

## IXARC Absolute Rotary Encoder

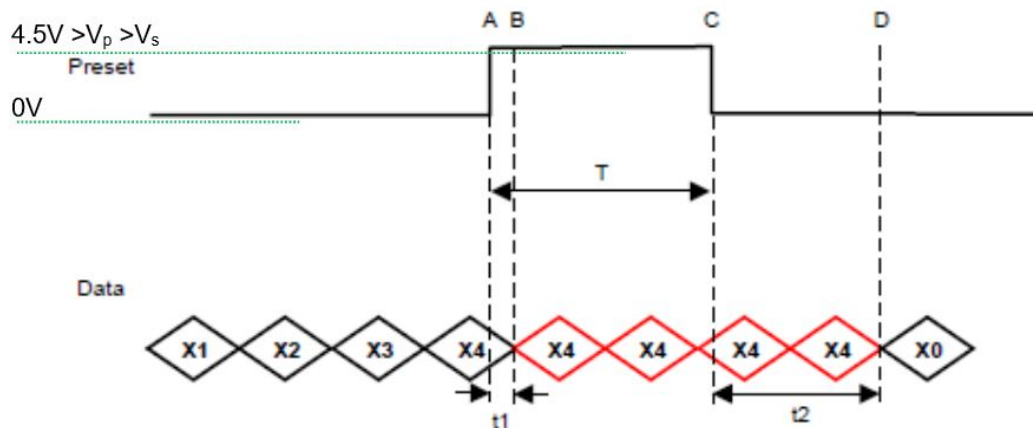
**UCD-S101G-1212-V6S0-PAQ**



### Interface

Interface	SSI with Preset
Manual Functions	Preset + complement via cable or connector
Interface Cycle Time	≥ 25 μs
Number of Preset Cycles	5,100,000
SSI Format	MMMMMMMMMMMMSSSSSSSSSSSS00
Video Manual	<a href="#">▶ Watch a simple installation video</a>

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



$T = 105 \text{ msec } (+/- 2\text{msec})$

$t1 = 3.5 \text{ msec } +/- 2\text{msec}$

$T + t2 = 224 \text{ msec } (+/- 4\text{msec})$

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)
Min Time needed for change	40 msec
Input Resistance	60 k $\Omega$

### Outputs

Output Driver	RS422
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### Electrical Data

Supply Voltage	4.5 - 30 VDC
Power Consumption	$\leq 1.0 \text{ W}$
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	350 years @ 40 °C

### Sensor

Technology	Magnetic
Resolution Singleturn	12 bit
Resolution Multiturn	12 bit
Multiturn Technology	Self powered magnetic pulse counter (no battery, no gear)
Accuracy (INL)	±0.0878° (≤ 12 bit)
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

Housing Material	Steel
Housing Coating	Cathodic corrosion protection (>720 hrs salt spray resistance)
Flange Type	Blind Hollow, ø 36 mm / ø 42 mm
Flange Material	Aluminum
Shaft Type	Blind Hollow, Depth = 18 mm
Shaft Diameter	ø 6 mm (0.24")
Shaft Material	Stainless Steel V2A (1.4305, 303)
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	54,2 mm (2.13")
Weight	105 g (0.23 lb)
Maximum Axial / Radial Misalignment	Static ± 0.3 mm /± 0.5 mm; Dynamic ± 0.1 mm /± 0.2 mm

### Electrical Connection

Data Sheet

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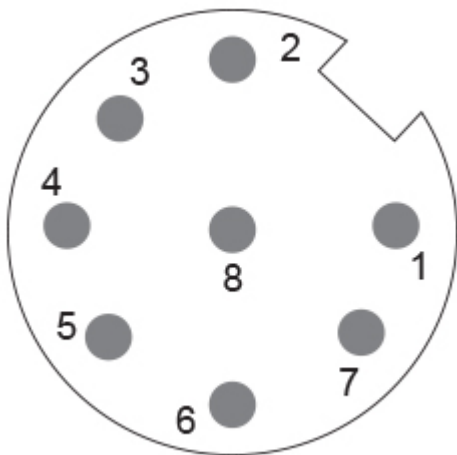
Connection Orientation	Axial
Connector	M12, Male, 8 pin, a coded

### Certification

Approval	CE
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### Product Life Cycle

Product Life Cycle	Established
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### Connection Plan

SIGNAL	CONNECTOR	PIN NUMBER
Power Supply	Connector 1	2
GND	Connector 1	1
Data+	Connector 1	5
Data-	Connector 1	6
Clock+	Connector 1	3
Clock-	Connector 1	4
Preset	Connector 1	7
DIR	Connector 1	8
Shielding	Connector 1	Connector Housing

Connector-View on Encoder  
 Rotation Clockwise (seen on shaft)

### Dimensional Drawing

### Accessories

Connectors & Cables

10m PUR Cable, 8pin, A-Coded, f

POS M12 8pin-A Female+5m PUR Cable

POS M12 8pin-A Female+2m PUR Cable [Data Sheet](#)

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POS M12 8pin-A Female+10m PUR Cable

M12, 8pin A-Coded, Female

More

Clamping Rings

Clamping Ring V06

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

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.