Model LCE
Linear Cable Encoder

Features
- Low Cost Linear Solution
- Imperial and Metric Options
- Up to 1.27M or 50 Inches Full Stroke Length

The Linear Cable Encoder (LCE) provides a low cost alternative for obtaining accurate linear measurements. As opposed to typical rotary shaft style encoders, the LCE has a retractable stainless steel cable, allowing for numerous and unusual measuring configurations. Placing the LCE away from harsh environmental conditions, while still providing precise measurements, gives the LCE an outstanding advantage over shaft style encoders. Installation is easy with a variety of cable exit directions, and perfect parallel alignment is no longer necessary. The heart of the LCE is the 716 Series encoder. The 716 provides a reliable digital pulse train in quadrature format, with resolutions down to 0.1mm. The small overall size, a variety of resolutions, and choice of connector types, makes the versatility of the LCE unbeatable!

Common Applications
Robotics, Extrusion Presses, Valve Positioning, Textile Machinery, Control Gate Positioning

Model LCE Ordering Guide
Red type indicates price adder options. Not all configuration combinations may be available. Contact Customer Service for details.

Model LCE Resolution Table

<table>
<thead>
<tr>
<th>Pulses Per 127mm / 5.0&quot; Linear Travel</th>
<th>0127</th>
<th>1270</th>
<th>0050</th>
<th>0500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linear Resolution</td>
<td>1.00mm</td>
<td>0.10mm</td>
<td>0.10&quot;</td>
<td>0.01&quot;</td>
</tr>
<tr>
<td>Select Option</td>
<td>E01</td>
<td>E10</td>
<td>0M1</td>
<td>1M0</td>
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</tbody>
</table>

Notes:
1. For non-standard cable lengths, please call the sales office.

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Model LCE Specifications

Electrical

Input Voltage.............4.75 to 24 VCC max for temperatures up to 70º C
Input Current .............80 mA maximum with no output load
Input Ripple ..........100 mV peak-to-peak at 0 to 100 kHz
Output Format ..........Incremental- Square wave with channel A leading B during linear extension
Output Type Push-Pull- 20 mA max per channel
Freq Response .........Up to 125 kHz
Symmetry .................180º (±18º) electrical
Quad Phasing ...........90º (±22.5º) electrical
Rise Time .................Less than 1 microsecond

Mechanical

Full Stroke .................1.27M / 50" standard.
Finish ......................Black powder coated aluminum
Accuracy ....................±0.10% of FSL
Repeatability ..............±0.015% of FSL
Linear Resolution .......See resolution table
Cable Material ..........0.864mm Dia nylon coated stainless steel rope
Cable Tension ...........570 gms maximum typical
Life (cycles) ..............1,000,000 predicted at zero angle cable exit
Electrical Conn .........6-pin MS, or 8-pin M12 Eurofast
                   Gland with 2M cable (foil and braid shield, 24 AWG conductors)

Environmental

Operating Temp ........0º to 70º C standard
Sealing ......................IP50 Standard

Waveform Diagrams

Line Driver

Wiring Tables

<table>
<thead>
<tr>
<th>Function</th>
<th>Gland Color</th>
<th>8-pin M12</th>
<th>6-pin MS</th>
<th>6-pin MS</th>
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<tbody>
<tr>
<td>Com</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>+VDC</td>
<td>Black</td>
<td>7 A A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A'</td>
<td>Brown</td>
<td>1 C</td>
<td></td>
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</tr>
<tr>
<td>A</td>
<td>White</td>
<td>3 D D</td>
<td></td>
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</tr>
<tr>
<td>B</td>
<td>Blue</td>
<td>4 E E</td>
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</tr>
<tr>
<td>B*</td>
<td>Violet</td>
<td>5 F</td>
<td></td>
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</tr>
<tr>
<td>Shield</td>
<td>Screen</td>
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