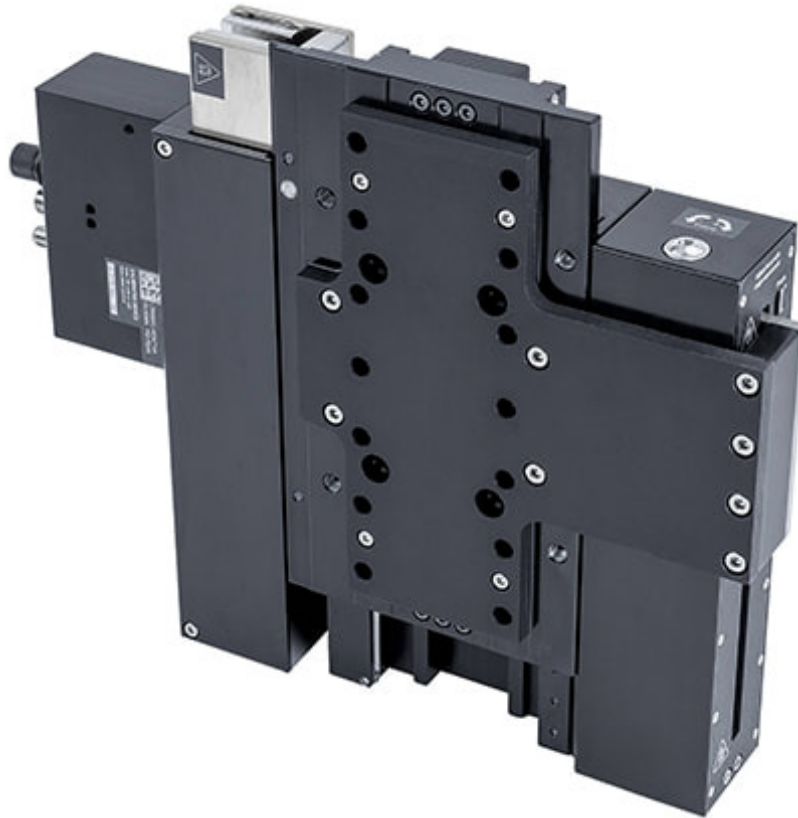


X-LDM-AEZ Series Datasheet



- 40 mm or 60 mm travel
- Passive, user adjustable magnetic counterbalance for payloads up to 55 N
- High repeatability (80 nm) and accuracy (1 μm), with 25 nm minimum incremental move
- Direct position measurement from 1 nm resolution linear encoder
- Non-contact ironless linear motor for high precision, high dynamic performance & reliability
- Built-in controller; daisy-chains with other Zaber products
- One digital input and two digital outputs
- Learn more: [Magnetic Counterbalances for High Performance Vertical Stages](#)

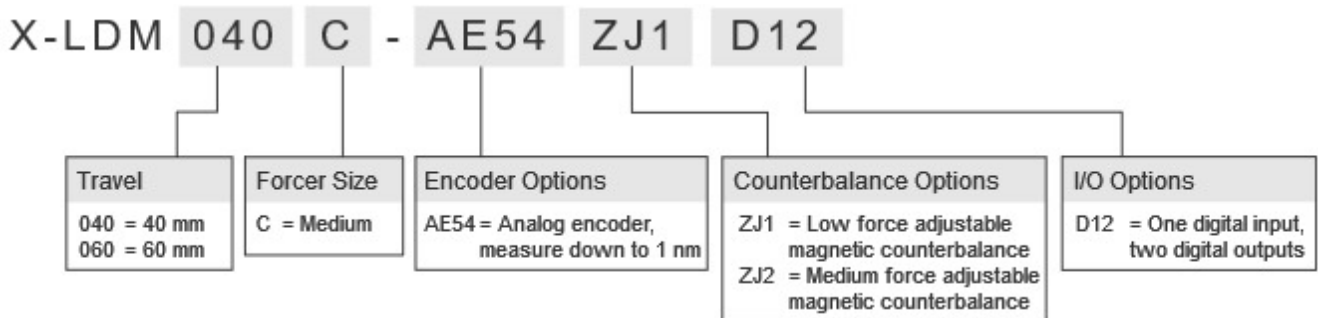
X-LDM-AEZ Series Overview

Zaber's X-LDM-AEZ Series devices are computer-controlled, motorized stages delivering the high precision, reliability, and speed of X-LDM-AE linear motor stages in a package for vertical applications. A passive magnetic counterbalance compensates for payloads up to 55 N, preventing unwanted motion during power loss. The counterbalance's force can be finely adjusted in seconds with a single screw.

These stages are stand-alone units requiring only a standard 48 V power supply. They connect to the RS-232 port or USB port of any computer and 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. Like all of Zaber's products, the X-LDM-AEZ Series is designed to be 'plug and play' and very easy to set up and operate. X-LDM-AEZ devices also include a digital input and two digital outputs for interfacing with external systems. An event-driven trigger system allows devices to be programmed for stand-alone operation based on I/O, time, or movement stimuli.

For more information visit: <https://www.zaber.com/products/vertical-stages/X-LDM-AEZ>

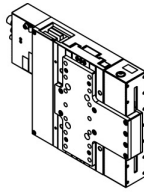
X-LDM-AEZ Series Part Numbering



X-LDM-AEZ Series Drawings

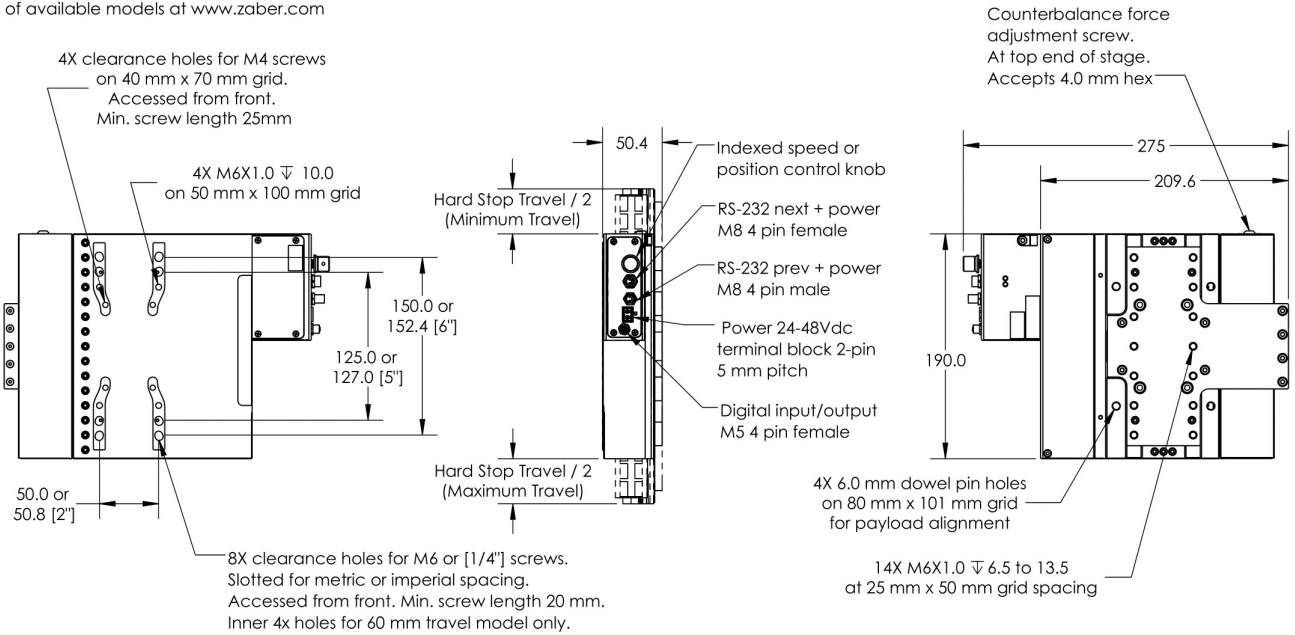
ZABER

X-LDM-AEZ Direct Drive Vertical Stage
dimensions in mm



Model Number*	Nominal Travel	Hard Stop Travel
X-LDM040C-AE54ZJ2D12	40.0	50.0
X-LDM060C-AE54ZJ1D12	60.0	76.0

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



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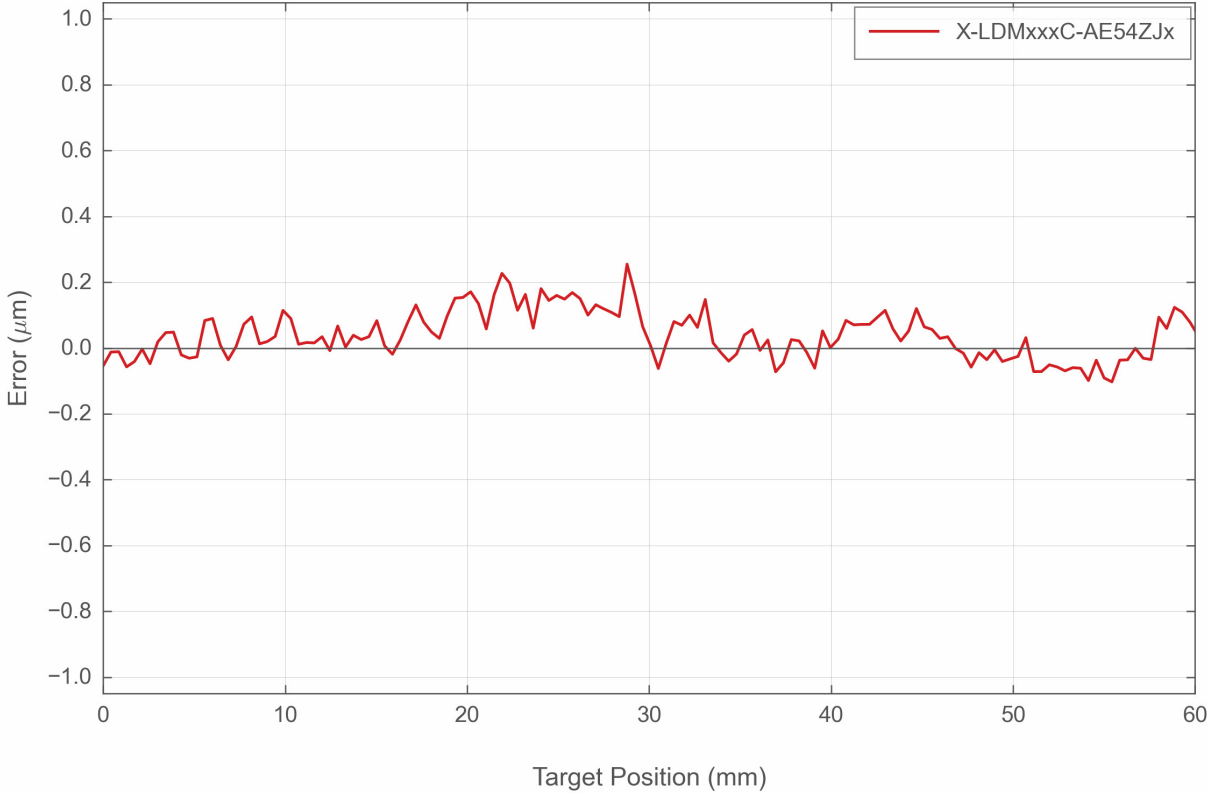
X-LDM-AEZ Series Specifications

Specification	Value	Alternate Unit
Built-in Controller	Yes	
Travel Range	60 mm	2.362"
Accuracy (unidirectional)	1 μm	0.000039"
Repeatability	< 0.08 μm	< 0.000003"
Minimum Incremental Move	25 nm	
Maximum Acceleration	16 m/s ²	1.63 g
Maximum Speed	800 mm/s	31.496"/s
Minimum Speed	0.61 nm/s	
Speed Resolution	0.61 nm/s	
Encoder Type	Linear analog encoder	
Encoder Count Size	1 nm	
Peak Thrust	50 N	11.2 lb
Maximum Continuous Thrust	25 N	5.6 lb
Communication Interface	RS-232	
Communication Protocol	Zaber ASCII (Default)	
Maximum Cantilever Load	1200 N-cm	1699.3 oz-in
Guide Type	Crossed-Roller Bearing	
Horizontal Runout	< 4 μm	< 0.000157"
Pitch	0.003°	0.052 mrad
Roll	0.002°	0.035 mrad
Yaw	0.002°	0.035 mrad
Counterbalance Type	Adjustable Magnetic	
Counterbalance Payload Range	10-33 N	2.2-7.4 lb
Maximum Current Draw	3000 mA	
Power Supply	48 VDC	
Power Plug	2-pin screw terminal	
Motor Type	Moving Magnet Track Linear Motor	
Data Cable Connection	Locking 4-pin M8	
Limit or Home Sensing	Optical Index Mark	
Manual Control	Indexed knob with push switch	

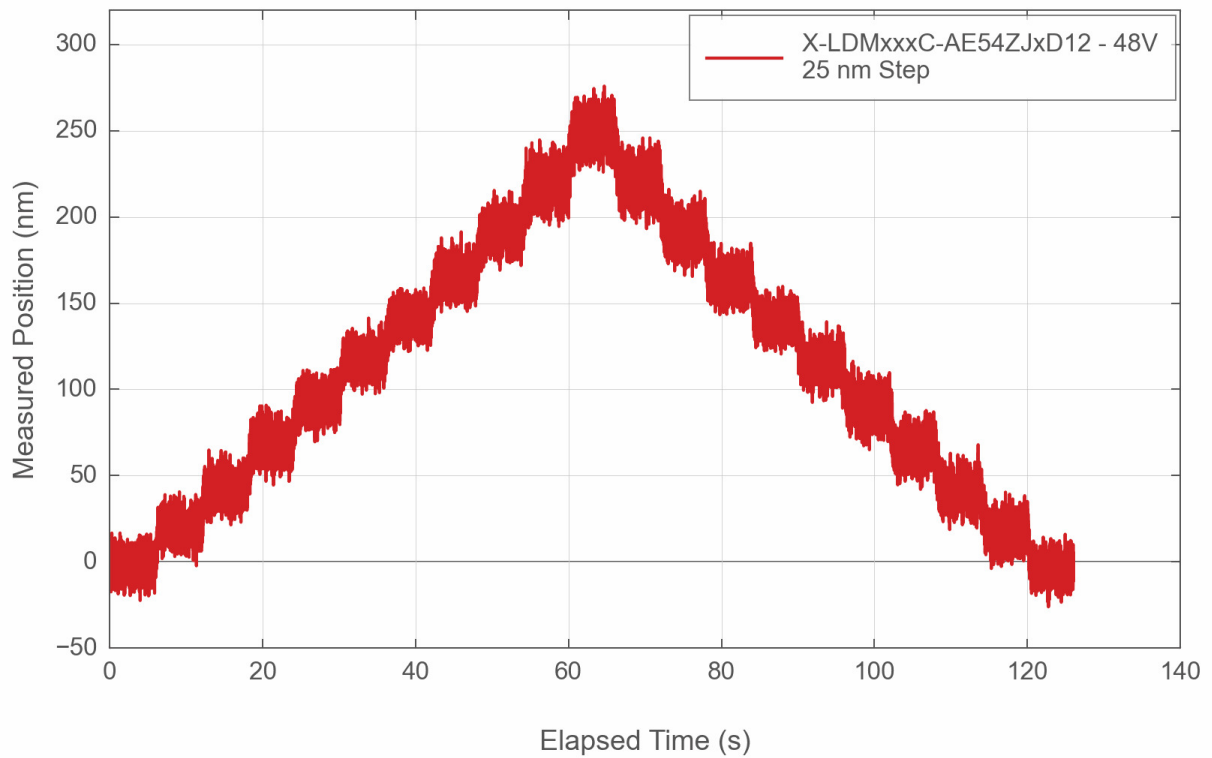
Specification	Value	Alternate Unit
Axes of Motion	1	
LED Indicators	Yes	
Mounting Interface	M6 threaded holes	
Operating Temperature Range	0 to 50 °C	
Vacuum Compatible	No	
RoHS Compliant	Yes	
CE Compliant	Yes	
Moving Mass	2.32 kg	5.104 lbs
Digital Input	1	
Digital Output	2	
Weight	5.17 kg	11.398 lb

X-LDM-AEZ Series Charts

Typical Accuracy



Typical Minimum Incremental Move



Contact

Email: contact@zaber.com

Phone (toll free Canada/USA): 1-888-276-8033

Phone (direct): 1-604-569-3780

Fax: 1-604-648-8033

Zaber Technologies Inc.

#2 - 605 West Kent Ave. N.

Vancouver, British Columbia

Canada, V6P 6T7

<https://www.zaber.com>