

## IXARC Absolute Rotary Encoder

### UCD-AC1P5-PPPP-L100-PRM



#### Interface

Interface	Programmable Analog Current (Preset + Dir)
Manual Functions	Preset + complement via cable or connector
Configuration Tool	UBIFAST Configuration Tool (Version $\geq$ 1.6.10) + Ubifast Adap
Video Manual	<a href="#">▶ Watch a simple installation video</a>
Programming Functions	Measurement Range, Preset Value, Output Direction, Code

#### Electrical Data

Supply Voltage	8 - 32 VDC
Current Consumption	Typical 20 mA @24 V (no load)
Start-Up Time	<500 ms
Max Load Resistance	500 $\Omega$
Analog Accuracy	@ 20 mA = $\pm$ 20 $\mu$ A (with an ideal power supply)
Linearity	0.15%
Settling Time	32 ms (from min value to max value jump)
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	240.8 years @ 40 $^{\circ}$ C

Data Sheet

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**Sensor**

Technology	Magnetic
Multiturn Technology	Self powered magnetic pulse counter (no battery, no gear)
Accuracy (INL)	$\pm 0.0878^\circ$ ( $\leq 12$ bit)
Sense Signal (Default)	Counterclockwise shaft movement (front view on shaft)
Code	Analog Current 4 - 20 mA
Cycle Time Base Sensor	$< 100 \mu\text{s}$
Minimum Measurement Range	0 - $11.25^\circ$
Resolution of Output	Max. 13 bits over entire measuring range (Fractional Turns - Resolution decreases less than 13 bits when measurements range is less than 90 degrees)
Multiturn Range	16 turn (default setting). User can use the UBIFAST Tool to measure up to 65536 turns.

**Environmental Specifications**

Protection Class (Shaft)	IP65
Protection Class (Housing)	IP66/IP67
Operating Temperature	$-40^\circ\text{C}$ ( $-40^\circ\text{F}$ ) - $+85^\circ\text{C}$ ( $+185^\circ\text{F}$ )
Humidity	98% RH, no condensation

**Mechanical Data**

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 (L)
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 <sup>8</sup> 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	$\leq 30$ gcm <sup>2</sup> [ $\leq 0.17$ oz-in <sup>2</sup> ]
Friction Torque	$\leq 3$ Ncm @ $20^\circ\text{C}$ (4.2 oz-in @ $68^\circ\text{F}$ )
Max. Permissible Mechanical Speed	$\leq 12000$ 1/min

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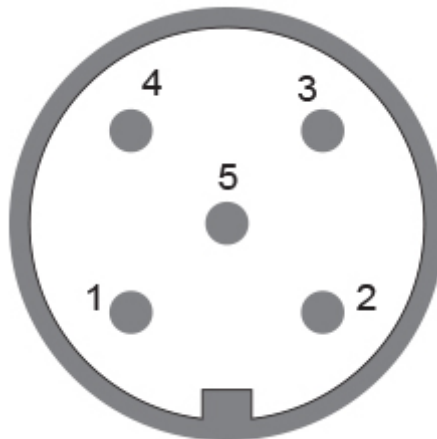
Shock Resistance	≤ 100 g (half sine 6 ms, EN 60068-2-27)
Permanent Shock Resistance	≤ 10 g (half sine 16 ms, EN 60068-2-29)
Vibration Resistance	≤ 10 g (10 Hz - 1000 Hz, EN 60068-2-6)
Length	52,7 mm (2.07")
Weight	325 g (0.72 lb)

### Electrical Connection

Connection Orientation	Radial
Connector	M12, Male, 5 pin, a coded

### Product Life Cycle

Product Life Cycle	New
Approval	CE + cULus



### Connection Plan

SIGNAL	CONNECTOR	PIN NUMBER
Power Supply	Connector 1	2
GND	Connector 1	3
Analog Output	Connector 1	1
Set1/Direction	Connector 1	5
Set2/Zero Set	Connector 1	4

## Connector-View on Encoder Dimensional Drawing

[2D 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-10-10  
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  
Spring Loaded Pivot Arm 58mm  
More

## Clamping Rings

Clamp Disc w/ Eccentric Hole-4pcs  
Clamp Disc w/ Centred Hole-4pcs

## Displays

AP22-D0 Analog Display (4 dig. o/p)  
DiMod-A Analog Display

## Configuration/Programming Tools

UBIFAST Configuration Tool  
Ubifast Adapter Cable - UCD-Ax-PxM

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

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