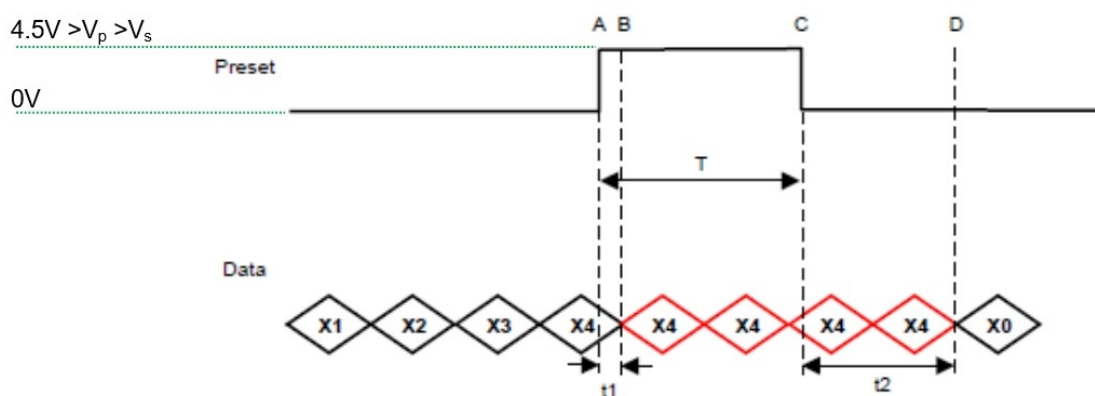
OCD-S101G-1212-S060-PRL



Interface

Interface	SSI with Preset
Manual Functions	Preset + complement via cable or connector
Interface Cycle Time	$\geq 25 \mu\text{s}$

The Preset function allows to set the output value to zero at the present mechanical position.
Input resistance is 110 k Ω



$T = 103\text{msec} \pm 2\text{msec}$

$t1 = 3\text{msec} \pm 2\text{msec}$

$T+t2 = 225\text{msec} (\pm 13\text{msec})$

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The DIR-function allows to change the encoder counting direction.

0 (open or GND)	Increasing Values Turning Clockwise (Viewed from Flange Side)
1 (4.5 V to V _S)	Decreasing Values Turning Clockwise (Viewed from Flange Side)
Input Resistance	60 kΩ

Outputs

Output Driver	RS422
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Electrical Data

Supply Voltage	4.5 - 30 VDC
Power Consumption	≤ 1.5 W
Start-Up Time	< 1 s
Clock Input	RS 422, via Optocoupler
Clock Frequency	100 kHz - 2 MHz
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	16.2 years @ 40 °C

Sensor

Technology	Optical
Resolution Singleturn	12 bit
Resolution Multiturn	12 bit
Multiturn Technology	Mechanical Gearing (no Battery)
Accuracy (INL)	±0.0220° (14 - 16 bit), ±0.0439° (≤13 bit)
Sense Signal (Default)	Clockwise shaft movement (front view on shaft)
Code	Gray

Environmental Specifications

Protection Class (Shaft)	IP65
Protection Class (Housing)	IP65
Operating Temperature	-40 °C (-40 °F) - +85 °C (+185 °F)
Humidity	98% RH, no condensation

Mechanical Data

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Housing Material	Steel
Housing Coating	Wet coating (RAL 9006 White Aluminium) + Cathodic corrosion protection (>720 h salt spray resistance)
Flange Type	Synchro, ø 58 mm (S)
Flange Material	Aluminum
Shaft Type	Solid, Length = 10 mm
Shaft Diameter	ø 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)	550 (20 N / 40 N), 195 (40 N / 60 N), 135 (40 N / 80 N), 85 (40 N / 110 N)
Rotor Inertia	≤ 30 gcm ² [≤ 0.17 oz-in ²]
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	56,7 mm (2.23")
Weight	270 g (0.60 lb)

Electrical Connection

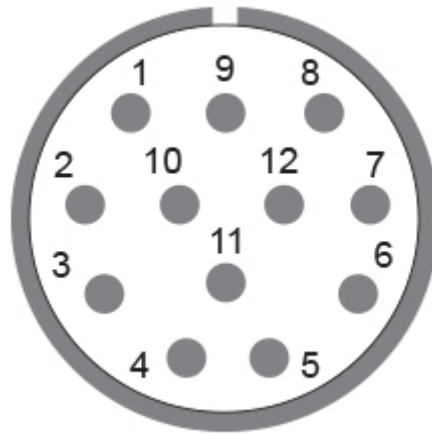
Connection Orientation	Radial
Connector	M23, Male, 12 pin, CCW / left

Product Life Cycle

Product Life Cycle	Established
Approval	CE + cULus

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Connection Plan

SIGNAL	PIN NUMBER
Power Supply	11
GND	12
Data+	3
Data-	4
Clock+	2
Clock-	1
Preset	9
DIR	8
Not Connected	5
Not Connected	6
Not Connected	7
Not Connected	10

Connector-View on Encoder

Dimensional Drawing

[2D Drawing](#)

Accessories

Connectors & Cables

10m PVC Cable, 12pin, Clockwise, f

15m PVC Cable, 12pin, Clockwise, f

1m PVC Cable, 12pin, Clockwise, f

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20m PVC Cable, 12pin, Clockwise, f
5m PVC Cable, 12pin, Clockwise, f
30m PVC Cable, 12pin, Clockwise, f
2m PVC Cable, 12pin, Clockwise, f
M23, 12pin Clockwise, 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

Mounting Bracket for Synchro Flange w/ fixtures

Clamping Rings

Clamp Disc w/ Eccentric Hole-4pcs

Clamp Disc w/ Centred Hole-4pcs

Displays

AP21-00 SSI Display

AP21-DA SSI Display (4 dig. + analog o/p)

DiMod-P SSI Display

Configuration/Programming Tools

SSI2USB Adapter DB15 (VA01)

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



Contact Us

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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.