



# POSITAL

## FRABA

### IXARC Absolute Rotary Encoder

### UCD-S101B-2012-NA1A-2AW



#### 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	MMMMMMMMMMMMMMMMMMMMMMMMSSSSSSSSSSSS
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	350 years @ 40 °C

### Sensor

Technology	Magnetic
Resolution Singleturn	12 bit
Resolution Multiturn	20 bit
Multiturn Technology	Self powered magnetic pulse counter (no battery, no gear)
Accuracy (INL)	$\pm 0.0878^\circ$ ( $\leq 12$ bit)
Sense Signal (Default)	Clockwise shaft movement (front view on shaft)
Code	Binary

### Environmental Specifications

Protection Class (Shaft)	IP65
Protection Class (Housing)	IP54
Operating Temperature	-30 °C fixed (-22 °F), -5 °C flexible (+23 °F) - +80 °C (+176 °F)
Humidity	98% RH, no condensation

### Mechanical Data

Housing Material	Steel
Housing Coating	Cathodic corrosion protection (>720 hrs salt spray resistance)
Flange Type	Synchro, $\varnothing$ 58 mm (N)
Flange Material	Aluminum
Shaft Type	Solid, Length = 11.5 mm
Shaft Diameter	$\varnothing$ 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	$\leq 30$ gcm <sup>2</sup> [ $\leq 0.17$ oz-in <sup>2</sup> ]
Friction Torque	$\leq 3$ Ncm @ 20 °C (4.2 oz-in @ 68 °F)
Max. Permissible Mechanical Speed	$\leq 12000$ 1/min
Shock Resistance	$\leq 100$ g (half sine 6 ms, EN 60068-2-27)
Permanent Shock Resistance	$\leq 10$ g (half sine 16 ms, EN 60068-2-29)
Vibration Resistance	$\leq 10$ g (10 Hz - 1000 Hz, EN 60068-2-6)

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Length	43 mm (1.69")
Weight	330 g (0.73 lb)

### Electrical Connection

Connection Orientation	Axial
Cable Length	2 m [79"]
Wire Cross Section	0.14 mm <sup>2</sup> / AWG 26
Material / Type	PVC
Cable Diameter	6 mm (0.24 in)
Minimum Bend Radius	46 mm (1.81") fixed, 61 mm (2.4") flexing

### Certification

Approval	CE
Product Life Cycle	Established

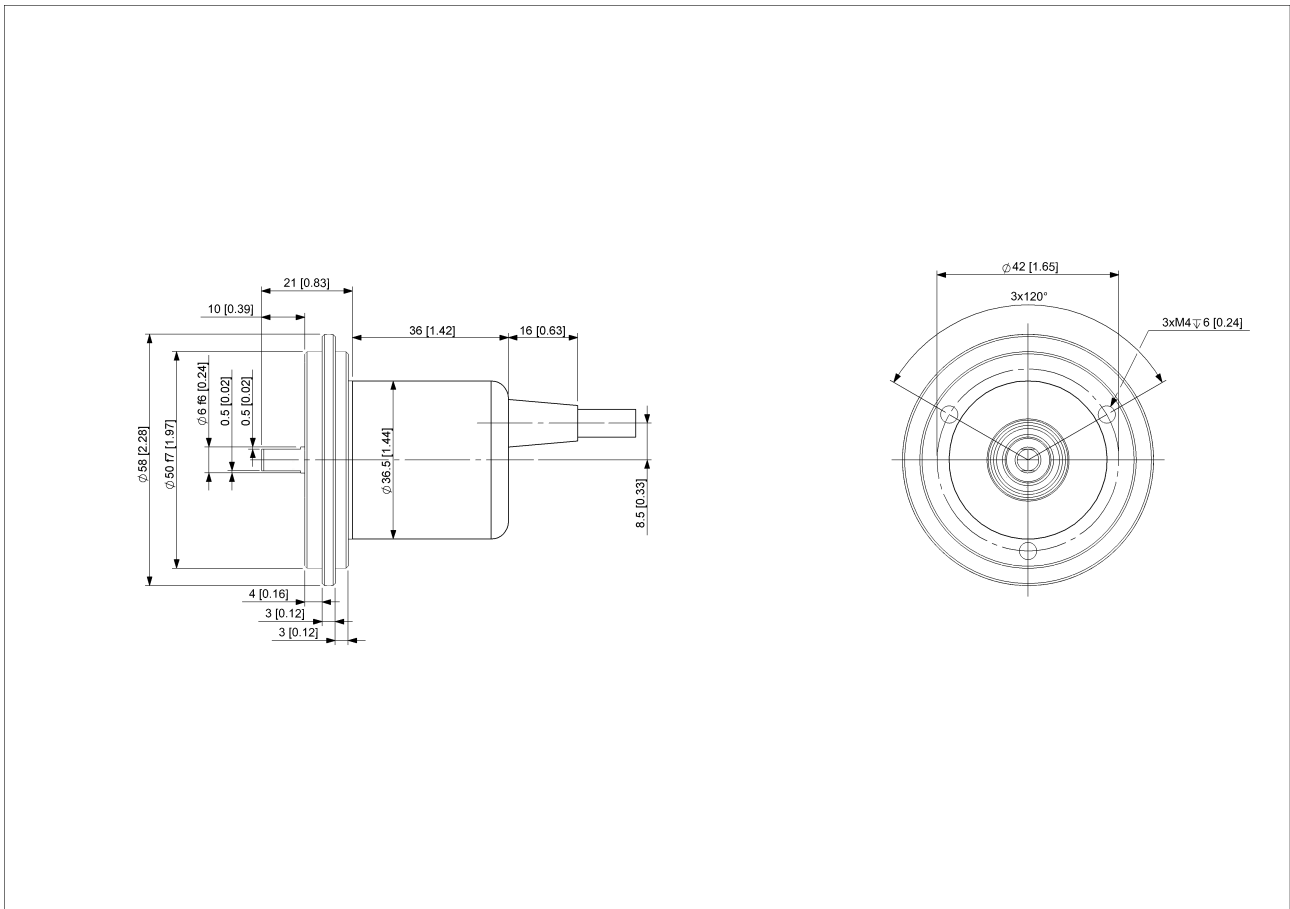
### Connection Plan

SIGNAL	CABLE COLOR
Power Supply	Brown
GND	White
Data+	Gray
Data-	Pink
Clock+	Green
Clock-	Yellow
Preset	Blue
DIR	Red
Shielding	Shield



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### [2D Drawing](#)

### Accessories

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")  
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

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Coupling Disc Type-06-10  
[More](#)

[Mounting Bracket for Synchro Flange w/ fixtures](#)

### Contact



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