



### IXARC Absolute Rotary Encoder

OCD-EEA1B-0016-S060-PRM



#### Interface

|                       |                                                                                       |
|-----------------------|---------------------------------------------------------------------------------------|
| Interface             | EtherNet/IP                                                                           |
| Profile               | CIP (Common Industrial Protocol)                                                      |
| Diagnostics           | Memory                                                                                |
| Programming Functions | Resolution, time base and filter for velocity, preset, counting direction, IP-Address |
| Features              | Boot-Loader, Round Axis                                                               |
| Transmission Rate     | 10 / 100 Mbit                                                                         |
| Interface Cycle Time  | $\geq 1$ ms                                                                           |

#### 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               | $< 250$ ms                                       |
| Reverse Polarity Protection | Yes                                              |
| Short Circuit Protection    | Yes                                              |
| EMC: Emitted Interference   | DIN EN 61000-6-4                                 |
| EMC: Noise Immunity         | DIN EN 61000-6-2                                 |

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|      |                  |
|------|------------------|
| MTTF | 65 years @ 40 °C |
|------|------------------|

### Sensor

|                       |                                                                       |
|-----------------------|-----------------------------------------------------------------------|
| Technology            | Optical                                                               |
| Resolution Singleturn | 16 bit                                                                |
| Accuracy (INL)        | $\pm 0.0220^\circ$ (14 - 16 bit), $\pm 0.0439^\circ$ ( $\leq 13$ bit) |
| Code                  | Binary                                                                |

### Environmental Specifications

|                            |                                    |
|----------------------------|------------------------------------|
| Protection Class (Shaft)   | IP65                               |
| Protection Class (Housing) | IP65                               |
| Operating Temperature      | -40 °C (-40 °F) - +85 °C (+185 °F) |
| Storage 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 (S)                                           |
| Flange Material                                                 | Aluminum                                                                   |
| Shaft Type                                                      | Solid, Length = 10 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 °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                                                          | 73 mm (2.87")                                                              |
| Weight                                                          | 345 g (0.76 lb)                                                            |

### Electrical Connection

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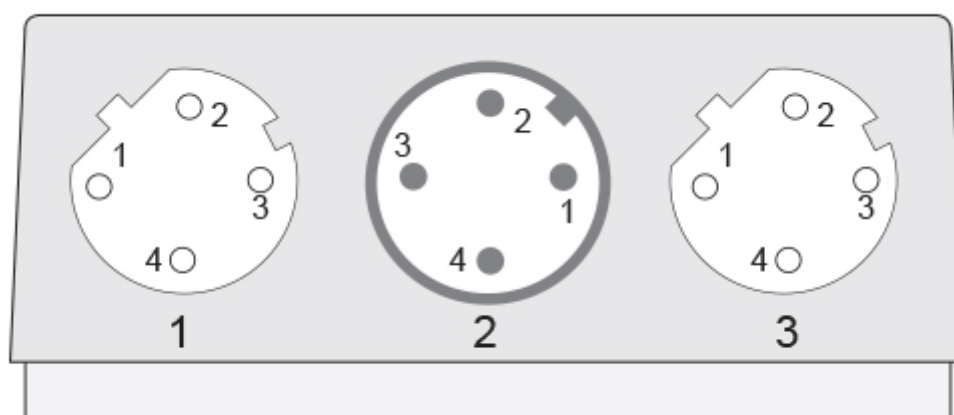
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|                        |                             |
|------------------------|-----------------------------|
| Connection Orientation | Radial                      |
| Connector 1            | M12, Female, 4 pin, d coded |
| Connector 2      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

### Certification

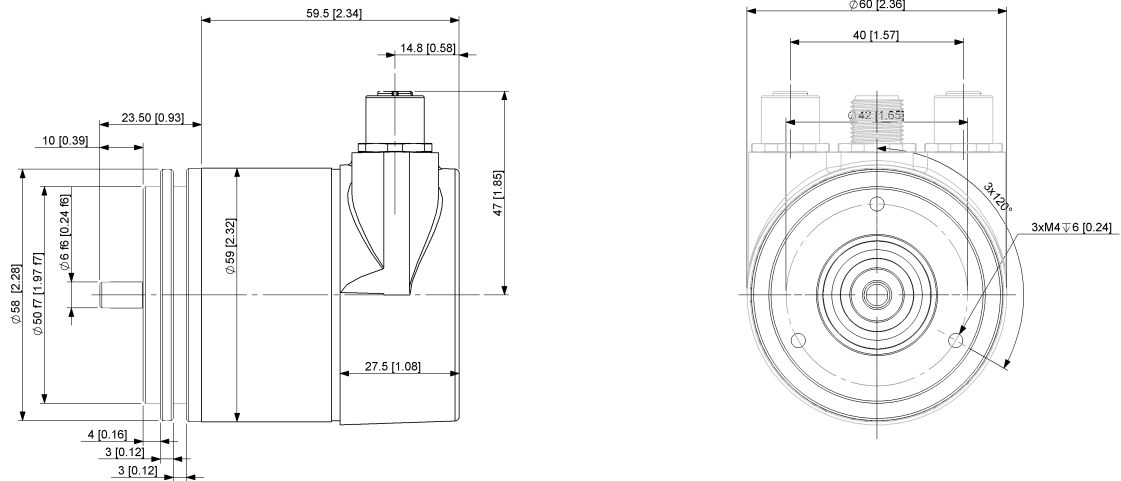
|                    |                                                 |
|--------------------|-------------------------------------------------|
| Approval           | CE + cULus listed, Industrial Control Equipment |
| Product Life Cycle | Established                                     |



### 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



### [2D Drawing](#)

### Accessories

#### Connectors & Cables

10m PUR Cable, 5pin, A-Coded, f  
 2m PUR Cable, 5pin, A-Coded, f  
 5m PUR Cable, 5pin, A-Coded, f  
 2m PUR Cable, 4pin, D-Coded, m  
 M12, 4pin A-Coded, Female  
 10m PUR Cable, 4pin, D-Coded, m  
 10m PVC Cable, 4pin, D-Coded, m  
 2m PVC Cable, 4pin, D-Coded, m  
 5m PVC Cable, 4pin, D-Coded, m  
 M12, 4pin D-Coded, Male  
 5m PUR Cable, 4pin, D-Coded, m  
 More

Clamp Disc w/ Eccentric Hole-4pcs

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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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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.