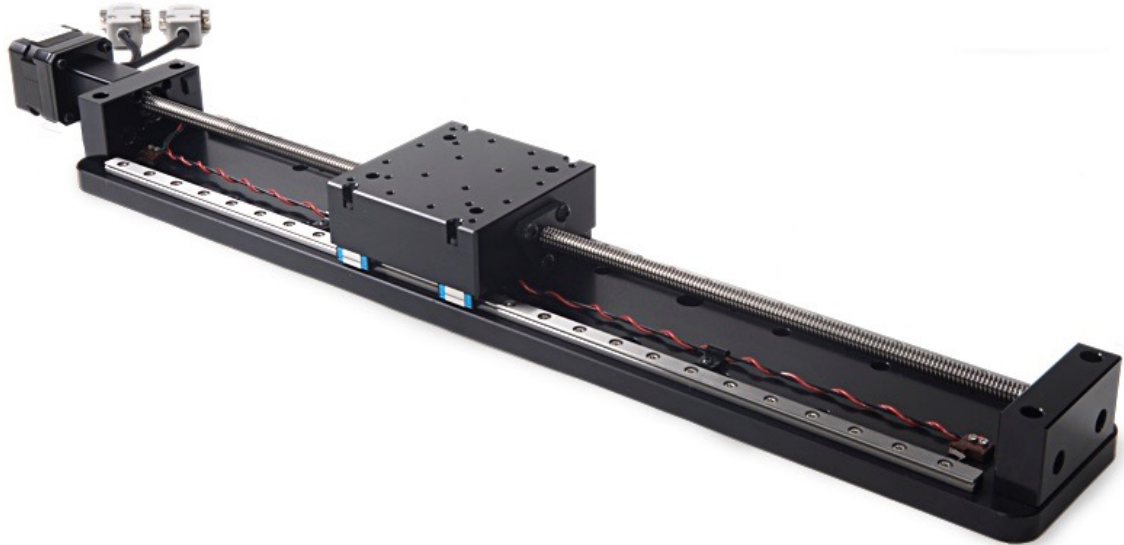


LC SERIES LINEAR STAGE



The LC series offers travel lengths from 200 mm to 400 mm. Two lead screw pitches are available, a 2mm pitch for higher resolution and a 12mm pitch for high speed applications. The LC series comes standard with a high torque size 17 stepper motor end of travel limit switches. The limit switch and motor cables are terminated by a 9 pin connector near the rear of the stage next to the motor.

The drive system utilizes a stainless steel ACME lead screw with internally lubricated plastic drive nut. The drive nut offers zero backlash operation that automatically adjusts for wear to insure zero backlash for the life of the stage.

The LC Series can be configured as XY, XZ, or XYZ linear stage.

All LC series linear stages are machined from 6061 aluminum alloy and black anodized.

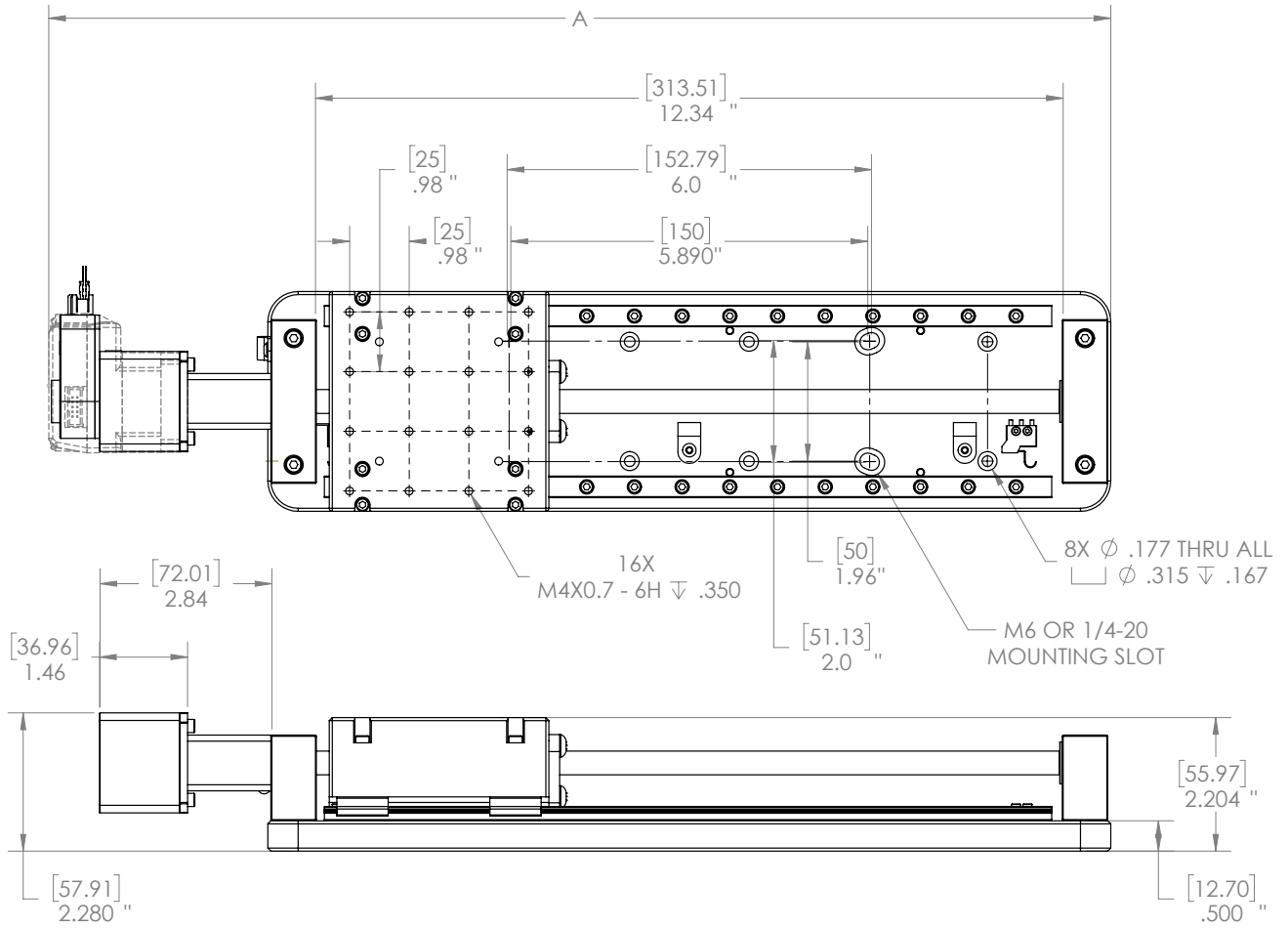


Specifications

Travel Range	200 mm, 300 mm, 400 mm
Resolution	0.04 μm (2 mm pitch lead screw) 0.24 μm (12 mm pitch lead screw)
Accuracy	0.0006 mm/mm of travel
Max. Speed	12 mm/sec (2 mm pitch lead screw) 70 mm/sec (12 pitch lead screw)
Unidirectional Repeatability	2 μm
Bidirectional Repeatability	15 μm
Maximum Load	22.6 kg (50 lbs)
Encoder	Optical rotary encoder mounted to read of motor, 4000 CPR with index (Optional)
Limit Switches	Mechanical, normally closed
Lead Screw Pitch	2 mm and 12 mm options
Stage Weight	LC-200: 2.8 kg (6.2 lbs), LC-300: 3.3 kg (7.3 lbs), LC-400: 3.8 kg (8.4 lbs)
Material	Aluminum Alloy Construction
Finish	Black Anodize
Operating Temperature	0°C to 50°C

Dimensions

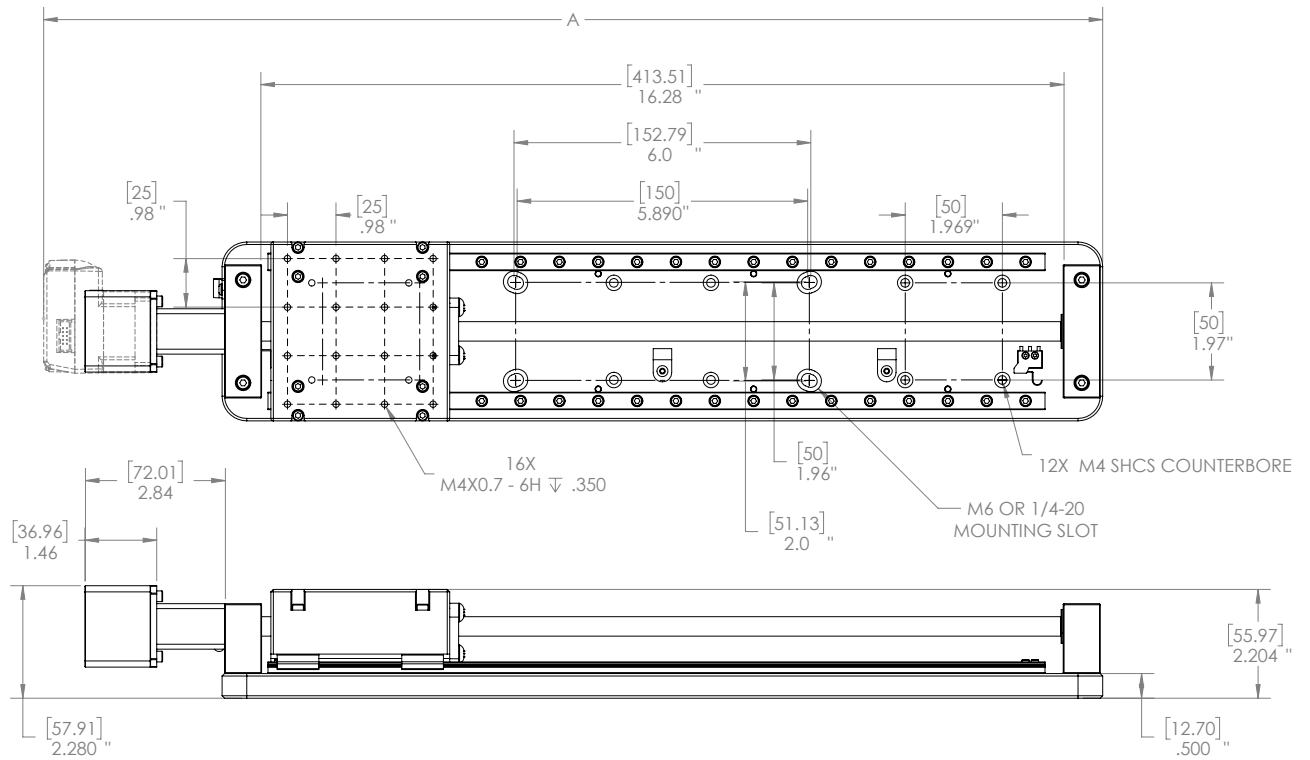
200 mm Travel



Motor	Stepper	Stepper+Encoder	Mdrive
A			
[mm]	[423.75]	[444.14]	[445.28]
IN	16.68	17.49	17.53

Dimensions

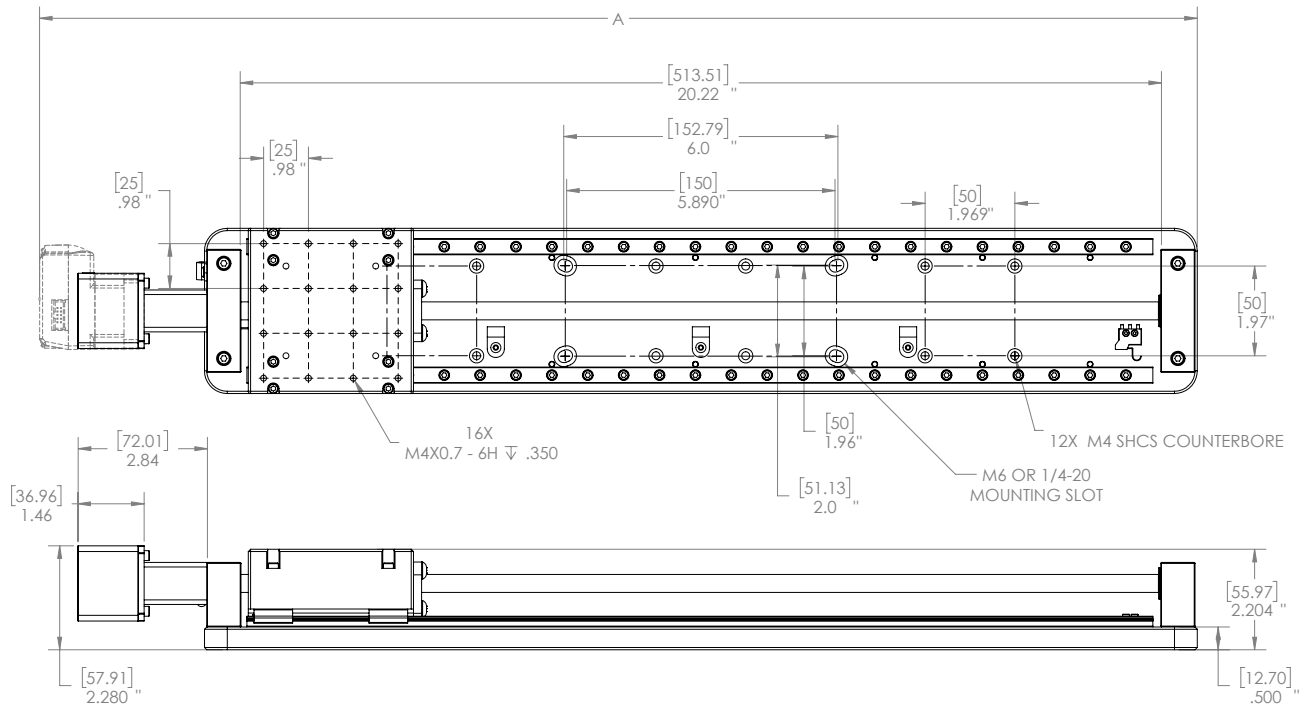
300 mm Travel



Motor	Stepper	Stepper+Encoder	Mdrive
A [mm]	[523.75]	[544.14]	[545.28]
IN	20.62	21.42	21.47

Dimensions

400 mm Travel



Motor	Stepper	Stepper+Encoder	Mdrive
A [mm]	[623.75]	[644.14]	[645.29]
IN	24.56	25.36	25.405

Standard Stepper Motor Version

Motor

DB-9 Male	Description
1.	Phase A
2.	Phase A'
3.	Phase B
4.	Phase B'
5.	Phase A Center
6.	Phase B Center

Motor Specifications

Step Size: 1.8°/step

Amps/Phase: 0.95

Resistance: 4.0 Ohm/Phase

Inductance: 3.1 mH/Phase

Signals

DB-9 Female	Description
1.	+ Limit Switch
2.	- Limit Switch (motor side)
3.	Limit Switch Ground

Limit switch wired normally closed

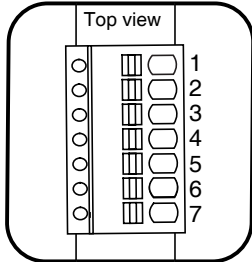
Signals (Encoder Option)

HD-15 Female	Description
1.	+ Limit Switch
2.	- Limit Switch
3.	Limit Switch Ground
4.	Encoder Ground
5.	+5V Encoder Power
6.	Ch. A
7.	Ch. A-
8.	Ch. B
9.	Ch. B-
10.	Index +
11.	Index -

Limit switch wired normally closed

Pin Assignment

MDrive Stepper Motor Version



7-Pin Pluggable Terminal

Power and I/O

7-Pin Terminal	Description
1	I/O 1
2	I/O 2
3	I/O 3
4	I/O 4
5	Analog Input
6	Power GND
7	+24V Motor Power

The forward limit switch is connected to I/O 1.
The reverse limit switch is connected to I/O 2.
Limit switches are wired normally closed.

RS-422 Communications

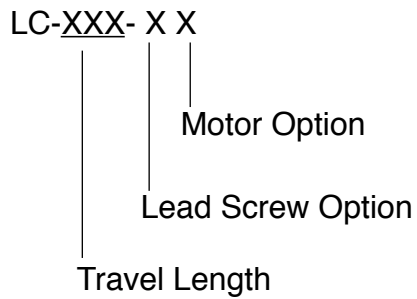
10-Pin IDC	Description
1	TX+
2	TX-
3	RX+
4	RX-
5	Aux-Logic
6	RX+
7	RX-
8	TX-
9	TX+
10	COMM GND

Connected to 7-Pin Terminal

DC Jack, 2.1 mm	Description
Center	+24 VDC
Outside	Power Ground

Ordering Information

Part Number Configuration



Travel Length

- 200 mm
- 300 mm
- 400 mm

Lead Screw Options

- 1 2 mm lead
- 2 12 mm lead

Motor Options

- 1 Stepper Motor
- 2 Stepper Motor with Encoder
- 3 MDrive Motor with Encoder

Motion Controllers

The following Newmark Systems, Inc. controllers are compatible with the eTrack Stage.

[NCS-A1 Series](#) | [NSC-A2L Series](#) | [NSC-G Series](#)