

## IXARC Incremental Encoder

### UTD-IPH00-XXXXX-Y10S-PAL



#### 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) | $\pm 0.0878^\circ$ ( $\leq 12$ 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                  | Steel                                                                                                 |
| Housing Coating                   | Wet coating (RAL 9006 White Aluminium) + Cathodic corrosion protection (>720 h salt spray resistance) |
| Flange Type                       | Synchro, $\varnothing$ 58 mm (Y)                                                                      |
| Flange Material                   | Aluminum                                                                                              |
| Shaft Type                        | Solid, Length = 20 mm                                                                                 |
| Shaft Diameter                    | $\varnothing$ 10 mm (0.39")                                                                           |
| 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                            | 45,7 mm (1.80")                                                                                       |

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|                                                                         |                                                                            |
|-------------------------------------------------------------------------|----------------------------------------------------------------------------|
| Weight                                                                  | 285 g (0.63 lb)                                                            |
| Minimum Mechanical Lifetime<br>(10 <sup>8</sup> revolutions with Fa/Fr) | 420 (20 N / 40 N), 145 (40 N / 60 N), 100 (40 N / 80 N), 55 (40 N / 110 N) |

### Electrical Connection

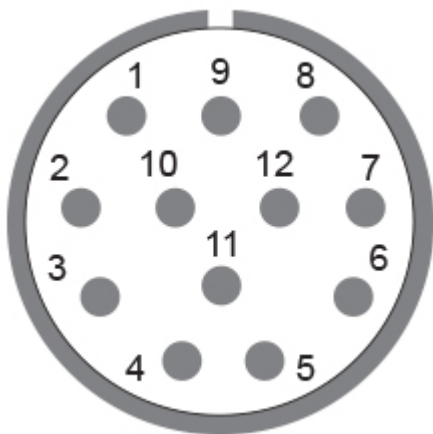
|                        |                               |
|------------------------|-------------------------------|
| Connection Orientation | Axial                         |
| Connector              | M23, Male, 12 pin, CCW / left |

### Certification

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

### Product Life Cycle

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

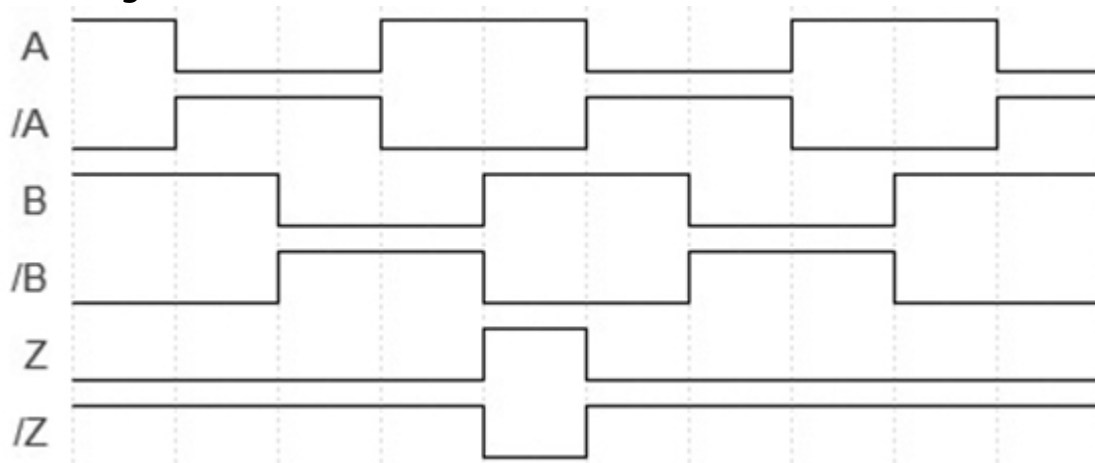


### Connection Plan

| SIGNAL       | PIN NUMBER        |
|--------------|-------------------|
| Power Supply | 12                |
| GND          | 10                |
| A            | 5                 |
| /A           | 6                 |
| B            | 8                 |
| /B           | 1                 |
| Z            | 3                 |
| /Z           | 4                 |
| Shielding    | Connector housing |

## Connector-View on Encoder

### Pulse Diagram



Rotation Clockwise (seen on shaft)

### Dimensional Drawing

#### Accessories

Configuration/Programming Tools

UBIFAST Configuration Tool

Connectors & Cables

10m PVC Cable, 12pin, Clockwise, f

15m PVC Cable, 12pin, Clockwise, f

1m PVC Cable, 12pin, Clockwise, f

20m PVC Cable, 12pin, Clockwise, f

5m PVC Cable, 12pin, Clockwise, f

30m PVC Cable, 12pin, Clockwise, f

2m PVC Cable, 12pin, Clockwise, f

M23, 12pin Clockwise, Female

More

Couplings

Coupling Disc Type-10-12

Coupling Bellow Type-10-10

Coupling Bellow Type-06-10

Coupling Bellow Type-08-10

Coupling Bellow Type-10-12

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

Coupling Bellow Type-10-(3/8")

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Coupling Jaw Type-06-10

Coupling Jaw Type-08-10

Coupling Jaw Type-10-12

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

Coupling Jaw Type-10-(3/8")

Coupling Jaw Type-10-10

Coupling Disc Type-06-10

Coupling Disc Type-10-10

More

Measuring Wheels

Measuring Wheels 200mm-Knurled Alu Surface

Measuring Wheels 200mm-Smooth PUR Surface

Measuring Wheels 200mm-Studded PUR Surface

Measuring Wheels 200mm-Corrugated PUR Surface

Measuring Wheels 500mm-Knurling Alu Surface

Measuring Wheels 500mm-Smooth PUR Surface

Measuring Wheels 500mm-Studded PUR Surface

Measuring Wheels 500mm-Corrugated PUR Surface

More

Adapter Flanges

Mounting Bracket for Synchro Flange w/ fixtures

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

Clamp Disc w/ Eccentric Hole-4pcs

Clamp Disc w/ Centred Hole-4pcs

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



Contact Us

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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.