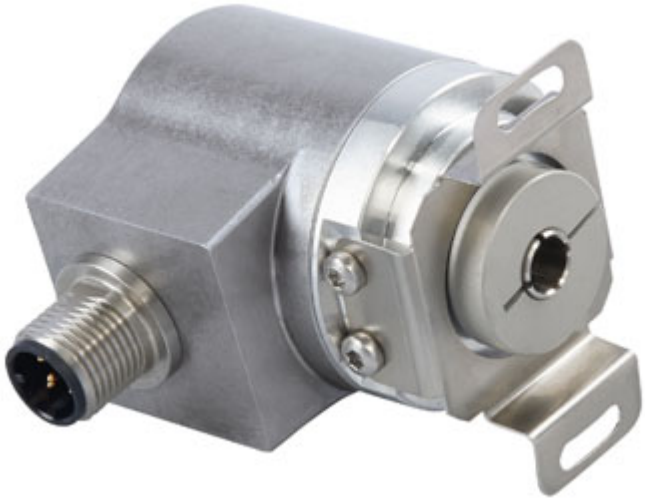
IXARC Absolute Rotary Encoder

UCD-AC1P5-PPPP-V6S0-PRM



Interface	
Interface	Programmable Analog Current (Preset + Dir)
Manual Functions	Preset + complement via cable or connector
Configuration Tool	UBIFAST Configuration Tool (Version ≥ 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 20 mA @24 V (no load)
Start-Up Time	<500 ms
Max Load Resistance	500 Ω
Analog Accuracy	@ 20 mA = ±20 µA (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

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)	±0.0878° (≤ 12 bit)
Sense Signal (Default)	Counterclockwise shaft movement (front view on shaft)
Code	Analog Current 4 – 20 mA
Cycle Time Base Sensor	< 100 µs
Minimum Measurement Range	0 – 11.25°
Resolution of Output	Max. 13 bits over entire measureing 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.

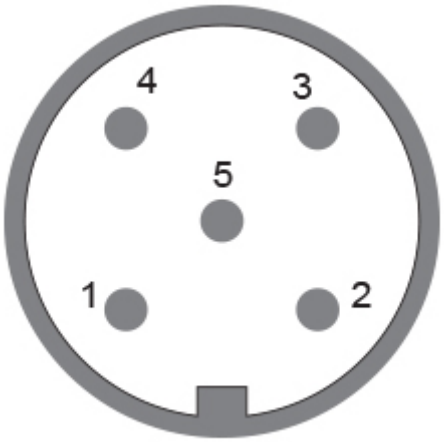
Environmental Specifications	
Protection Class (Shaft)	IP65
Protection Class (Housing)	IP65
Operating Temperature	-40 °C (-40 °F) - +85 °C (+185 °F)
Humidity	98% RH, no condensation

Mechanical Data	
Housing Material	Steel
Housing Coating	Cathodic corrosion protection (>720 hrs salt spray resistance)
Flange Type	Blind Hollow, ø 36 mm / ø 42 mm
Flange Material	Aluminum
Shaft Type	Blind Hollow, Depth = 18 mm
Shaft Diameter	ø 6 mm (0.24")
Shaft Material	Stainless Steel V2A (1.4305, 303)
Friction Torque	≤ 3 Ncm @ 20 °C (4.2 oz-in @ 68 °F)
Max. Permissible Mechanical Speed	≤ 12000 1/min
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	50,2 mm (1.98")
Weight	180 g (0.40 lb)
Maximum Axial / Radial Misalignment	Static ± 0.3 mm /± 0.5 mm; Dynamic ± 0.1 mm /± 0.2 mm

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
Clamping Rings
Clamping Ring V06
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!