



# POSITAL

## FRABA

### IXARC Incremental Encoder UCD-IPT00-00256-NA10-PRD



#### Interface

|                       |   |
|-----------------------|---|
| Interface             | Programmable Incremental                          |
| Programming Functions | PPR (1-16384), Output, Counting Direction         |
| Configuration Tool    | UBIFAST Configuration Tool (Version $\geq$ 1.6.3) |

#### Outputs

|   |  |
|---|--|
| Output Driver                             | RS 422 (TTL)   |
| Output Incremental                        | A, /A, B, /B   |
| Quadrature Phasing                        | $90^\circ \pm 4.5^\circ$ electrical                                |
| 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 | $\leq 140\text{mA}$ @ 5V DC, $\leq 70\text{mA}$ @ 10V DC, $\leq 40\text{mA}$ @ 24V DC |
| Power Consumption   | $\leq 1.0$ W  |
| Start-Up Time       | < 250 ms  |

Data Sheet

Printed at 15-02-2018 17:02



# POSITAL

## FRABA

|                             |                   |
|-----------------------------|-------------------|
| Min. Load Resistance        | 120 $\Omega$      |
| 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                        | 280 years @ 40 °C |

### Sensor

|                |   |
|----------------|---|
| Technology     | Magnetic                                  |
| Accuracy (INL) | $\pm 0.0878^\circ$ ( $\leq 12$ bit)       |
| Duty Cycle     | $180^\circ \pm 27^\circ$ (Speed > 100RPM) |
| Phase Angle    | $90^\circ \pm 14^\circ$ (Speed > 100RPM)  |

### 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

#### 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                                       |
| 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)                    |

Data Sheet

Printed at 15-02-2018 17:02



# POSITAL

## FRABA

|   |  |
|---|--|
| Length  | 47,5 mm (1.87")  |
| Weight  | 395 g (0.87 lb)  |
| Minimum Mechanical Lifetime<br>(10 <sup>8</sup> revolutions with Fa/Fr) | 550 (20 N / 40 N), 195 (40 N / 60 N), 135 (40 N / 80 N), 85 (40 N / 110 N) |

### Electrical Connection

|                        |                            |
|------------------------|----------------------------|
| Connection Orientation | Radial                     |
| Connector              | MS3102R14S-6P, Male, 6 pin |

### Certification

|          |    |
|----------|----|
| Approval | CE |
|----------|----|

### Product Life Cycle

|                    |             |
|--------------------|-------------|
| Product Life Cycle | Established |
|--------------------|-------------|

### Connection Plan

| SIGNAL       | PIN NUMBER        |
|--------------|-------------------|
| A            | E                 |
| /A           | C                 |
| B            | D                 |
| /B           | F                 |
| Power Supply | B                 |
| GND          | A                 |
| Shielding    | Connector housing |

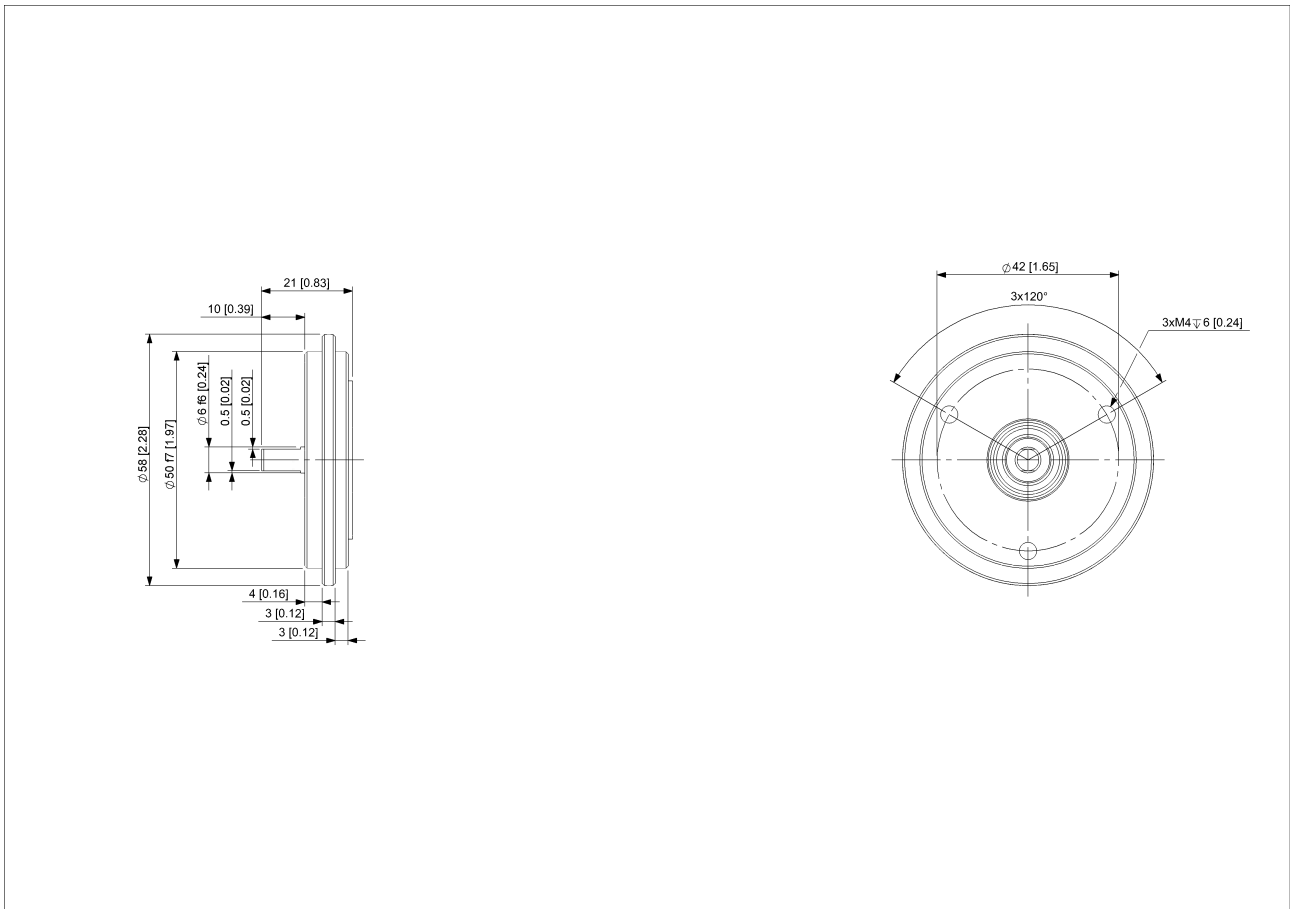
Connector-View on Encoder  
Rotation Clockwise (seen on shaft)

### Dimensional Drawing



# POSITAL

## FRABA



[2D Drawing](#)

### Accessories

Configuration/Programming Tools

UBIFAST Configuration Tool

Couplings

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

Data Sheet

Printed at 15-02-2018 17:02



# POSITAL

---

## FRABA

Coupling Disc Type-06-10

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

### Contact



Contact Us

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.

Data Sheet

Printed at 15-02-2018 17:02