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IXARC Absolute Rotary Encoder

UCD-S401B-1212-M120-PRQ



Interface

Interface	SSI with Button and LEDs
Programming Functions	Absolute: Resolution, Revolution, Code, Preset
Manual Functions	Preset via push button and cable or connector
Interface Cycle Time	$\geq 25 \mu s$
Number of Preset Cycles	5,100,000
SSI Format	MMMMMMMMMMMMSSSSSSSSSSSS00
Video Manual	Data Sheet Watch a simple installation video

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Outputs

Output Driver	RS422
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Electrical Data

Supply Voltage	4.5 – 30 VDC
Current Consumption	Typical 50 mA
Power Consumption	≤ 1.0 W
Start-Up Time	< 250 ms
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	350 years @ 40 °C

Sensor

Technology	Magnetic
Resolution Singleturn	12 bit
Resolution Multiturn	12 bit
Multiturn Technology	Self powered magnetic pulse counter (no battery, no gear)
Accuracy (INL)	±0.0878° (≤ 12 bit)
Sense Signal (Default)	Clockwise shaft movement (front view on shaft)
Code	Binary

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	Clamp, ø 58 mm (M)



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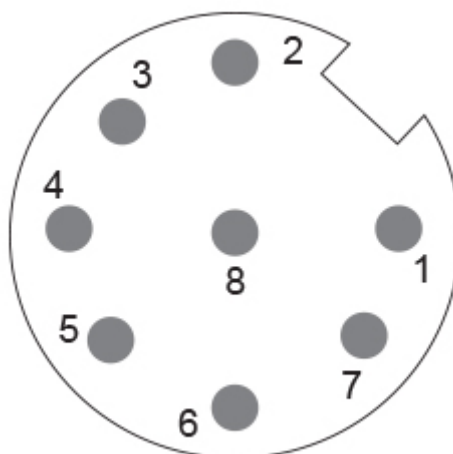
Flange Material	Aluminum
Shaft Type	Solid, Single Flat, Length = 20 mm
Shaft Diameter	ø 12 mm (0.47")
Shaft Material	Stainless Steel V2A (1.4305, 303)
Max. Shaft Load	Axial 40 N, Radial 110 N
Minimum Mechanical Lifetime (10 ⁸ revolutions with Fa/Fr)	430 (20 N / 40 N), 150 (40 N / 60 N), 100 (40 N / 80 N), 55 (40 N / 110 N)
Rotor Inertia	≤ 30 gcm ² [≤ 0.17 oz-in ²]
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	96 mm (3.78")
Weight	215 g (0.47 lb)

Electrical Connection

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

Certification

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



Connection Plan

SIGNAL	PIN NUMBER
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Data Sheet

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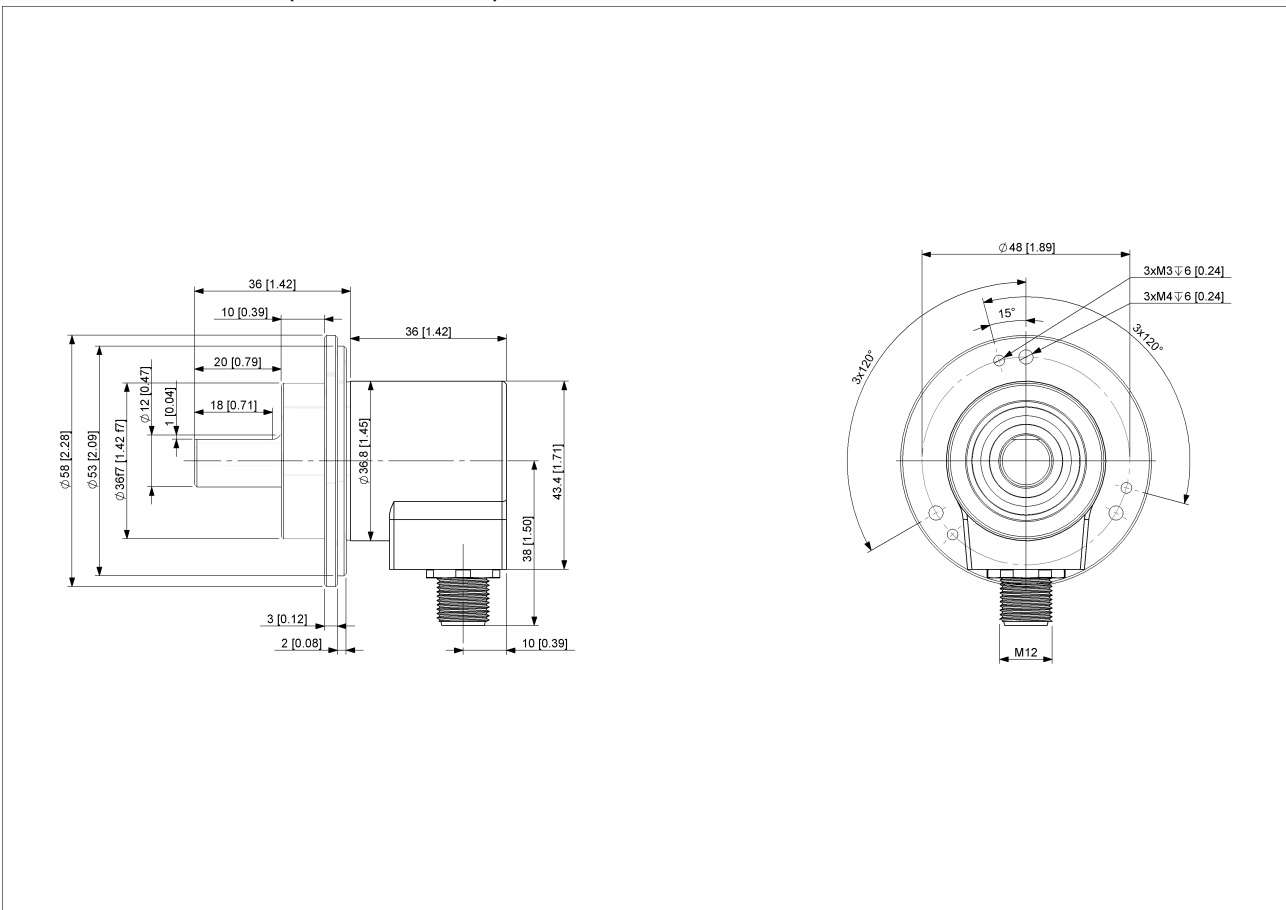


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Power Supply	2
GND	1
Data+	5
Data-	6
Clock+	3
Clock-	4
Preset	7
DIR	8
Shielding	Connector Housing

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



[2D Drawing](#)

Accessories

Connectors & Cables

5m PUR Cable, 8pin, A-Coded, f

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10m PUR Cable, 8pin, A-Coded, f
2m PUR Cable, 8pin, A-Coded, f
10m PUR Cable, 8pin, A-Coded, f
M12, 8pin A-Coded, Female
More

Clamp Disc w/ Eccentric Hole-4pcs
Clamp Disc w/ Centred Hole-4pcs

Coupling Disc Type-10-12
Coupling Bellow Type-10-12
Coupling Jaw Type-06-12
Coupling Jaw Type-10-12
Coupling Disc Type-12-12
Coupling Jaw Type-12-12
Coupling Jaw Type-12-3/8"
More

Mounting Bracket for Clamping Flange w/ fixtures
L Mounting Bracket w/ screws
Mounting Bracket Spring Loaded f. Clamping Flange

Contact



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Contact Us

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. © FRABA B.V., All rights reserved. We do not assume responsibility for technical inaccuracies or omissions.
Specifications are subject to change without notice.