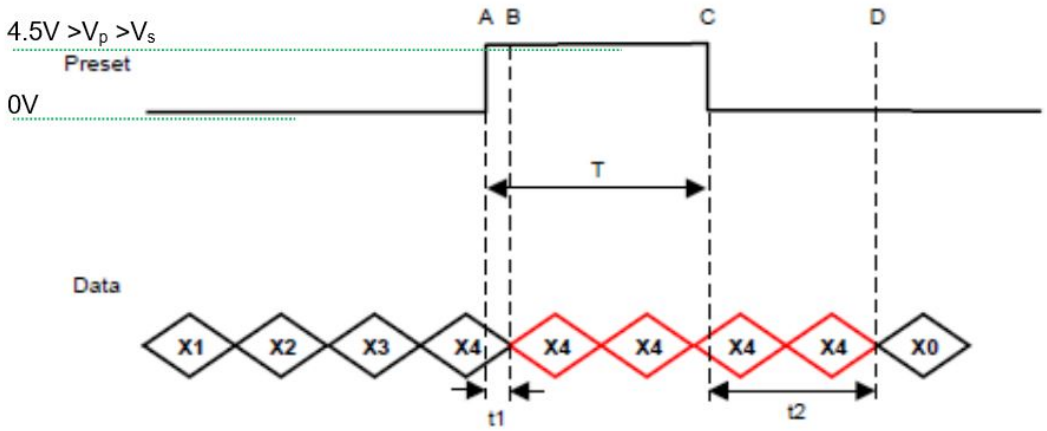
IXARC Absolute Rotary Encoder

UCD-S101G-0013-R060-PRQ

Interface	
Interface	SSI with Preset
Manual Functions	Preset + complement via cable or connector
Interface Cycle Time	≥ 25 µs
Number of Preset Cycles	5,100,000
SSI Format	SSSSSSSSSSSS0
Video Manual	**Watch a simple installation video**

The Preset function allows to set the output value to zero at the present mechanical position.

Input resistance is 110 kΩ



T = 105 msec (+/- 2msec)

t1 = 3.5 msec +/- 2msec

T+ t2 = 224 msec (+/- 4msec)

The DIR-function allows to change the encoder counting direction.

0 (open or GND)	Increasing Values Turning Clockwise (Viewed from Flange Side)
1 (4.5 V to V_S)	Decreasing Values Turning Clockwise (Viewed from Flange Side)
Min Time needed for change	40 msec
Input Resistance	60 kΩ

Outputs

Output Driver	RS422

Electrical Data

Supply Voltage	4.5 – 30 VDC
Current Consumption	Typical 50 mA
Power Consumption	≤ 1.0 W
Start-Up Time	< 1 s
Clock Input	RS 422, via Optocoupler
Clock Frequency	100 kHz – 2 MHz
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	500 years @ 40 °C

Sensor

Technology	Magnetic
Resolution Singleturn	13 bit
Resolution Multiturn	0 bit
Accuracy (INL)	±0.0878° (≤ 12 bit)
Sense Signal (Default)	Clockwise shaft movement (front view on shaft)
Code	Gray

Environmental Specifications

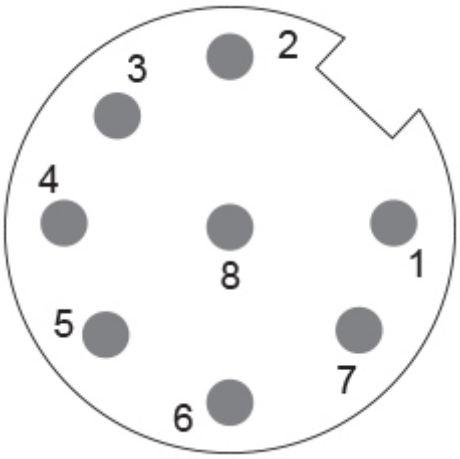
Protection Class (Shaft)	IP65
Protection Class (Housing)	IP65
Operating Temperature	-40 °C (-40 °F) - +85 °C (+185 °F)
Humidity	98% RH, no condensation

Mechanical Data

Housing Material	Steel
Housing Coating	Cathodic corrosion protection (>720 hrs salt spray resistance)
Flange Type	Synchro, ø 36 mm
Flange Material	Aluminum
Shaft Type	Solid, Length = 11.5 mm
Shaft Diameter	ø 6 mm (0.24")
Shaft Material	Stainless Steel V2A (1.4305, 303)
Max. Shaft Load	Axial 40 N, Radial 110 N
Minimum Mechanical Lifetime (10^8 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	≤ 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	39 mm (1.54")
Weight	140 g (0.31 lb)

Electrical Connection	
Connection Orientation	Radial
Connector	M12, Male, 8 pin, a coded

Product Life Cycle	
Product Life Cycle	Established
Approval	CE + cULus



Connection Plan	
SIGNAL	PIN NUMBER
Power Supply	2
GND	1
Data+	5
Data-	6
Clock+	3
Clock-	4
Preset	7
DIR	8
Shielding	Connector Housing

Connector-View on Encoder
Rotation Clockwise (seen on shaft)

Dimensional Drawing

2D Drawing

Accessories

Connectors & Cables
10m PUR Cable, 8pin, A-Coded, f
POS M12 8pin-A Female+5m PUR Cable
POS M12 8pin-A Female+2m PUR Cable
POS M12 8pin-A Female+10m PUR Cable
M12, 8pin 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
AP21-00 SSI Display
AP21-DA SSI Display (4 dig. + analog o/p)
DiMod-P SSI Display
Configuration/Programming Tools
SSI2USB Adapter DB15 (VA01)

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