



X-LHM025A-SE03 Datasheet



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

X-LHM-E Series Overview

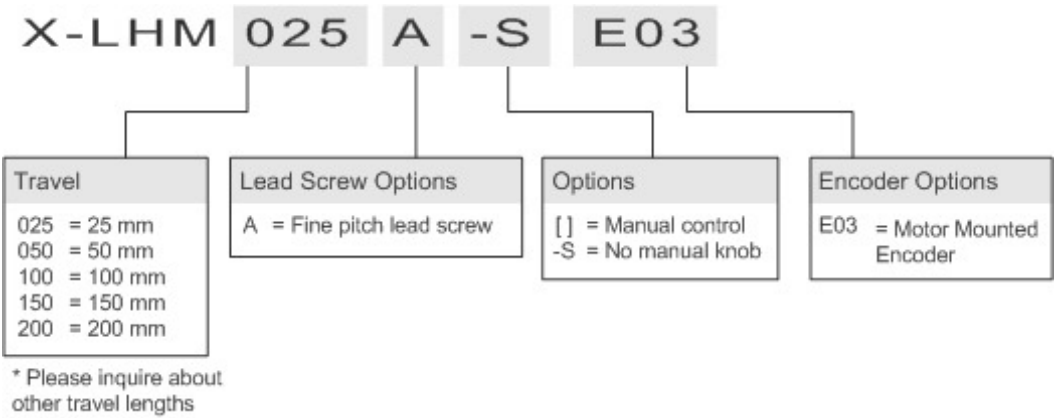
Zaber's X-LHM-E Series devices are computer-controlled, motorized linear stages with a compact size and affordable price tag. They are stand-alone units requiring only a standard 24 or 48 V power supply. The built-in motor encoder allows closed-loop operation and slip/stall recovery features. An optional 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.

X-LHM-E Series Part Numbering



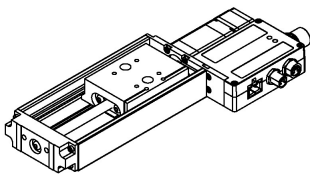
X-LHM025A-SE03 Bundle Options

This device may be purchased stand-alone or bundled with one of the following accessory kits:

Products	Description
X-LHM025A-SE03	Motorized linear stage, 25 mm travel, integrated controller and motor encoder
with KX14A accessory kit Power supply: North America, 48 V. Powers multiple X-Series devices	<ul style="list-style-type: none">• 1 x PS14S-48V37: Power Supply, 48 V 3.75 A, Compatible with X-Series Products• 1 x X-DC02: Data Cable, 2 ft (0.6 m), for Use with all X-Series Products• 1 x X-USBDC: USB to Serial Converter Cable with M8 Female Plug for X-Series Products
with KX13A accessory kit Power supply: North America, 48 V. Powers one axis	<ul style="list-style-type: none">• 1 x PS13S-48V12: Power Supply, 48 V 1.25 A, Compatible with X-Series Products• 1 x X-DC02: Data Cable, 2 ft (0.6 m), for Use with all X-Series Products• 1 x X-USBDC: USB to Serial Converter Cable with M8 Female Plug for X-Series Products
with PTB2 accessory Power Supply Not Included	<ul style="list-style-type: none">• 1 x PTB2: Power Terminal Block, 2 Pin, 5 mm Pitch, for Use with X-Series Devices with Custom Power Supply

X-LHM025A-SE03 Drawings

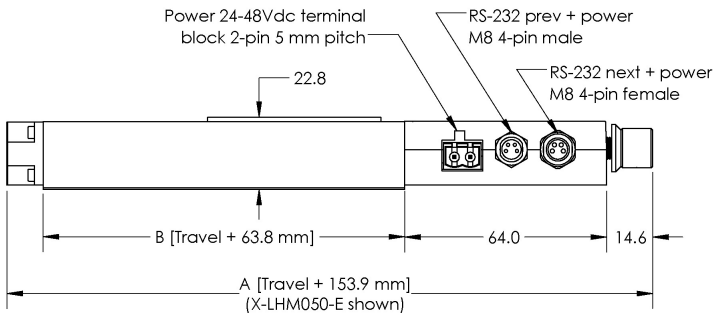
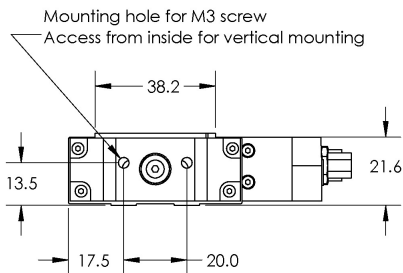
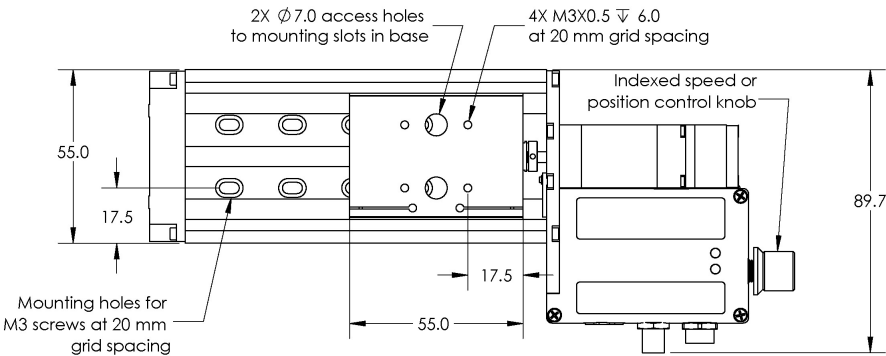
ZABER
X-LHM-E Motorized Linear Stage
dimensions in mm



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-LHM025A-SE03 Specifications

Specification	Value	Alternate Unit
Microstep Size (Default Resolution)	0.124023437 μm	
Built-in Controller	Yes	
Travel Range	25.4 mm	1.000"
Accuracy (unidirectional)	50 μm	0.001968"
Repeatability	< 4 μm	< 0.000157"
Backlash	< 30 μm	< 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	
Maximum Centered Load	30 N	6.7 lb
Maximum Cantilever Load	50 N-cm	70.8 oz-in
Guide Type	Plain bearing	
Maximum Current Draw	350 mA	
Power Supply	24-48 VDC	
Power Plug	2-pin Screw Terminal	
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	
Data Cable Connection	Locking 4-pin M8	
Mechanical Drive System	Lead screw	
Limit or Home Sensing	Magnetic hall sensor	

Specification	Value	Alternate Unit
Manual Control	No	
Axes of Motion	1	
LED Indicators	Yes	
Mounting Interface	M3 threaded holes	
Operating Temperature Range	0 to 50 °C	
Vacuum Compatible	No	
RoHS Compliant	Yes	
CE Compliant	Yes	
Weight	0.36 kg	0.794 lb

X-LHM-E Series Charts

Thrust Speed Performance

