

POSITAL

FRABA



IXARC Absolute Rotary Encoder

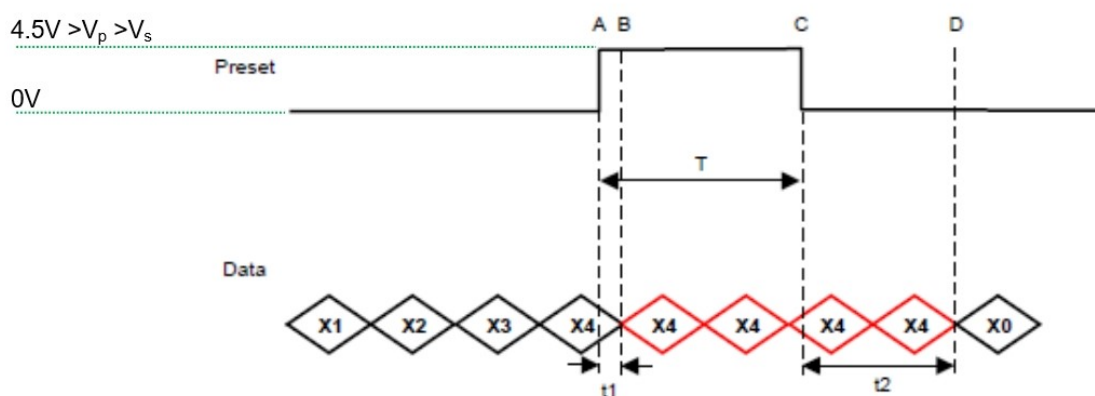
OCD-S101G-1213-C10S-PRL



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	13 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)	IP66/IP67
Protection Class (Housing)	IP66/IP67
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	Clamp, \varnothing 58 mm (C)
Flange Material	Aluminum
Shaft Type	Solid, Single Flat, Length = 20 mm
Shaft Diameter	\varnothing 10 mm (0.39")
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	$\leq 30 \text{ gcm}^2$ [$\leq 0.17 \text{ oz-in}^2$]
Friction Torque	$\leq 5 \text{ Ncm}$ @ 20 °C, (7.1 oz-in @ 68 °F)
Max. Permissible Mechanical Speed	$\leq 3000 \text{ 1/min}$
Shock Resistance	$\leq 100 \text{ g}$ (half sine 6 ms, EN 60068-2-27)
Permanent Shock Resistance	$\leq 10 \text{ g}$ (half sine 16 ms, EN 60068-2-29)
Vibration Resistance	$\leq 20 \text{ g}$ (20 Hz - 2000 Hz, EN 60068-2-6)
Length	52,7 mm (2.07")
Weight	290 g (0.64 lb)

Electrical Connection

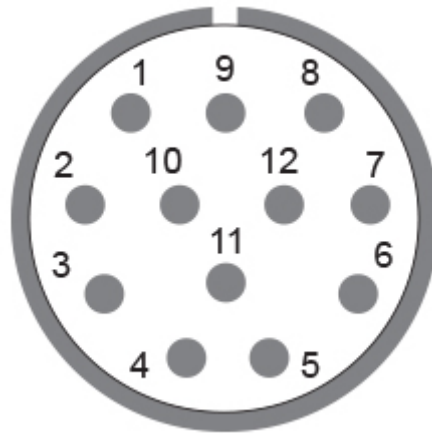
Connection Orientation	Radial
Connector	M23, Male, 12 pin, CCW / left

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 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

Adapter Flanges

Mounting Bracket for Clamping Flange w/ fixtures
L Mounting Bracket w/ screws
Mounting Bracket Spring Loaded f. Clamping Flange

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)

Contact



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.