

X-LHM-E Series Datasheet



- 25, 50, 100, 150, 200 mm travel
- Up to 65 mm/s speed and up to 25 N thrust
- 3 kg load capacity
- Daisy-chains with other Zaber products
- Our most affordable linear stage with built-in controller and motor encoder

X-LHM-E Series Overview

Zaber's X-LHM-E Series devices are computer-controlled, motorized linear stages with a compact size and affordable price tag. They are stand-alone units requiring only a standard 24 or 48 V power supply. The built-in motor encoder allows closed-loop operation and slip/stall recovery features. An optional indexed knob provides convenient manual control for versatile operation even without a computer.

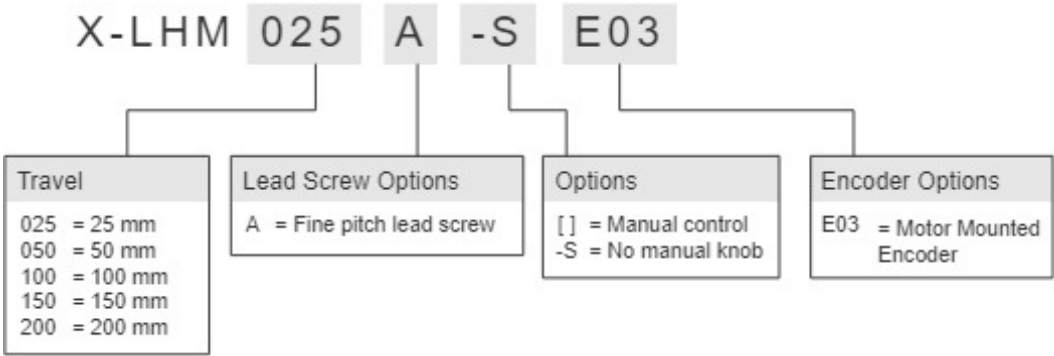
These stages connect to the RS-232 port or USB port of any computer, and they can be daisy-chained with any other Zaber products. The daisy-chain also shares power, making it possible for multiple X-Series products to share a single power supply. Convenient locking 4-pin M8 connectors on the unit allow for secure connection between units.

At only 23 mm high, these miniature plain bearing stages are excellent for applications where a small profile is required. Carriage pre-load can be easily adjusted to compensate for wear over the lifetime of the stage. Like all of Zaber's products, the X-LHM-E Series is designed to be 'plug and play' and very easy to set up and operate.

For applications requiring more precise motion or high stiffness in multi-axis assemblies, please contact us or see our Product Overview page for the variety of stages we offer.

For more information visit: <https://www.zaber.com/products/linear-stages/X-LHM-E>

X-LHM-E Series Part Numbering & Options



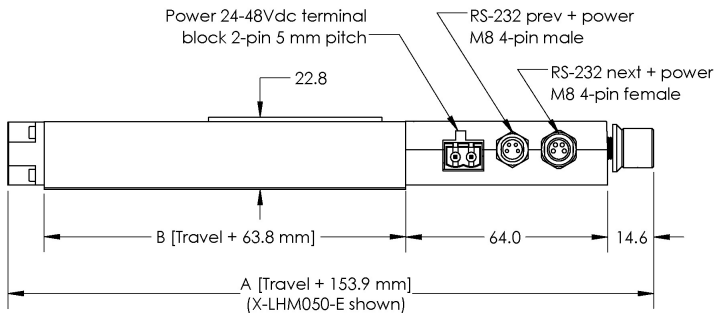
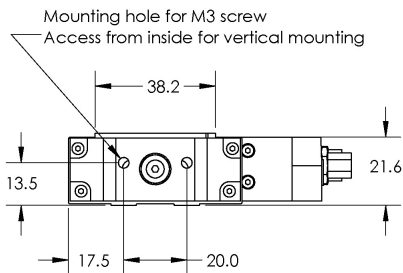
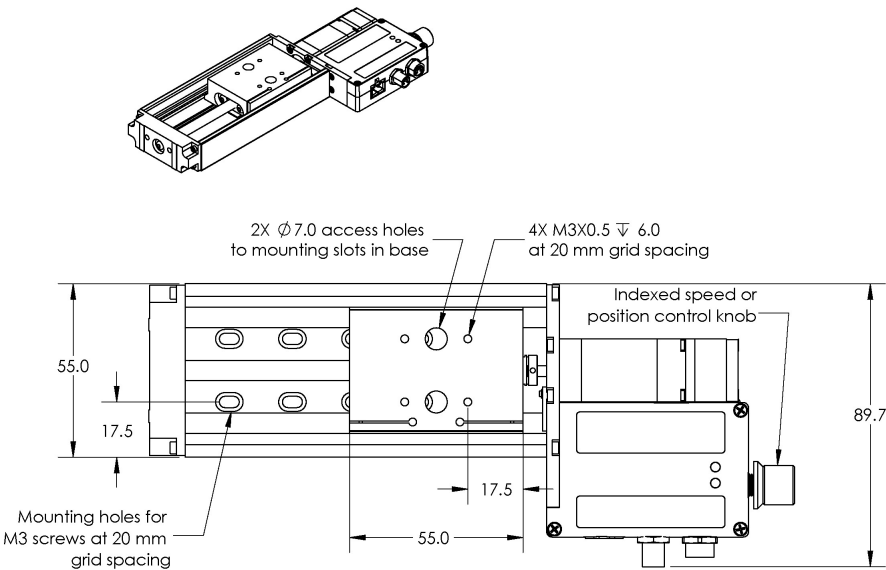
X-LHM-E Series Drawings

ZABER
X-LHM-E Motorized Linear Stage
dimensions in mm

Model Number*	Travel	A**	B
X-LHM025-E	25.4	179.3	89.2
X-LHM050-E	50.8	204.7	114.6
X-LHM100-E	101.6	255.5	165.4
X-LHM150-E	152.4	306.3	216.2
X-LHM200-E	203.2	357.1	267.0

*See product page for complete list of available models at www.zaber.com

**Subtract 13.1 mm knob length from 'A' for -S versions without manual control



DWG 1096 R02

X-LHM-E Series Specifications

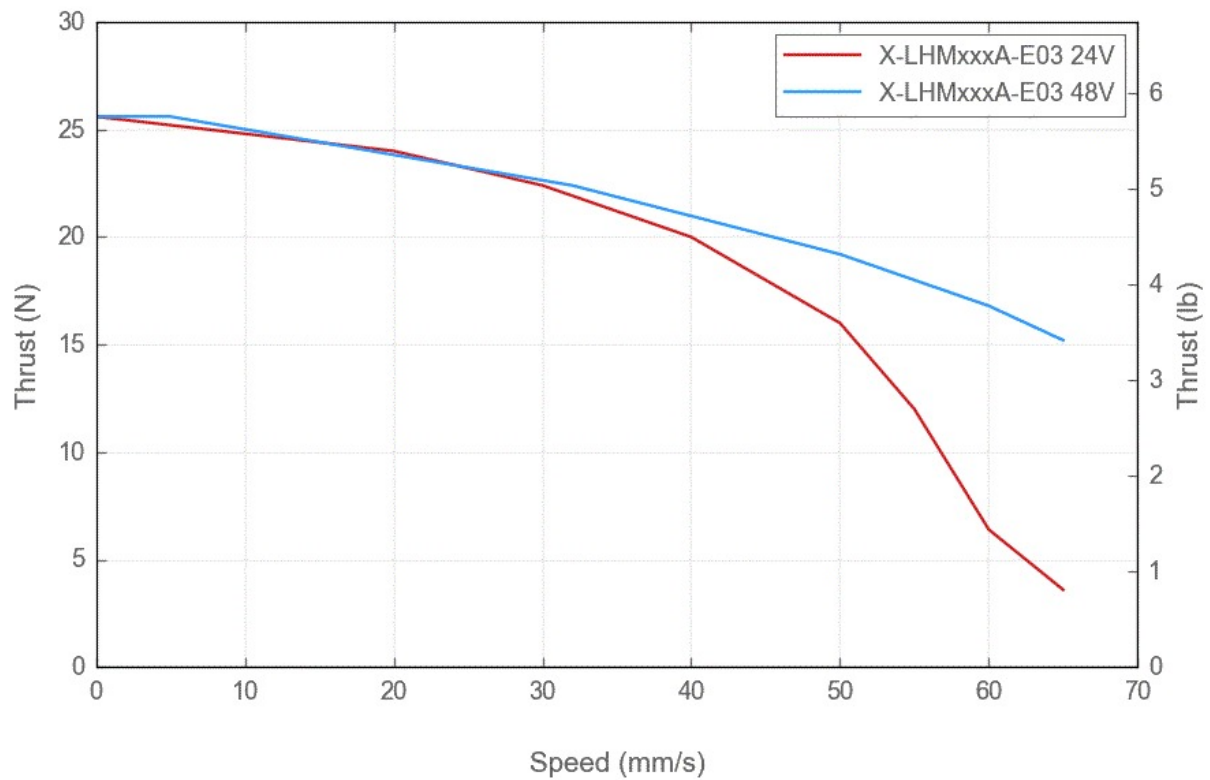
Microstep Size (Default Resolution)	0.124023437 μm
Built-in Controller	Yes
Repeatability	< 4 μ m (< 0.000157")
Backlash	< 30 μ m (< 0.001181")
Maximum Speed	65 mm/s (2.559"/s)
Minimum Speed	0.000076 mm/s (0.000003"/s)
Speed Resolution	0.000076 mm/s (0.000003"/s)
Encoder Resolution	200 CPR (800 states/rev)
Encoder Type	Rotary quadrature encoder
Peak Thrust	25 N (5.6 lb)
Maximum Continuous Thrust	25 N (5.6 lb)
Communication Interface	RS-232
Communication Protocol	Zaber ASCII (Default), Zaber Binary
Data Cable Connection	Locking 4-pin M8
Maximum Centered Load	30 N (6.7 lb)
Maximum Cantilever Load	50 N-cm (70.8 oz-in)
Guide Type	Plain bearing
Power Supply	24-48 VDC
Power Plug	2-pin Screw Terminal
Maximum Current Draw	350 mA
Linear Motion Per Motor Rev	1.5875 mm (0.062")
Motor Steps Per Rev	200
Motor Type	Stepper (2 phase)
Motor Rated Current	600 mA/phase
Inductance	3.5 mH/phase
Default Resolution	1/64 of a step
Mechanical Drive System	Lead screw
Limit or Home Sensing	Magnetic hall sensor
Axes of Motion	1
LED Indicators	Yes
Mounting Interface	M3 threaded holes

Microstep Size (Default Resolution)	0.124023437 µm
Operating Temperature Range	0 to 50 °C
RoHS Compliant	Yes
CE Compliant	Yes
Vacuum Compatible	No

Part Number	Travel Range	Accuracy (unidirectional)	Manual Control	Weight
X-LHM025A-E03	25.4 mm (1.000")	50 µm (0.001968")	Yes	0.36 kg (0.794 lb)
X-LHM025A-SE03	25.4 mm (1.000")	50 µm (0.001968")	No	0.36 kg (0.794 lb)
X-LHM050A-E03	50.8 mm (2.000")	75 µm (0.002953")	Yes	0.42 kg (0.926 lb)
X-LHM050A-SE03	50.8 mm (2.000")	75 µm (0.002953")	No	0.42 kg (0.926 lb)
X-LHM100A-E03	101.6 mm (4.000")	125 µm (0.004921")	Yes	0.48 kg (1.058 lb)
X-LHM100A-SE03	101.6 mm (4.000")	125 µm (0.004921")	No	0.48 kg (1.058 lb)
X-LHM150A-E03	152.4 mm (6.000")	175 µm (0.006890")	Yes	0.52 kg (1.146 lb)
X-LHM150A-SE03	152.4 mm (6.000")	175 µm (0.006890")	No	0.52 kg (1.146 lb)
X-LHM200A-E03	203.2 mm (8.000")	225 µm (0.008858")	Yes	0.58 kg (1.279 lb)
X-LHM200A-SE03	203.2 mm (8.000")	225 µm (0.008858")	No	0.58 kg (1.279 lb)

X-LHM-E Series Charts

Thrust Speed Performance



Contact

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