

IXARC Absolute Rotary Encoder

UCD-AV1P1-PPPP-G10G-PAM



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	▶ Watch a simple installation video
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 Ω
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)	$\pm 0.0878^\circ$ (≤ 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)	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 ⁸ revolutions with Fa/Fr)	7.6 (300N / 300 N), 10 (270 N / 270 N), 200 (100 N / 100 N)
Friction Torque	≤ 3 Ncm @ 20 °C (4.2 oz-in @ 68 °F)
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)

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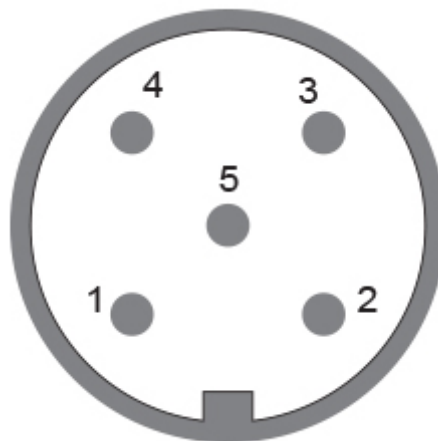
Vibration Resistance	≤ 30 g (10 Hz - 1000 Hz, EN 60068-2-6)
Length	64,9 mm (2.56")
Weight	400 g (0.88 lb)

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

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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

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

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877-737-8698

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877-378-0240

sales@servo2go.com

www.servo2go.com

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Specifications are subject to change without notice.