



# POSITAL

## FRABA

### IXARC Absolute Rotary Encoder

UCD-S101B-0013-NA10-PAQ



#### Interface

Interface	SSI with Preset
Programming Functions	Absolute: Resolution, Revolution, Code, Preset
Manual Functions	Preset + complement via cable or connector
Interface Cycle Time	$\geq 25 \mu\text{s}$
Number of Preset Cycles	5,100,000
SSI Format	SSSSSSSSSSSS0
Video Manual	<a href="#">▶ Watch a simple installation video</a>

#### Outputs

Output Driver	RS422
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#### Electrical Data

Supply Voltage	4.5 - 30 VDC
Current Consumption	Typical 50 mA
Power Consumption	$\leq 1.0 \text{ W}$
Start-Up Time	$< 250 \text{ ms}$
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

Data Sheet

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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	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	Synchro, ø 58 mm (N)
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 <sup>8</sup> revolutions with Fa/Fr)	550 (20 N / 40 N), 195 (40 N / 60 N), 135 (40 N / 80 N), 85 (40 N / 110 N)
Rotor Inertia	≤ 30 gcm <sup>2</sup> [≤ 0.17 oz-in <sup>2</sup> ]
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	43 mm (1.69")
Weight	180 g (0.40 lb)



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### Electrical Connection

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

### Certification

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



### 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

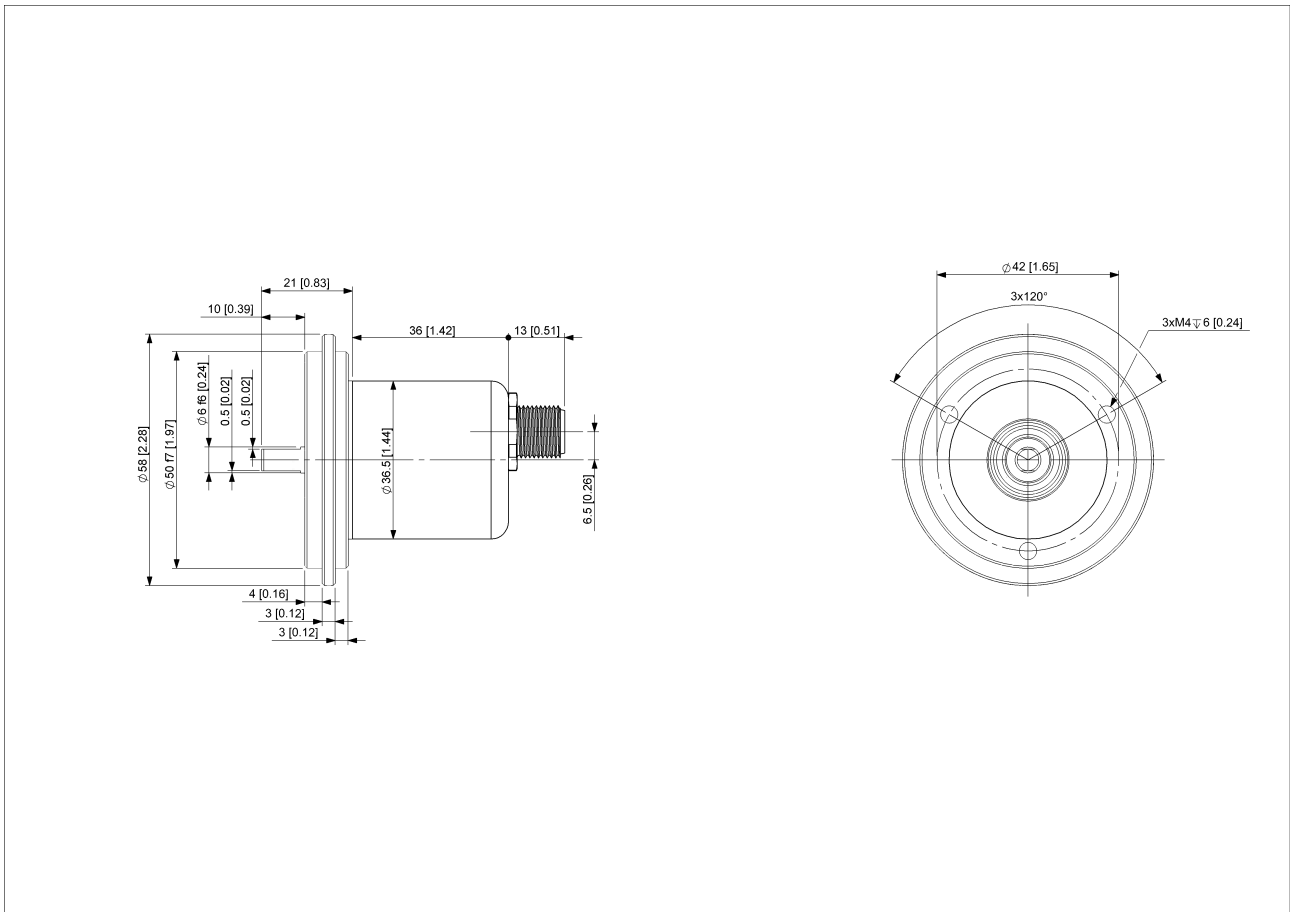
Connector-View on Encoder  
Rotation Clockwise (seen on shaft)



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### [2D Drawing](#)

### Accessories

#### Connectors & Cables

- 5m PUR Cable, 8pin, A-Coded, f
- 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 Bellow Type-06-06
- Coupling Bellow Type-06-10
- Coupling Bellow Type-06-08
- Coupling Bellow Type-06-(3/8")

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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

Mounting Bracket for Synchro Flange w/ fixtures

### 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.