

# Model LCE Linear Cable Encoder



### Features

- Low Cost Linear Solution
- Imperial and Metric Options
- IP65 Sealing Available
- Up to 1.27M or 50 Inches Full Stroke Length

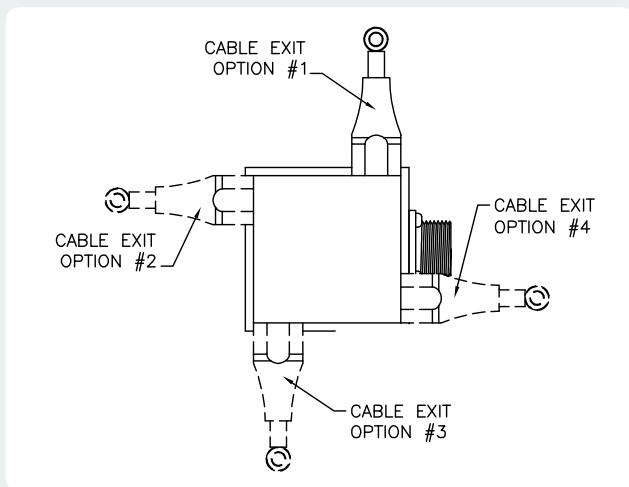
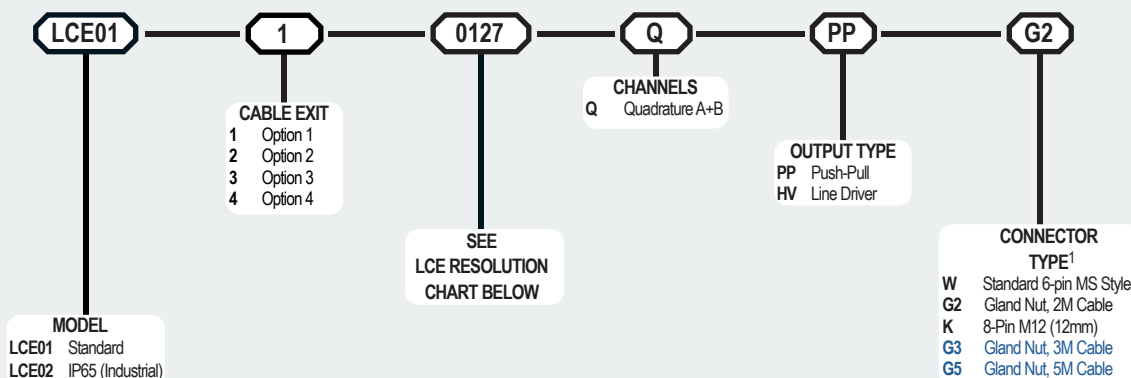
The Linear Cable Encoder (LCE) provides a low cost alternative for obtaining accurate linear measurements. As opposed to typical rotary shaft style encoders, the LCE has a retractable stainless steel cable, allowing for numerous and unusual measuring configurations. Placing the LCE away from harsh environmental 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 no longer necessary. The heart of the LCE is the popular 716 Series Encoder, the finest cube style encoder available. The 716 provides a reliable digital pulse train in either single channel or quadrature format, with resolutions down to 0.1mm per cycle. The small overall size, a variety of resolutions, and many different 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

Blue type indicates price adder options. Not all configuration combinations may be available. Contact Customer Service for details.



For specification assistance call Customer Service at +44 (0)1978 262100

### Model LCE Resolution Table

Pulses Per 127mm / 5.0" Linear Travel	0127	1270	0050	0500
Linear Resolution	1.00mm	0.10mm	0.10"	0.01"

### 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 70° 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 Line Driver- 20 mA max per channel (Meets RS 422 at 5 VCC supply)
Freq Response.....	Up to 125 kHz
Symmetry .....	180° (±18°) electrical
Quad Phasing.....	90° (±22.5°) electrical
Rise Time.....	Less than 1 microsecond

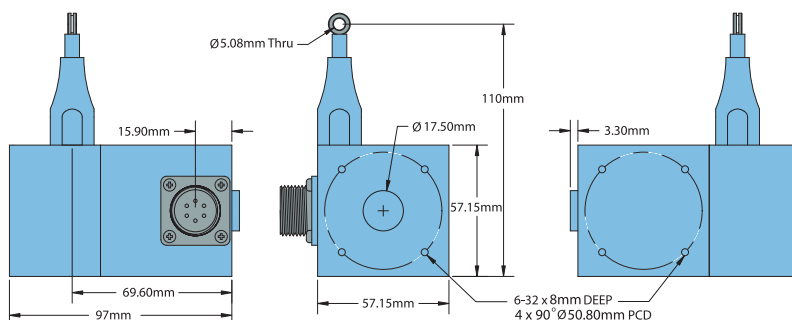
### Mechanical

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 grams 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)

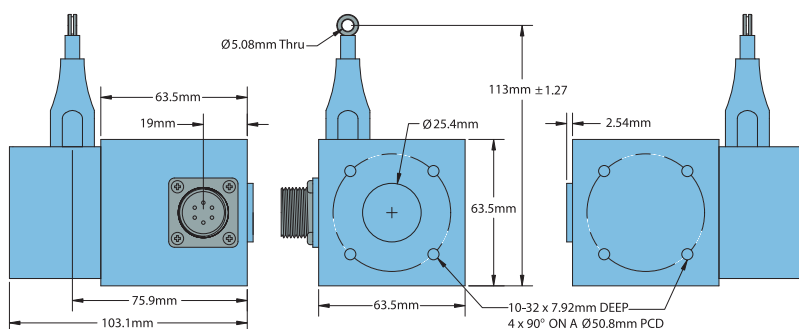
### Environmental

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

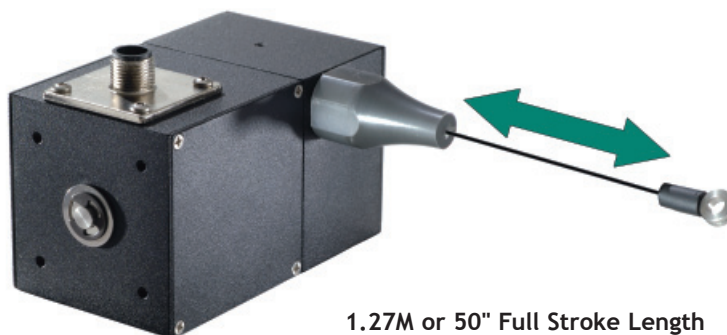
## Model LCE Standard Housing (LCE01)



## Model LCE IP65 Industrial Housing (LCE02)



All dimensions are in mm with a tolerance of ±0.127 or ±0.254 unless otherwise specified

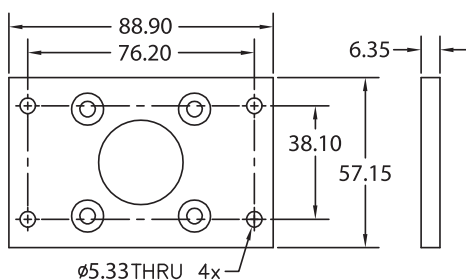


1.27M or 50" Full Stroke Length

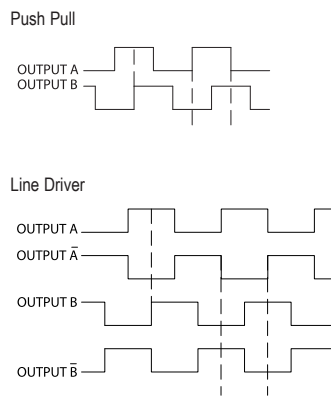
### Optional Mounting Plate

Attaches to Standard or Industrial LCE in three different orientations.

Order Accessory Item 176064-01



### Waveform Diagrams



### Wiring Table

Function	Gland Cable† Wire Color	8-pin M12** HV (A&B)	6-pin MS** HV (A&B)	6-pin MS** PP (A&B)
0 Volts	Black	7	A	A
+VCC	Red	2	B	B
A'	Brown	1	C	--
A	White	3	D	D
B	Blue	4	E	E
B'	Violet	5	F	--
Shield	Bare*	Case	Case	Case

\*CE: Cable shield (bare wire) is connected to internal case.

†Standard cable is 24 AWG conductors with foil and braid shield.

\*\*CE: Shield is connected to connector case unless otherwise specified.