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## IXARC Absolute Rotary Encoder

### OCD-EIB1B-1213-C10V-PRM

POSITAL Measuring Tools & Sensors Profinet, Multiturn - 12 bit (4096 rev), 13 bit (8192 Steps; 0.044°), IP67, Stainless Steel - V2A (1.4305, 303), Solid Shaft - Clamping,  $\varnothing$  58 mm (2.28"),  $\varnothing$  10 mm (0.39"), Connector - Radial 3 x M12,  $\leq 0.02^\circ$  (Optical), CE / UL Available 0



#### Interface

Interface	Profinet
Profile	Profidrive Profile 4.x, Encoder Profile 4.x
Diagnostics	Memory
Features	Boot-Loader, Round Axis, Flashing LEDs
Transmission Rate	10 / 100 Mbit
Interface Cycle Time	$\geq 1$ ms
Programming Functions	Resolution, time base and filter for velocity, preset, counting direction, IP-Address

#### Outputs

Output Driver Ethernet

#### Electrical Data

Supply Voltage	10 – 30 VDC
Current Consumption	$\leq 230$ mA @ 10 V DC, $\leq 100$ mA @ 24 V DC
Power Consumption	$\leq 2.5$ W
Start-Up Time	$< 1$ s
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 65 years @ 40 °C

### Sensor

Technology Optical  
Resolution Singleturn 13 bit  
Resolution Multiturn 12 bit  
Multiturn Technology Mechanical Gearing (no Battery)  
Accuracy (INL)  $\pm 0.0220^\circ$  (14 – 16 bit),  $\pm 0.0439^\circ$  ( $\leq 13$  bit)  
Code Binary

### Environmental Specifications

Protection Class (Shaft) IP66/IP67  
Protection Class (Housing) IP66/IP67  
Operating Temperature  $-40^\circ\text{C}$  ( $-40^\circ\text{F}$ ) -  $+85^\circ\text{C}$  ( $+185^\circ\text{F}$ )  
Storage Temperature  $-40^\circ\text{C}$  ( $-40^\circ\text{F}$ ) –  $+85^\circ\text{C}$  ( $+185^\circ\text{F}$ )  
Humidity 98% RH, no condensation

### Mechanical Data

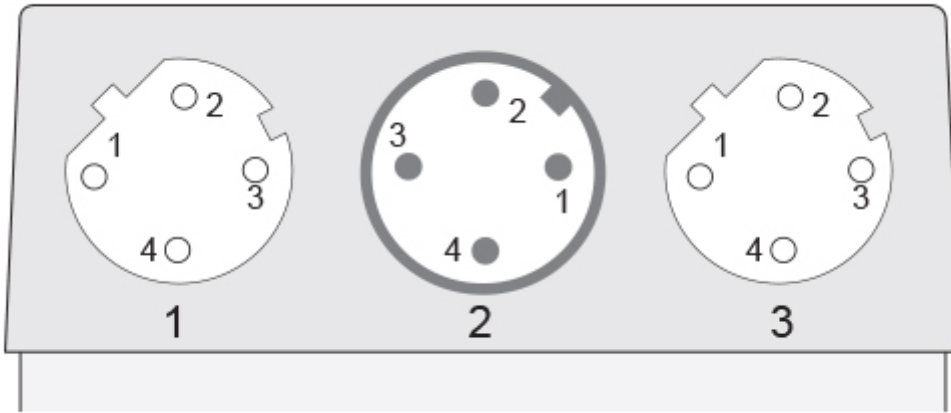
Housing Material Stainless Steel V2A (1.4305, 303)  
Housing Coating No Coating  
Flange Type Clamp,  $\varnothing$  58 mm (C)  
Flange Material Stainless steel V2A (1.4305; 303)  
Shaft Type Solid, Single Flat, Length = 20 mm  
Shaft Diameter  $\varnothing$  10 mm (0.39")  
Shaft Material Stainless 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) 430 (20 N / 40 N), 150 (40 N / 60 N), 100 (40 N / 80 N), 55 (40 N / 110 N)  
Rotor Inertia  $\leq 30\text{ gcm}^2$  [ $\leq 0.17\text{ oz-in}^2$ ]  
Friction Torque  $\leq 5\text{ Ncm}$  @  $20^\circ\text{C}$ , (7.1 oz-in @  $68^\circ\text{F}$ )  
Max. Permissible Mechanical Speed  $\leq 3000\text{ 1/min}$   
Shock Resistance  $\leq 100\text{ g}$  (half sine 6 ms, EN 60068-2-27)  
Permanent Shock Resistance  $\leq 10\text{ g}$  (half sine 16 ms, EN 60068-2-29)  
Vibration Resistance  $\leq 10\text{ g}$  (10 Hz – 1000 Hz, EN 60068-2-6)  
Length 80 mm (3.15")  
Weight 860 g (1.90 lb)

### Electrical Connection

Connection Orientation Radial  
Connector 1 M12, Female, 4 pin, d coded  
Connector 2 M12, Male, 4 pin, a coded  
Connector 3 M12, Female, 4 pin, d coded

### Product Life Cycle

Product Life Cycle Established  
Approval CE + cULus listed, Industrial Control Equipment

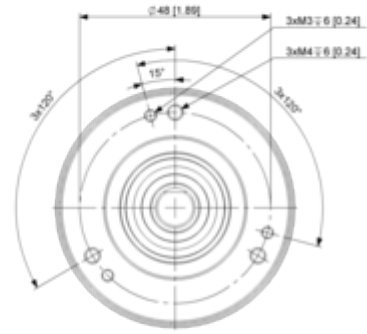
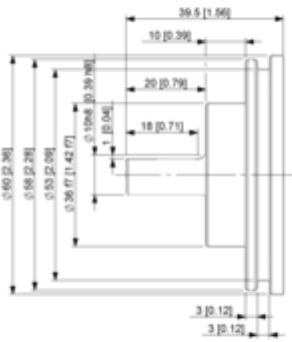


### Connection Plan

SIGNAL	CONNECTOR	PIN NUMBER
Tx+	Connector 1	1
Rx+	Connector 1	2
Tx-	Connector 1	3
Rx-	Connector 1	4
Power Supply	Connector 2	1
Not Connected	Connector 2	2
GND	Connector 2	3
Not Connected	Connector 2	4
Tx+	Connector 3	1
Rx+	Connector 3	2
Tx-	Connector 3	3
Rx-	Connector 3	4

Connector-View on Encoder

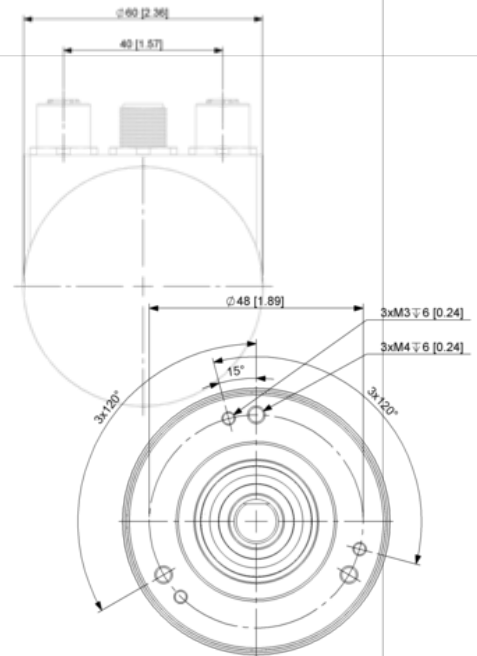
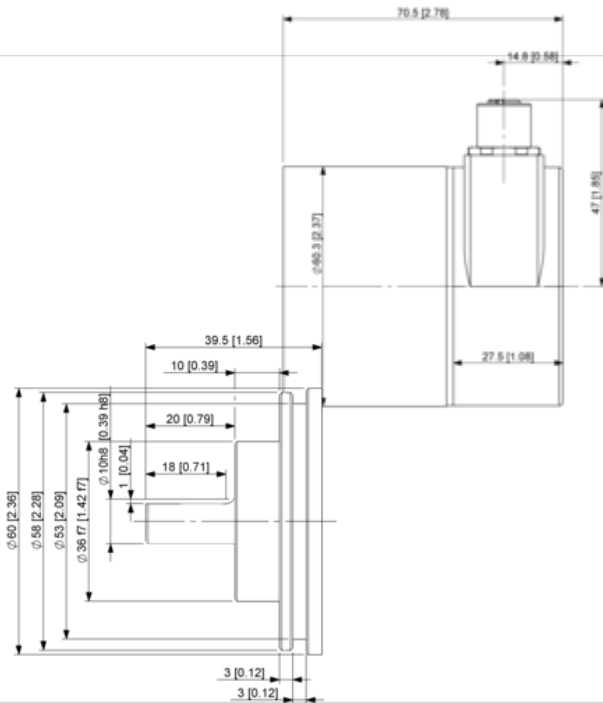
### Dimensional Drawing

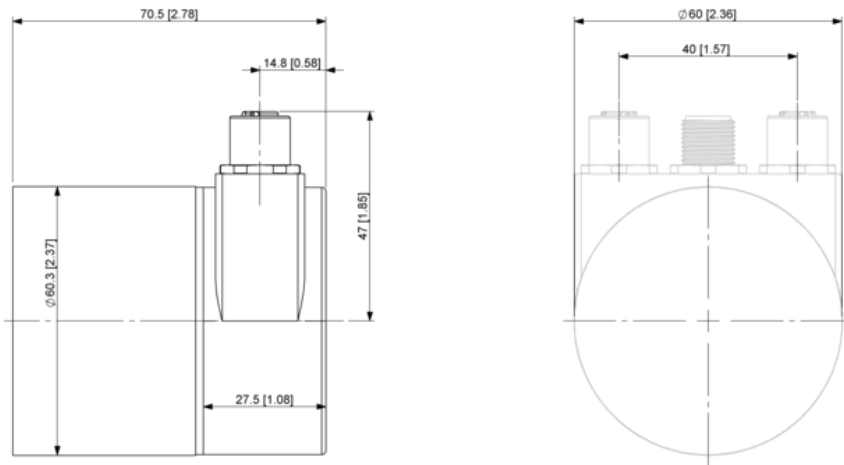


2D Drawing

Product Images

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The picture and drawing are for general presentation purposes only. Please refer to the "Download" section for detailed technical drawings. All dimension in [inch] mm.

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