EMI 55 A / AY
MAGNETIC INCREMENTAL KIT ENCODER

EMI series encoders are suitable for several application fields like electric motors, marine industry, iron and steel industry, textile machines, wood-working, paper-working, glass working, marble-working machinery and, more generally, automation and process control fields.

- 3 channel encoder (A / B / Z) up to 2048 ppr
- Power supply up to +28 VDC with several electronic interfaces available
- Cable or M12 connector output, other connectors available on cable end
- Compact dimensions
- No wear due to no contact magnetic technology
- Bore shaft diameter up to 10 mm
- IP 67 enclosure rating
- Wide operating temperature -40° ... +125°C (-40° ... +257°F)

<table>
<thead>
<tr>
<th>ORDERING CODE</th>
<th>EMI</th>
<th>55A</th>
<th>512</th>
<th>Z</th>
<th>5/28</th>
<th>P</th>
<th>10</th>
<th>X</th>
<th>10</th>
<th>P</th>
<th>R</th>
<th>. XXX</th>
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<tbody>
<tr>
<td>SERIES</td>
<td>EMI</td>
<td>55A</td>
<td>512</td>
<td>Z</td>
<td>5/28</td>
<td>P</td>
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<td>P</td>
<td>R</td>
<td>. XXX</td>
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<tr>
<td>MODEL</td>
<td>fixing holes ø 48 mm 55A</td>
<td>fixing holes ø 48 mm anodized 55AY</td>
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<tr>
<td>RESOLUTION</td>
<td>ppr from 2 to 2048</td>
<td>see table for pulses availability</td>
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<tr>
<td>ZERO PULSE</td>
<td>without zero pulse S</td>
<td>with zero pulse Z</td>
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<tr>
<td>POWER SUPPLY</td>
<td>(with L electronic interface) 5 V DC 5</td>
<td>5/28</td>
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<td></td>
<td>(with L or PC electronic interface) B ... 24 V DC 5/24</td>
<td>5 ... 28 V DC 5/28</td>
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<tr>
<td>ELECTRONIC INTERFACE</td>
<td>push-pull P</td>
<td>push-pull protected (AEIC-7272) PC</td>
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<td></td>
<td>line driver L</td>
<td>power supply 5/28 V - output RS-422 RS</td>
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<tr>
<td>MAGNET ACTUATOR BORE DIAMETER</td>
<td>mm 6</td>
<td>mm 8</td>
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<td></td>
<td>9.52 (3/8&quot;) mm 9</td>
<td>mm 10</td>
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<td>ENCLOSURE RATING</td>
<td>IP 64 X</td>
<td>IP 67 S</td>
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<td>MAX ROTATION SPEED</td>
<td>10000 rpm 10</td>
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<tr>
<td>OUTPUT TYPE</td>
<td>cable (standard length 0.5 m) P</td>
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<td>M12 connector M12</td>
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<td>female connector included, without female please add 162 as variant code</td>
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<td>DIRECTION TYPE</td>
<td>axial A</td>
<td>radial R</td>
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<td>VARIANT</td>
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</table>
**ELECTRICAL SPECIFICATIONS**

- **Resolution**: from 2 to 2048 ppr
- **Power supply**:
  - 5 V = 4.5...5.5 V DC
  - 5/28 = 4.75...29.4 V DC
  - 8/24 = 7.6...25.2 V DC (reverse polarity protection)
- **Power draw without load**: 800 mW max
- **Max load current**: 15 mA / channel
- **Output type**: push-pull / line driver
- **Max output frequency**: 205 kHz
- **Counting direction**: A leads B clockwise (magnet-actuator view)
- **Accuracy**: ± 0.35° typical / ± 0.50° max
- **Electromagnetic compatibility**: IEC 61000-6-2

**MECHANICAL SPECIFICATIONS**

- **Bore diameter (magnet-actuator)**: Ø 6 / 8 / 9.52 (3/8") / 10 mm
- **Enclosure rating**:
  - X = IP 64 (IEC 60529)
  - S = IP 67 (IEC 60529)
- **Max rotation speed**: 10000 rpm
- **Shock**: 50 G, 11 ms (IEC 60068-2-27)
- **Vibration**: 10 G, 10...2000 Hz (IEC 60068-2-6)
- **Moment of inertia**: 0.1 x 10^-6 kgm²
- **Body material**: EN AW 2011 aluminum
- **Housing material**: EN AW 2011 aluminum
- **Operating temperature**: -40°...+125°C (-40°...+257°F) (only for 5 V DC)
  - -40°...+100°C (-40°...+212°F)
- **Storage temperature**: -40°...+125°C (-40°...+257°F)
- **Weight**: 150 g (5.29 oz)

**CONNECTIONS**

- **Function**: 0 Volt, +V DC, Ch. A, Ch. B, Ch. Z, Ch. A-, Ch. B-, Ch. Z-, shield, housing
- **Cable output**: black, red, green, yellow, blue, brown, orange, white
- **5 pin M12 output**: Push-pull, Line Driver
- **8 pin M12 output**: Push-pull, Line Driver

**RESOLUTIONS**

- 2 - 4 - 8 - 16 - 20 - 32 - 40 - 64 - 80 - 100 - 125 - 128 - 200 - 250 - 256 - 400 - 500 - 512 - 1024 - 2048

Please contact our offices for further details on the available pulses.

**Dimensions in mm**

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**Electrical Specifications**

**MECHANICAL SPECIFICATIONS**

**CONNECTIONS**

**RESOLUTIONS**

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**Contact Information**

- **Website**: www.eltra-trade.com
- **Phone**: +421 552 601 099
- **Email**: info@eltra-trade.com

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**EMI 55 radial cable output**

**EMI 55 radial M12 output**

**EMI 55 axial cable output**

**EMI 55 axial M12 output**