

## IXARC Incremental Encoder

**UTD-IPH00-XXXXX-HAY0-PRQ**



### Interface

|                       |  |
|-----------------------|--|
| Interface             | Programmable Incremental                           |
| Programming Functions | PPR (1-16384), Output, Counting Direction          |
| Configuration Tool    | UBIFAST Configuration Tool (Version $\geq$ 1.6.10) |

### Outputs

|   |  |
|---|--|
| Output Driver                             | Push-Pull (HTL)  |
| Output Voltage High Level Push-Pull (HTL) | > 4 V @ 4.75-9 V Supply Voltage<br>> V-3 V @ 9-30 V Supply Voltage |
| Output Voltage Low Level Push-Pull (HTL)  | < 0.5 V  |
| Output Voltage High Level RS422 (TTL)     | > 4 V  |
| Output Voltage Low Level RS422 (TTL)      | < 0.5 V  |
| Maximum Frequency Response                | 1 MHz  |
| Maximum Switching Current                 | 50 mA per Channel  |

### Electrical Data

|                             |  |
|-----------------------------|--|
| Supply Voltage              | 4.75 - 30 VDC  |
| Current Consumption         | $\leq$ 60 mA @ 5V DC, $\leq$ 30 mA @ 10V DC, $\leq$ 25 mA @ 24V DC |
| Power Consumption           | $\leq$ 1.0 W   |
| Start-Up Time               | < 1 s  |
| Min. Load Resistance        | 120 $\Omega$   |
| Reverse Polarity Protection | Yes  |

Data Sheet

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|                           |                   |
|---------------------------|-------------------|
| Short Circuit Protection  | Yes               |
| EMC: Emitted Interference | DIN EN 61000-6-4  |
| EMC: Noise Immunity       | DIN EN 61000-6-2  |
| MTTF                      | 280 years @ 40 °C |

### Sensor

|                |   |
|----------------|---|
| Technology     | Magnetic                                  |
| Accuracy (INL) | $\pm 0.0878^\circ$ ( $\leq 12$ bit)       |
| Duty Cycle     | $180^\circ \pm 12^\circ$ (Speed > 100RPM) |
| Phase Angle    | $90^\circ \pm 6^\circ$ (Speed > 100RPM)   |

### Environmental Specifications

|                            |                                    |
|----------------------------|------------------------------------|
| Protection Class (Shaft)   | IP65                               |
| Protection Class (Housing) | IP66/IP67                          |
| Operating Temperature      | -40 °C (-40 °F) - +85 °C (+185 °F) |
| Humidity                   | 98% RH, no condensation            |

### Mechanical Data

#### Mechanical Data

|                                   |   |
|-----------------------------------|---|
| Housing Material                  | Steel   |
| Housing Coating                   | Wet coating (RAL 9006 White Aluminium) + Cathodic corrosion protection (>720 h salt spray resistance) |
| Flange Type                       | Blind Hollow, $\varnothing$ 58 mm (H)   |
| Flange Material                   | Aluminum  |
| Shaft Type                        | Blind Hollow, Depth = 28 mm   |
| Shaft Diameter                    | $\varnothing$ 10 mm (0.39")   |
| Shaft Material                    | Stainless Steel V2A (1.4305, 303)   |
| 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)   |
| Length                            | 71,2 mm (2.80")   |
| Weight                            | 320 g (0.71 lb)   |

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|                                     |   |
|-------------------------------------|---|
| Maximum Axial / Radial Misalignment | Static $\pm 0.3$ mm / $\pm 0.5$ mm; Dynamic $\pm 0.1$ mm / $\pm 0.2$ mm |
|-------------------------------------|---|

### Electrical Connection

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

### Certification

|          |            |
|----------|------------|
| Approval | CE + cULus |
|----------|------------|

### Product Life Cycle

|                    |     |
|--------------------|-----|
| Product Life Cycle | New |
|--------------------|-----|



### Connection Plan

| SIGNAL       | PIN NUMBER        |
|--------------|-------------------|
| A            | 3                 |
| /A           | 4                 |
| B            | 5                 |
| /B           | 6                 |
| Z            | 7                 |
| /Z           | 8                 |
| Power Supply | 2                 |
| GND          | 1                 |
| Shielding    | Connector housing |

## Pulse Diagram



Rotation Clockwise (seen on shaft)

## Dimensional Drawing

### Accessories

Configuration/Programming Tools

UBIFAST Configuration Tool

Connectors & Cables

10m PUR Cable, 8pin, A-Coded, f

POS M12 8pin-A Female+5m PUR Cable

POS M12 8pin-A Female+2m PUR Cable

POS M12 8pin-A Female+10m PUR Cable

M12, 8pin A-Coded, Female

More

Displays

AP20-00 Counter

AP20-D0 Counter (4 dig. o/p)

AP20-0A Counter (analog o/p)

AP20-DA Counter (4 dig. + analog o/p)

DiMod Counter (Relay o/p)

More

Clamping Rings

Clamping Ring Hollow Shaft T120

**Got questions? Need an individual solution? We are here to help!**



Contact Us

If the drawings are not available please refer to the "Download" section. The picture and drawing are for general presentation purposes only. 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.