

Incremental rotary encoder

ENI58IL-H12YY5-1024UD1-RSY:01

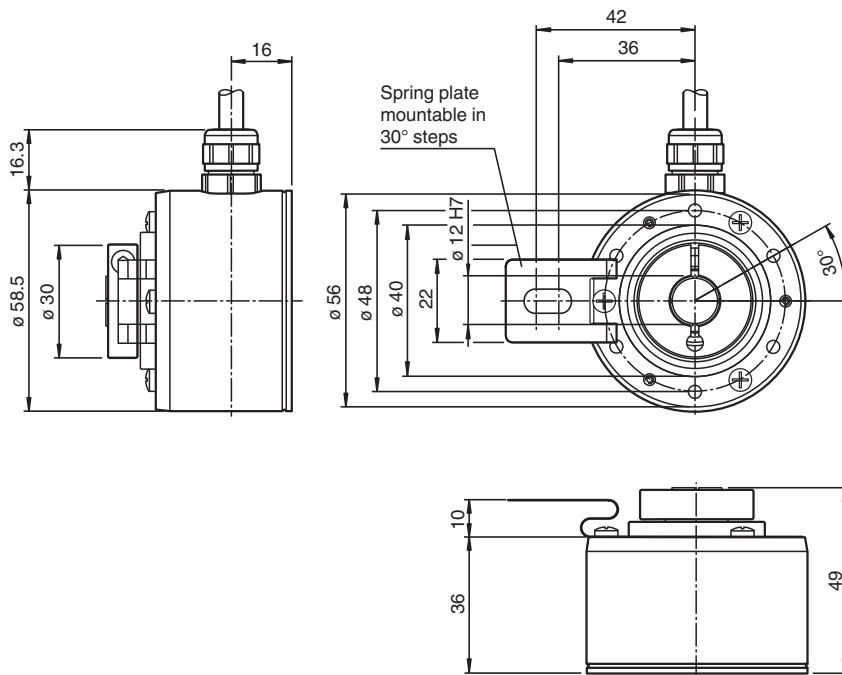
- Housing \varnothing 58 mm
- SUB-D connector 9-pin
- 1024 pulses, incremental
- BlueBeam technology for ultimate precision
- Universal output driver
- Hollow shaft



Function

The ENI58IL impresses with its modular design, which is available over all mechanical and electrical interfaces. The ENI58IL is the best solution for all common applications, coupled with its high robustness, high reliability and versatility. With the high-precision BlueBeam technology and innovative housing design, the ENI58IL is the new market standard for incremental encoders.

Dimensions



Technical Data

General specifications

| | |
|-----------------|------------------------|
| Detection type | photoelectric sampling |
| Linearity error | $\pm 0.025^\circ$ |
| Pulse count | 25 |

Functional safety related parameters

| | |
|--------------------------------|--------------------|
| MTTF _d | 140 a |
| Mission Time (T _M) | 20 a |
| L ₁₀ | 15 E+9 at 3000 rpm |
| Diagnostic Coverage (DC) | 0 % |

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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Technical Data

| Electrical specifications | | |
|---|-------|--|
| Operating voltage | U_B | 4.75 ... 30 V DC |
| No-load supply current | I_0 | max. 50 mA |
| Output | | |
| Output type | | push-pull or RS422 (universal output driver, output level depending on input voltage) |
| Load current | | max. per channel 40 mA , short-circuit protected, reverse polarity protected |
| Output frequency | | max. 400 kHz |
| Rise time | | 300 ns |
| Phase position A to B | | |
| Pulse counts < 3600 | | $90^\circ \pm 9^\circ$ electrical |
| Pulse counts \geq 3600 | | $90^\circ \pm 15^\circ$ electrical |
| Duty cycle | | $1/2 \pm 10\%$ |
| Connection | | |
| Fixed cable with plug | | cable $\varnothing 6$ mm, $4 \times 2 \times 0.14$ mm ² , L = 0.4 m 9-pin Sub-D connector |
| Standard conformity | | |
| Degree of protection | | DIN EN 60529, IP65 |
| Climatic testing | | DIN EN 60068-2-78 , no moisture condensation |
| Emitted interference | | EN 61000-6-4:2007/A1:2011 |
| Noise immunity | | EN 61000-6-2:2005 |
| Shock resistance | | DIN EN 60068-2-27, 300 g, 6 ms |
| Vibration resistance | | DIN EN 60068-2-6, 30 g, 10 ... 2000 Hz |
| Approvals and certificates | | |
| UL approval | | E223176 , cULus Listed, General Purpose, Class 2 Power Source, Type 1 enclosure , if UL marking is marked on the product. For use in NFPA 79 Applications only. adapters providing field wiring on request |
| Maximum permissible ambient temperature | | max. 80 °C (max. 176 °F) |
| Ambient conditions | | |
| Operating temperature | | -40 ... 85 °C (-40 ... 185 °F) , fixed cable -5 ... 85 °C (23 ... 185 °F) , movable cable |
| Storage temperature | | -40 ... 85 °C (-40 ... 185 °F) |
| Mechanical specifications | | |
| Material | | |
| Housing | | 3.2315 aluminum (AlMgSi1, saltwater-proof) |
| Flange | | 3.2315 aluminum (AlMgSi1, saltwater-proof) |
| Shaft | | Hollow shaft Stainless steel |
| Mass | | < 300 g without cable |
| Rotational speed | | max. 6000 min ⁻¹ |
| Moment of inertia | | ≤ 70 gcm ² |
| Starting torque | | ≤ 1.5 Ncm |
| Shaft load | | |
| Angle offset | | max. 1 ° |
| Axial offset | | max. 1 mm |

Accessories

| | | |
|---|------------------------|---|
|  | 9416 | Female cordset |
|  | 9416L | Female cordset |
|  | V19-G-2M-PVC-TP | Female cordset, M12, 8-pin, shielded, PVC cable |

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Accessories

| | | |
|---|--------------------------------|--|
|  | <p>V19-G-5M-PVC-TP</p> | <p>Female cordset, M12, 8-pin, shielded, PVC cable</p> |
|  | <p>V19-G-10M-PVC-TP</p> | <p>Female cordset, M12, 8-pin, shielded, PVC cable</p> |

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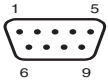
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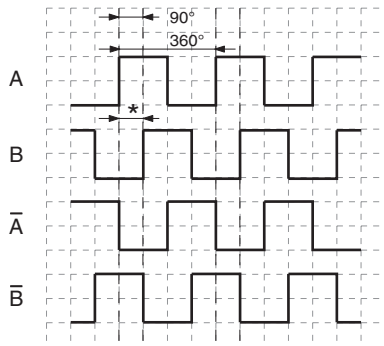
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Connection

| Signal | SUB-D connector, 9-pin |
|-----------------|---|
| 0 V | 1 |
| +U _b | 2 |
| A | 3 |
| \bar{A} | 4 |
| B | 5 |
| \bar{B} | 6 |
| Not connected | 7 ... 9 |
| Pinout |  |

Operation

Signal outputs



↻ cw - with view onto the shaft
 phase relationships electrical
 * 1 Measuring step is 90° electrical

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