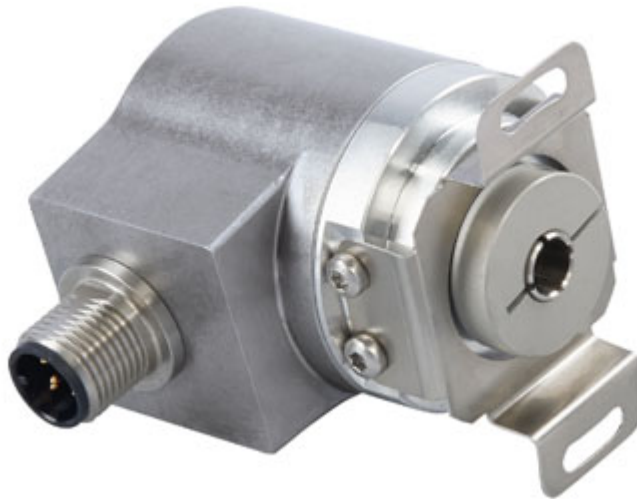


## IXARC Absolute Rotary Encoder

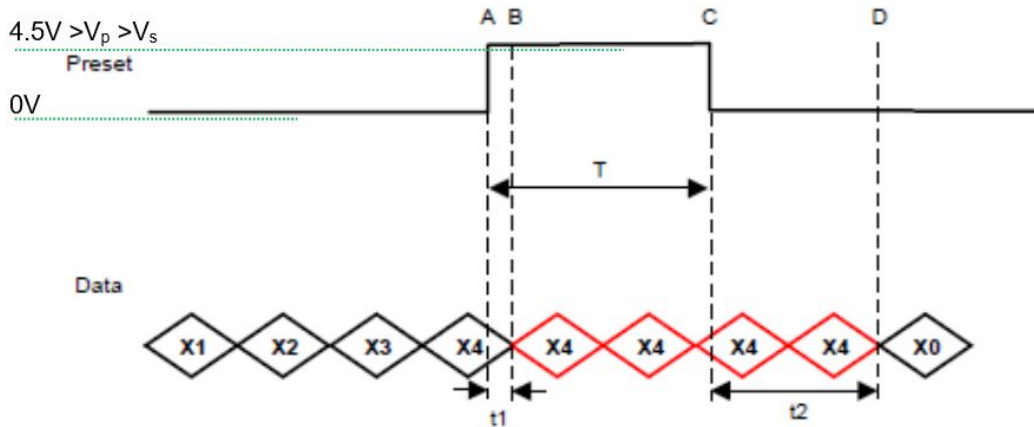
**UCD-S101G-1213-V6S0-PRQ**



### 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	MMMMMMMMMMMMSSSSSSSSSSSS0
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 kΩ



**T = 105 msec (+/- 2msec)**

**t1 = 3.5 msec +/- 2msec**

**T+ t2 = 224 msec (+/- 4msec)**

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 Vs)	Decreasing Values Turning Clockwise (Viewed from Flange Side)
Min Time needed for change	40 msec
Input Resistance	60 kΩ

### Outputs

Output Driver	RS422
---------------	-------

### Electrical Data

Supply Voltage	4.5 - 30 VDC
Current Consumption	Typical 50 mA
Power Consumption	≤ 1.0 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	13 bit
Resolution Multiturn	12 bit
Multiturn Technology	Self powered magnetic pulse counter (no battery, no gear)
Accuracy (INL)	$\pm 0.0878^\circ$ ( $\leq 12$ 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

Housing Material	Steel
Housing Coating	Cathodic corrosion protection (>720 hrs salt spray resistance)
Flange Type	Blind Hollow, $\varnothing 36$ mm / $\varnothing 42$ mm
Flange Material	Aluminum
Shaft Type	Blind Hollow, Depth = 18 mm
Shaft Diameter	$\varnothing 6$ mm (0.24")
Shaft Material	Stainless Steel V2A (1.4305, 303)
Friction Torque	$\leq 3$ Ncm @ 20 °C (4.2 oz-in @ 68 °F)
Max. Permissible Mechanical Speed	$\leq 12000$ 1/min
Shock Resistance	$\leq 100$ g (half sine 6 ms, EN 60068-2-27)
Permanent Shock Resistance	$\leq 10$ g (half sine 16 ms, EN 60068-2-29)
Vibration Resistance	$\leq 10$ g (10 Hz - 1000 Hz, EN 60068-2-6)
Length	50,2 mm (1.98")
Weight	140 g (0.31 lb)
Maximum Axial / Radial Misalignment	Static $\pm 0.3$ mm / $\pm 0.5$ mm; Dynamic $\pm 0.1$ mm / $\pm 0.2$ mm

Data Sheet

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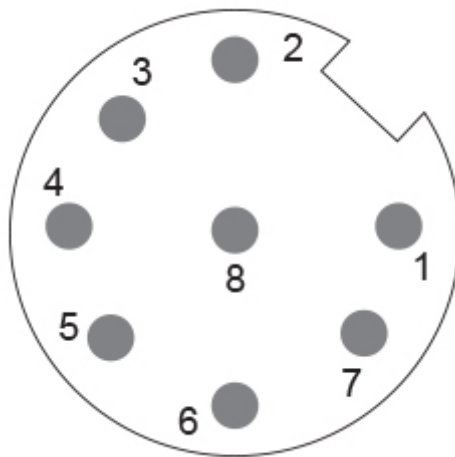


### Electrical Connection

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

### Product Life Cycle

Product Life Cycle	Established
Approval	CE + cULus



### Connection Plan

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

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

### Dimensional Drawing

[2D 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  
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!**

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