



IXARC Absolute Rotary Encoder

OCD-S3D1B-0016-B06S-PAL



Interface

| | |
|-----------------------------|--|
| Interface | SSI with Preset and Incr. |
| Optional Incremental Pulses | 8192 |
| Manual Functions | Preset + complement via cable or connector |
| Interface Cycle Time | $\geq 25 \mu\text{s}$ |

Outputs

| | |
|-------------------------|-------------------------------------|
| Output Driver | SSI (RS422) / Incr. (RS422) |
| Output Incremental | A, /A, B, /B |
| Quadrature Phasing | $90^\circ \pm 4.5^\circ$ electrical |
| Max. Frequency Response | 2 MHz |

Electrical Data

| | |
|-----------------------------|-------------------------|
| Supply Voltage | 4.5 - 30 VDC |
| Power Consumption | $\leq 1.5 \text{ W}$ |
| Start-Up Time | $< 250 \text{ ms}$ |
| Clock Input | RS 422, via Optocoupler |
| Clock Frequency | 100 kHz - 2 MHz |
| Reverse Polarity Protection | Yes |
| Short Circuit Protection | Yes |
| EMC: Emitted Interference | DIN EN 61000-6-4 |
| EMC: Noise Immunity | DIN EN 61000-6-2 |

Data Sheet

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| | |
|------|--------------------|
| MTTF | 16.2 years @ 40 °C |
|------|--------------------|

Sensor

| | |
|------------------------|---|
| Technology | Optical |
| Resolution Singleturn | 16 bit |
| Accuracy (INL) | $\pm 0.0220^\circ$ (14 - 16 bit), $\pm 0.0439^\circ$ (≤ 13 bit) |
| Sense Signal (Default) | Clockwise shaft movement (front view on shaft) |
| Code | Binary |
| Incremental Pulses | 8192 |

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

| | |
|-----------------------------------|--|
| Housing Material | Steel |
| Housing Coating | Cathodic corrosion protection (>720 hrs salt spray resistance) |
| Flange Type | Blind Hollow, \varnothing 58 mm (B) |
| Flange Material | Aluminum |
| Shaft Type | Blind Hollow, Depth = 30 mm |
| Shaft Diameter | \varnothing 6 mm (0.24") |
| Shaft Material | Stainless Steel V2A (1.4305, 303) |
| Rotor Inertia | ≤ 30 gcm ² [≤ 0.17 oz-in ²] |
| Friction Torque | ≤ 5 Ncm @ 20 °C, (7.1 oz-in @ 68 °F) |
| Max. Permissible Mechanical Speed | ≤ 3000 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 | 60,2 mm (2.37") |
| Weight | 330 g (0.73 lb) |

Electrical Connection

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

Data Sheet

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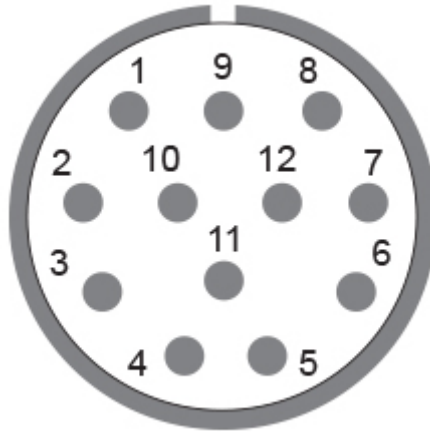
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Certification

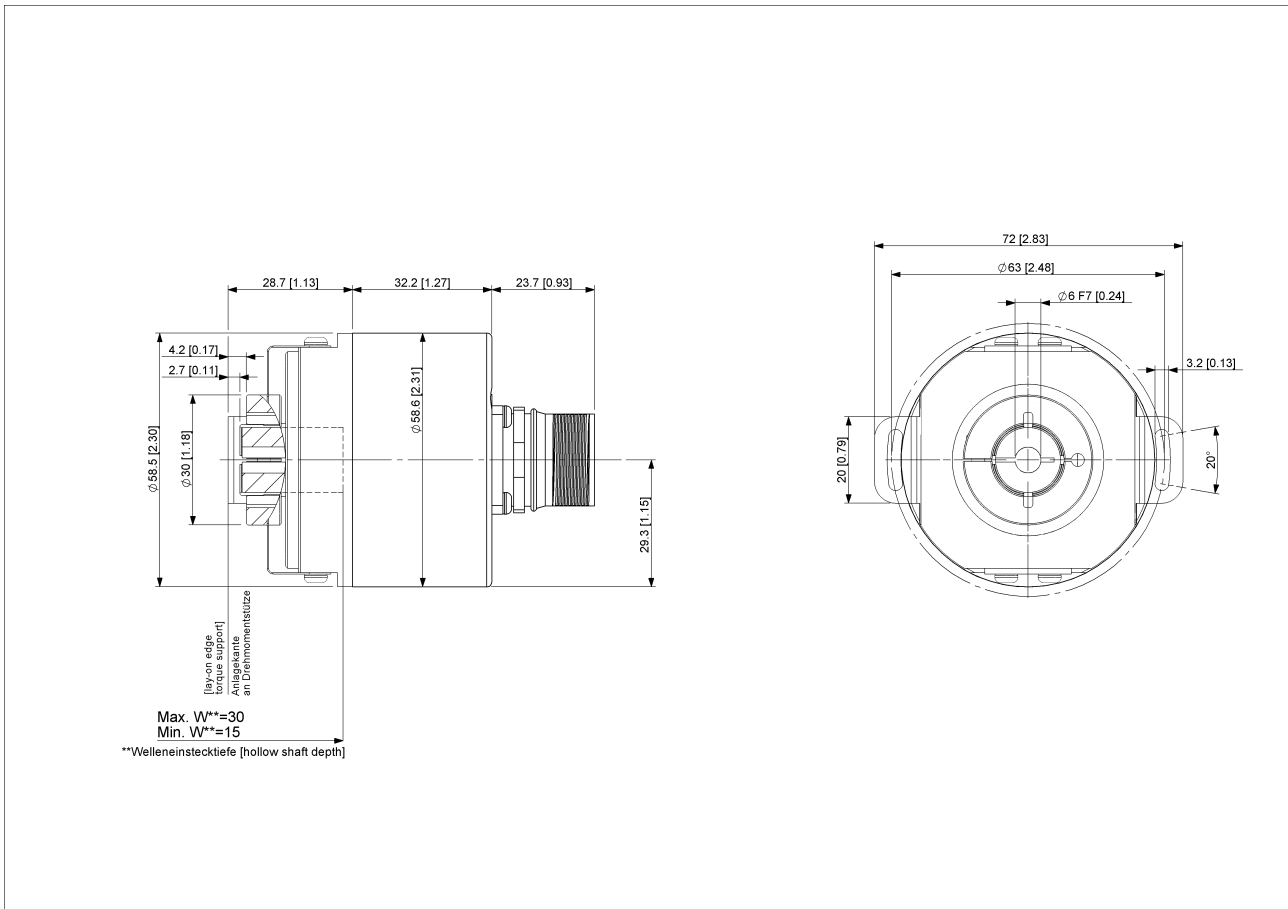
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|--------------------|---|
| Approval | CE + cULus listed, Industrial Control Equipment |
| Product Life Cycle | Established |



Connection Plan

| SIGNAL | PIN NUMBER |
|--------------|------------|
| Power Supply | 11 |
| GND | 12 |
| Data+ | 3 |
| Data- | 4 |
| Clock+ | 2 |
| Clock- | 1 |
| DIR | 8 |
| Preset | 9 |
| A | 5 |
| /A | 6 |
| B | 7 |
| /B | 10 |
| Shielding | Shell |

Connector-View on Encoder



[2D Drawing](#)

Accessories

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

Clamping Ring B15

Contact

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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.