

## IXARC Incremental Encoder

**UTD-IPH00-XXXXX-8R1S-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                                                                |

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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) | $\pm 0.0878^\circ (\leq 12 \text{ bit})$  |
| Duty Cycle     | $180^\circ \pm 12^\circ$ (Speed > 100RPM) |
| Phase Angle    | $90^\circ \pm 6^\circ$ (Speed > 100RPM)   |

### Environmental Specifications

|                            |                                    |
|----------------------------|------------------------------------|
| Protection Class (Shaft)   | IP66/IP67                          |
| 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                  | Aluminum                                             |
| Housing Coating                   | Chromated                                            |
| Flange Type                       | Square, $\square$ 2.25"                              |
| Flange Material                   | Aluminum                                             |
| Flange Coating                    | Chromated                                            |
| Shaft Type                        | Solid, Single Flat, Length = 15 mm                   |
| Shaft Diameter                    | $\varnothing$ 6.35 mm (1/4")                         |
| Shaft Material                    | Stainless Steel V2A (1.4305, 303)                    |
| Max. Shaft Load                   | Axial 40 N, Radial 110 N                             |
| Rotor Inertia                     | $\leq 30 \text{ gcm}^2 [\leq 0.17 \text{ oz-in}^2]$  |
| Friction Torque                   | $\leq 5 \text{ Ncm}$ @ 20 °C, (7.1 oz-in @ 68 °F)    |
| Max. Permissible Mechanical Speed | $\leq 3000 \text{ 1/min}$                            |
| 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                            | 110,8 mm (4.36")                                     |
| Weight                            | 380 g (0.84 lb)                                      |

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Minimum Mechanical Lifetime  
( $10^8$  revolutions with Fa/Fr)

430 (20 N / 40 N), 150 (40 N / 60 N), 100 (40 N / 80 N), 55 (40 N / 110 N)

### Electrical Connection

Connection Orientation

Radial

Connector

M12, Male, 8 pin, a coded

### Certification

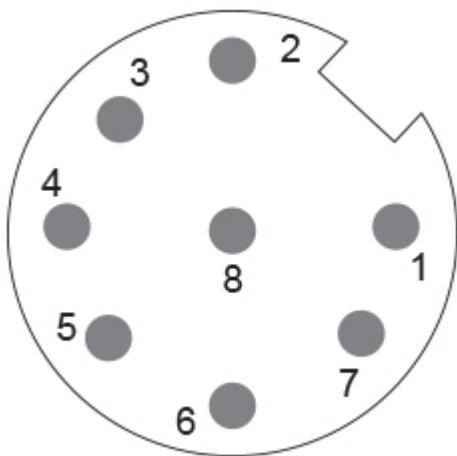
Approval

CE + cULus

### Product Life Cycle

Product Life Cycle

New



### Connection Plan

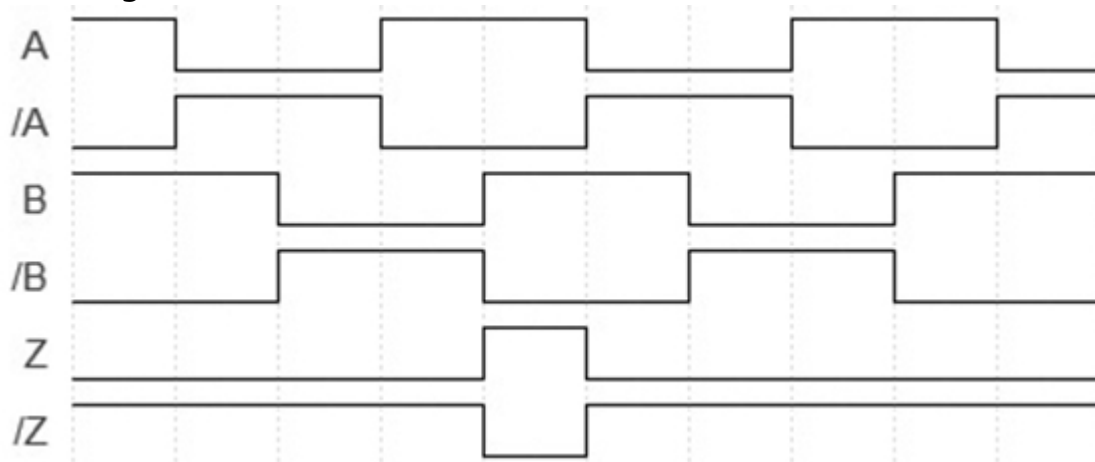
| SIGNAL       | PIN NUMBER        |
|--------------|-------------------|
| A            | 3                 |
| /A           | 4                 |
| B            | 5                 |
| /B           | 6                 |
| Z            | 7                 |
| /Z           | 8                 |
| Power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

Connector-View on Encoder

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## 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

Couplings

Coupling Bellow Type-10-(1/4")

Coupling Bellow Type-06-(1/4")

Coupling Jaw Type-10-(1/4")

Coupling Jaw Type-06-(1/4")

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

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**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.