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FRABA

IXARC Incremental Encoder

UCD-IPH00-00512-N060-2RW



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 | Push-Pull (HTL) |
| Quadrature Phasing | $90^\circ \pm 4.5^\circ$ electrical |
| Output Voltage High Level Push-Pull (HTL) | $> 4 \text{ V}$ @ 4.75-9 V Supply Voltage $> 3 \text{ V}$ @ 9-30 V Supply Voltage |
| Output Voltage Low Level Push-Pull (HTL) | $< 0.5 \text{ V}$ |
| Output Voltage High Level RS422 (TTL) | $> 4 \text{ V}$ |
| Output Voltage Low Level RS422 (TTL) | $< 0.5 \text{ V}$ |
| 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 | $\leq 1.0 \text{ W}$ |
| Start-Up Time | $< 250 \text{ ms}$ |
| Min. Load Resistance | 120 Ω |

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| | |
|-----------------------------|-------------------|
| 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) | $\pm 0.0878^\circ$ (≤ 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 | -30 °C fixed (-22 °F), -5 °C flexible (+23 °F) - +70 °C (+158 °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 = 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 |
| Rotor Inertia | ≤ 30 gcm ² [≤ 0.17 oz-in ²] |
| Friction Torque | ≤ 3 Ncm @ 20 °C (4.2 oz-in @ 68 °F) |
| Max. Permissible Mechanical Speed | ≤ 12000 1/min |
| Shock Resistance | ≤ 100 g (half sine 6 ms, EN 60068-2-27) |
| Permanent Shock Resistance | ≤ 10 g (half sine 16 ms, EN 60068-2-29) |
| Vibration Resistance | ≤ 10 g (10 Hz - 1000 Hz, EN 60068-2-6) |

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| | |
|---|--|
| Length | 39 mm (1.54") |
| Weight | 615 g (1.36 lb) |
| Minimum Mechanical Lifetime (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) |

Electrical Connection

| | |
|------------------------|---|
| Connection Orientation | Radial |
| Cable Length | 2 m [79"] |
| Wire Cross Section | 0.14 mm ² / AWG 26 |
| Material / Type | PVC |
| Cable Diameter | 6 mm (0.24 in) |
| Minimum Bend Radius | 46 mm (1.81") fixed, 61 mm (2.4") flexing |

Certification

| | |
|----------|---|
| Approval | CE + cULus listed, Industrial Control Equipment |
|----------|---|

Product Life Cycle

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

Connection Plan

| SIGNAL | CABLE COLOR |
|--------------|-------------|
| A | Green |
| /A | Yellow |
| B | Gray |
| /B | Pink |
| Z | Blue |
| /Z | Red |
| Power Supply | Brown |
| GND | White |
| Shielding | Shield |

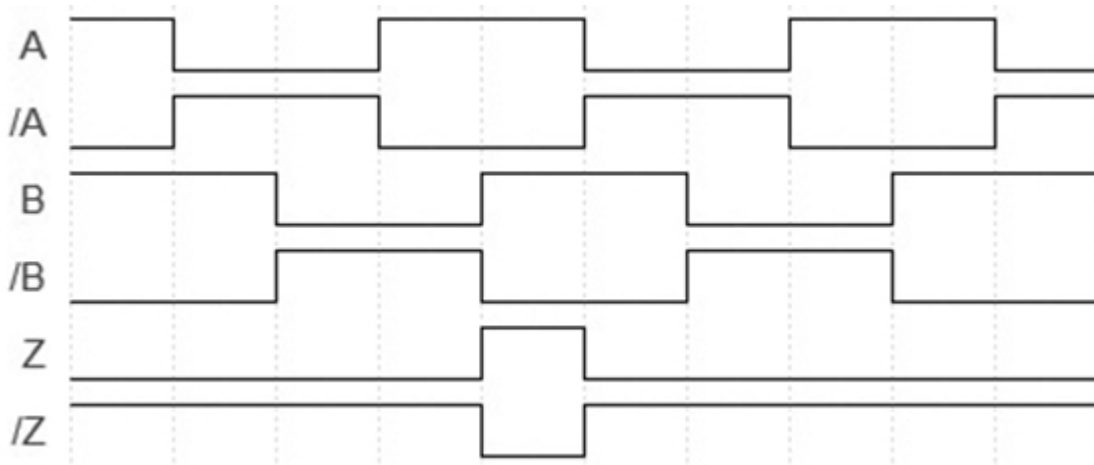
Connector-View on Encoder

Pulse Diagram

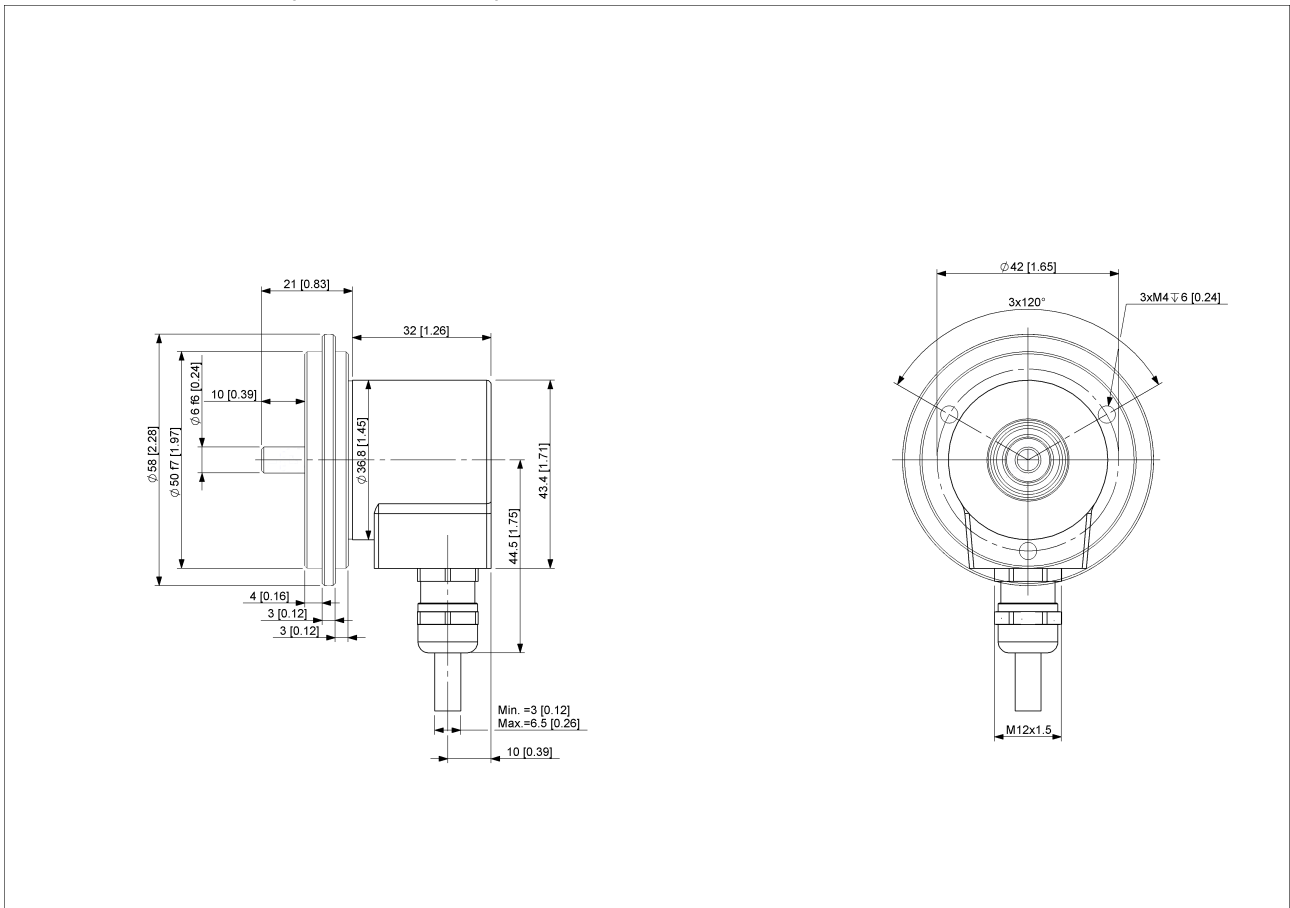


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Rotation Clockwise (seen on shaft)



[2D Drawing](#)

Accessories

Configuration/Programming Tools
UBIFAST Configuration Tool

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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

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.

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Specifications are subject to change without notice.