



# POSITAL

## FRABA

### IXARC Absolute Rotary Encoder

UCD-SLF2B-0016-NA10-PRQ



#### Interface

|                      |                                                     |
|----------------------|-----------------------------------------------------|
| Interface            | SSI                                                 |
| Interface Cycle Time | $\geq 25 \mu\text{s}$                               |
| SSI Format           | 0000000000000000SSSSSSSSSSSSSSSS                    |
| Video Manual         | <a href="#">▶ Watch a simple installation video</a> |

#### Outputs

|               |       |
|---------------|-------|
| Output Driver | RS422 |
|---------------|-------|

#### 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 - 1 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       |



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### Sensor

|                        |                                                       |
|------------------------|-------------------------------------------------------|
| Technology             | Magnetic                                              |
| Resolution Singleturn  | 16 bit                                                |
| Resolution Multiturn   | 0 bit                                                 |
| Accuracy (INL)         | $\pm 0.0878^\circ (\leq 12 \text{ bit})$              |
| Sense Signal (Default) | Counterclockwise 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, $\varnothing$ 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<br>( $10^8$ 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                                                   | $\leq 30 \text{ gcm}^2 [\leq 0.17 \text{ oz-in}^2]$                        |
| Friction Torque                                                 | $\leq 3 \text{ Ncm @ } 20^\circ\text{C}$ (4.2 oz-in @ 68 °F)               |
| Max. Permissible Mechanical Speed                               | $\leq 12000 \text{ 1/min}$                                                 |
| 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                                                          | 39 mm (1.54")                                                              |
| Weight                                                          | 215 g (0.47 lb)                                                            |

### Electrical Connection

|                        |            |
|------------------------|------------|
| Connection Orientation | Radial     |
|                        | Data Sheet |

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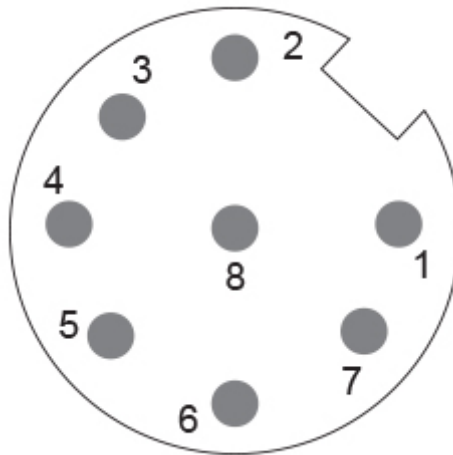
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|           |                           |
|-----------|---------------------------|
| Connector | M12, Male, 8 pin, a coded |
|-----------|---------------------------|

### 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                 |
| Shielding    | Connector housing |

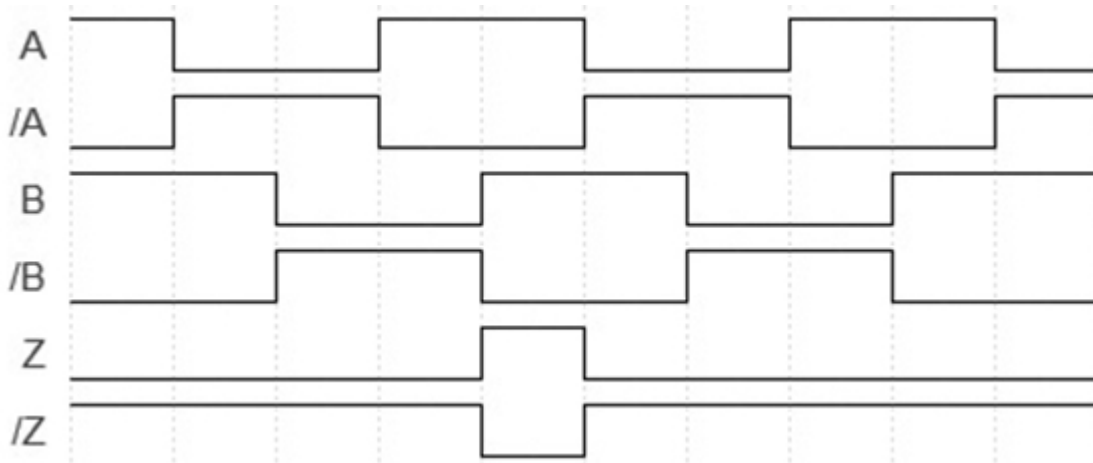
Connector-View on Encoder

### Pulse Diagram

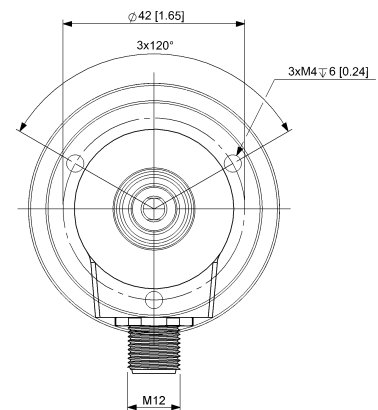
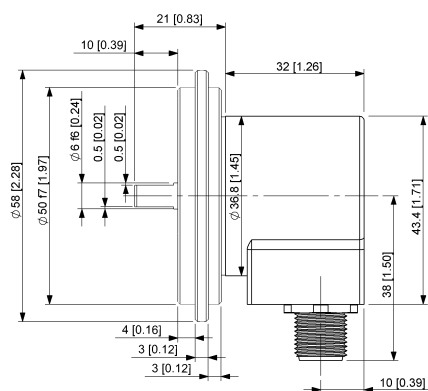


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Rotation Clockwise (seen on shaft)



### [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 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  
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.  
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