



POSITAL

FRABA

IXARC Incremental Encoder

UCD-IPT00-00256-HUS0-PRQ



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) |
| 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) | 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 15.9 mm (5/8") |
| Shaft Material | Stainless Steel V2A (1.4305, 303) |
| 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) |
| Length | 71,2 mm (2.80") |

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Weight 320 g (0.71 lb)

Electrical Connection

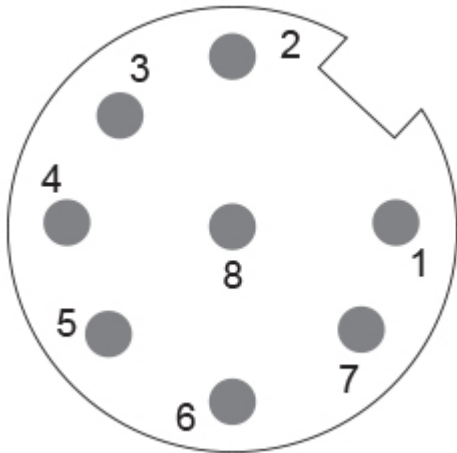
Connection Orientation Radial
Connector M12, Male, 8 pin, a coded

Certification

Approval CE + cULus listed, Industrial Control Equipment

Product Life Cycle

Product Life Cycle Established



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

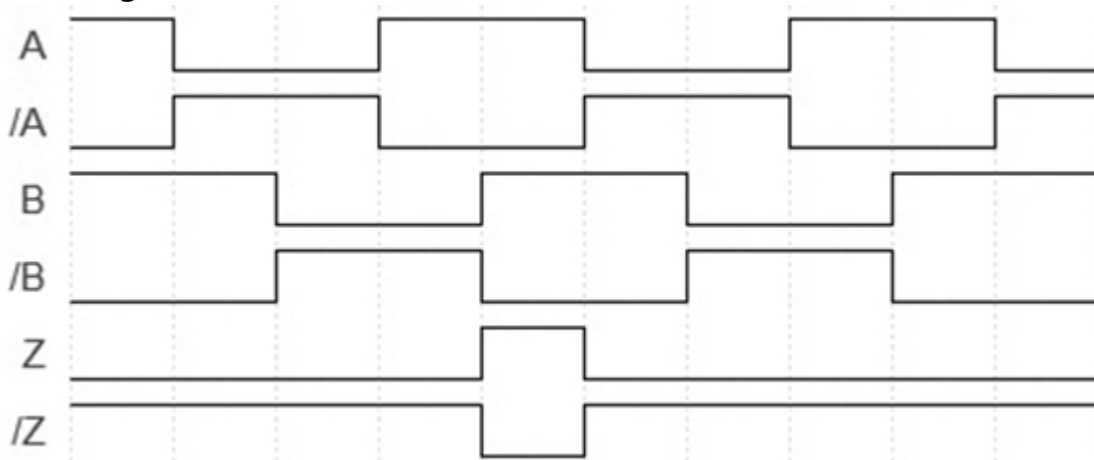
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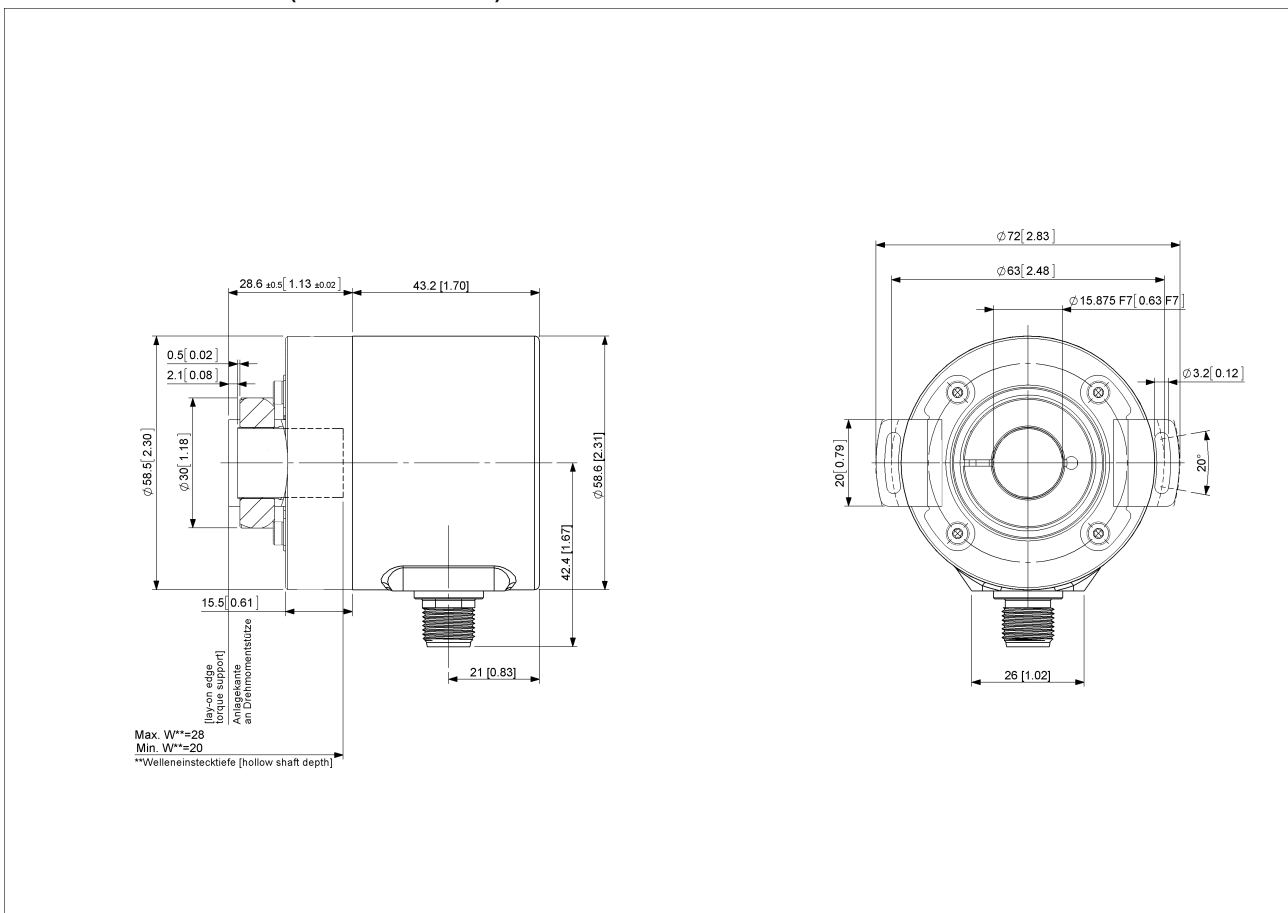
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Pulse Diagram



Rotation Clockwise (seen on shaft)



[2D Drawing](#)

Accessories

Configuration/Programming Tools

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UBIFAST Configuration Tool

Connectors & Cables

5m PUR Cable, 8pin, A-Coded, f

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

2m PUR Cable, 8pin, A-Coded, f

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

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 B15

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.

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