

## IXARC Absolute Rotary Encoder

### UCD-AC1P5-PPPP-G10G-PAM



#### 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
Resolution Singleturn	Programmable max. 13 bit, pre-programmed 13 bit
Resolution Multiturn	Programmable max. 16 bit, pre-programmed 4 bit
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)	IP68/IP69K
Protection Class (Housing)	IP68/IP69K
Operating Temperature	-40 °C (-40 °F) - +85 °C (+185 °F)
Humidity	98% RH, no condensation

**Mechanical Data**

Housing Material	Stainless Steel V4A (1.4404, 316 L)
Housing Coating	No Coating
Flange Type	Synchro, $\varnothing$ 42 mm Heavy Duty
Flange Material	Stainless steel V4A (1.4404, 316 L)
Shaft Type	Solid, Length = 20 mm
Shaft Diameter	$\varnothing$ 10 mm (0.39")
Shaft Material	Stainless Steel V4A (1.4112, 440 B), hardened
Max. Shaft Load	Axial 300 N, Radial 300 N
Minimum Mechanical Lifetime (10 <sup>8</sup> revolutions with Fa/Fr)	7.6 (300N / 300 N), 10 (270 N / 270 N), 200 (100 N / 100 N)
Friction Torque	$\leq 3$ Ncm @ 20 °C (4.2 oz-in @ 68 °F)

Data Sheet

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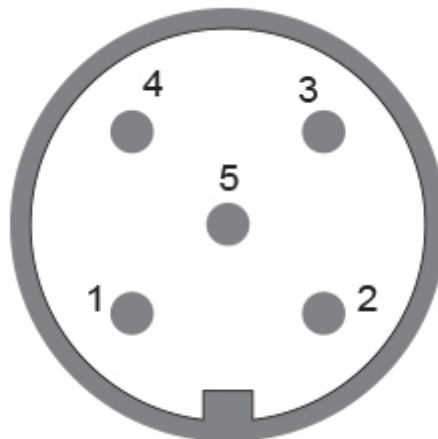
Max. Permissible Mechanical Speed	≤ 6000 1/min
Shock Resistance	≤ 200 g (half sine 11 ms, EN 60068-2-27)
Permanent Shock Resistance	≤ 30 g (half sine 16 ms, EN 60068-2-29)
Vibration Resistance	≤ 30 g (10 Hz - 1000 Hz, EN 60068-2-6)
Length	64,9 mm (2.56")
Weight	400 g (0.88 lb)

### Electrical Connection

Connection Orientation	Axial
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

### 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

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