

## IXARC Absolute Rotary Encoder

### UCD-AV1P1-PPPP-R060-PRM



#### Interface

Interface	Programmable Analog Voltage (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 15 mA @24V (no load)
Start-Up Time	<500 ms
Min. Load Resistance	5 k $\Omega$
Analog Accuracy	@ 10 V = $\pm$ 10 mV (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 °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	Programmable Analog Voltage 0-5 V or 0.5-4.5 V, preprogrammed 0-5V
Cycle Time Base Sensor	$< 100 \mu\text{s}$
Minimum Measurement Range	0 - 11.25°
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)	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	Synchro, $\varnothing$ 36 mm
Flange Material	Aluminum
Shaft Type	Solid, Length = 11.5 mm
Shaft Diameter	$\varnothing$ 6 mm (0.24")
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)	40 (20 N / 40 N), 14 (40 N / 60 N), 10 (40 N / 80 N), 6 (40 N / 110 N)
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)

Data Sheet

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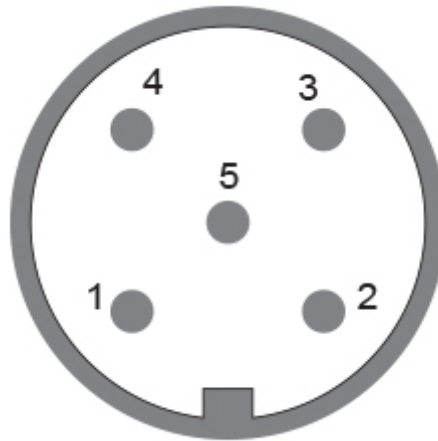
Permanent Shock Resistance	≤ 10 g (half sine 16 ms, EN 60068-2-29)
Vibration Resistance	≤ 10 g (10 Hz - 1000 Hz, EN 60068-2-6)
Length	39 mm (1.54")
Weight	180 g (0.40 lb)

### 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 Bellow Type-06-06

Coupling Bellow Type-06-10

Coupling Bellow Type-06-(3/8")

Coupling Bellow Type-06-(1/4")

Coupling Jaw Type-06-06

Coupling Jaw Type-06-10

Coupling Jaw Type-06-08

Coupling Jaw Type-06-12

Coupling Jaw Type-06-(1/4")

Coupling Jaw Type-06-(3/8")

Coupling Disc Type-06-06

Coupling Disc Type-06-10

More

Adapter Flanges

Spring Loaded Pivot Arm 36mm

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

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