

## LSA25A-T4A Datasheet



- 10 or 25 mm travel
- Up to 14 mm/s speed and up to 35 N thrust
- < 25 nm microstep size
- Fits into the most restrictive spaces
- Designed for use with MCC Family controllers or any 2-phase stepper motor controller
- With AutoDetect, Zaber controllers automatically configure settings for the connected peripheral
- Mounts directly in XY (requires AB106 angle bracket for Z axis/vertical mounting)

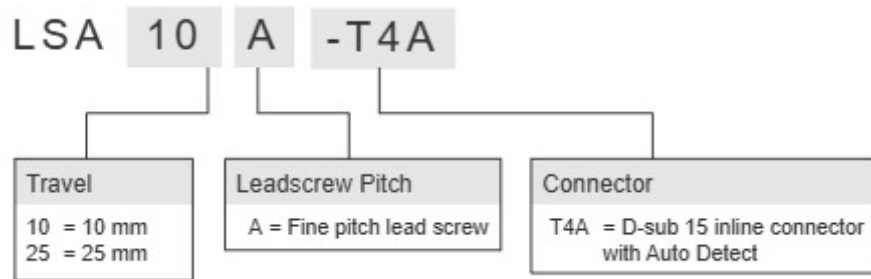
## LSA Series Overview

Zaber's LSA series stages are designed to fit into the smallest spaces, without sacrificing performance or features. Small but powerful, these stages have up to 14 mm/s speed and up to 35 N thrust. With a microstep size of less than 25 nm and < 1 um repeatability, they allow for reliable ultra-fine positioning.

The LSA stages are designed to interface with our MCC Family universal motor controllers, offering high resolution daisy-chainable operation. Set up is easy with AutoDetect. Once connected, the controller will automatically detect and configure the LSA. Our handy kits include free software, and all of the accessories that you will need to get the stage running right out of the box.

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

## LSA Series Part Numbering & Options



## LSA25A-T4A Drawings

- [LSA.png \(Drawing for the LSA\)](#)

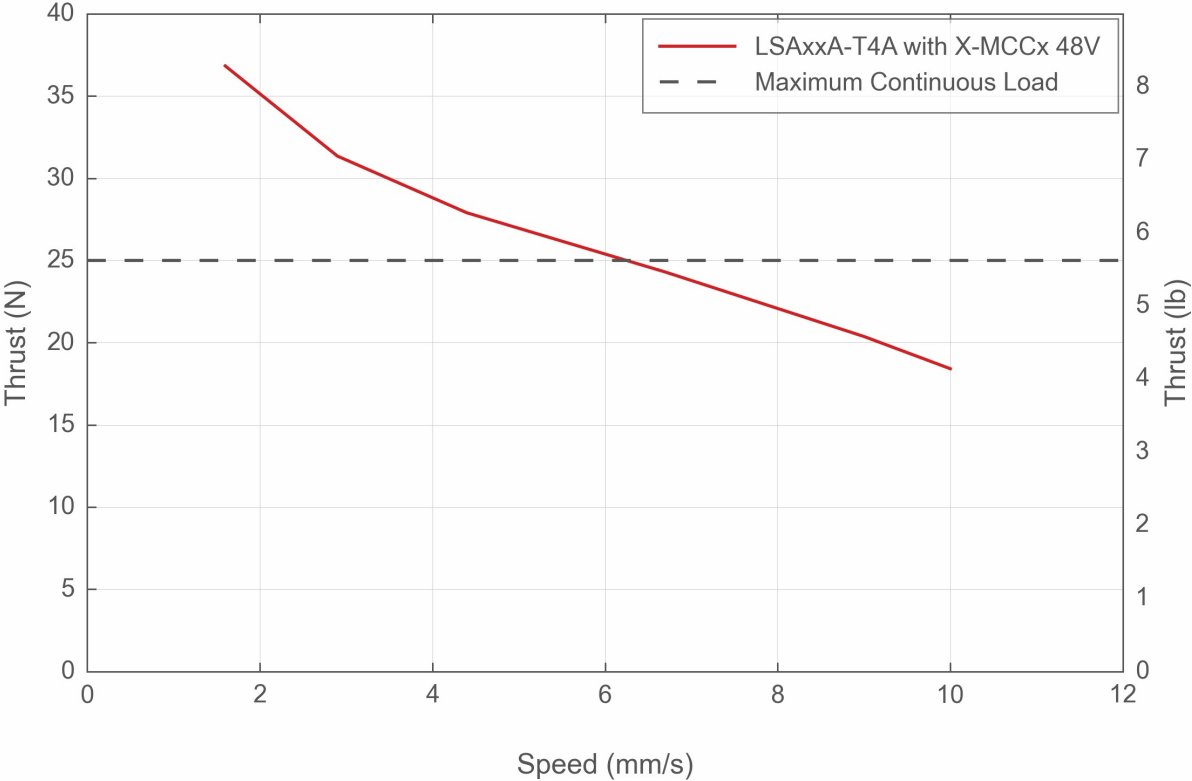
## LSA25A-T4A Specifications

<b>Microstep Size (Default Resolution)</b>	<b>0.0238125 <math>\mu\text{m}</math></b>
Built-in Controller	No
Recommended Controller	MCC (48 V) Recommended
AutoDetect	Yes
Travel Range	25 mm (0.984")
Accuracy (unidirectional)	24 $\mu\text{m}$ (0.000945")
Repeatability	< 1 $\mu\text{m}$ (< 0.000039")
Backlash	< 5 $\mu\text{m}$ (< 0.000197")
Maximum Speed	14 mm/s (0.551"/s)
Minimum Speed	0.000015 mm/s (0.000001"/s)
Speed Resolution	0.000015 mm/s (0.000001"/s)
Encoder Type	No
Peak Thrust	35 N (7.8 lb)
Maximum Continuous Thrust	25 N (5.6 lb)
Maximum Centered Load	30 N (6.7 lb)
Maximum Moment (Pitch)	50 N-cm (70.8 oz-in)
Maximum Moment (Roll)	125 N-cm (177.0 oz-in)
Maximum Moment (Yaw)	50 N-cm (70.8 oz-in)
Vertical Runout	< 50 $\mu\text{m}$ (< 0.001968")
Horizontal Runout	< 13 $\mu\text{m}$ (< 0.000512")
Pitch	0.14° (2.443 mrad)
Roll	0.05° (0.873 mrad)
Yaw	0.12° (2.094 mrad)
Linear Motion Per Motor Rev	0.3048 mm (0.012")
Motor Steps Per Rev	200
Motor Type	Stepper (2 phase)
Motor Rated Current	240 mA/phase
Motor Winding Resistance	20.4 ohms/phase
Inductance	5 mH/phase
Motor Rated Power	2.35 Watts
Motor Connection	D-sub 15

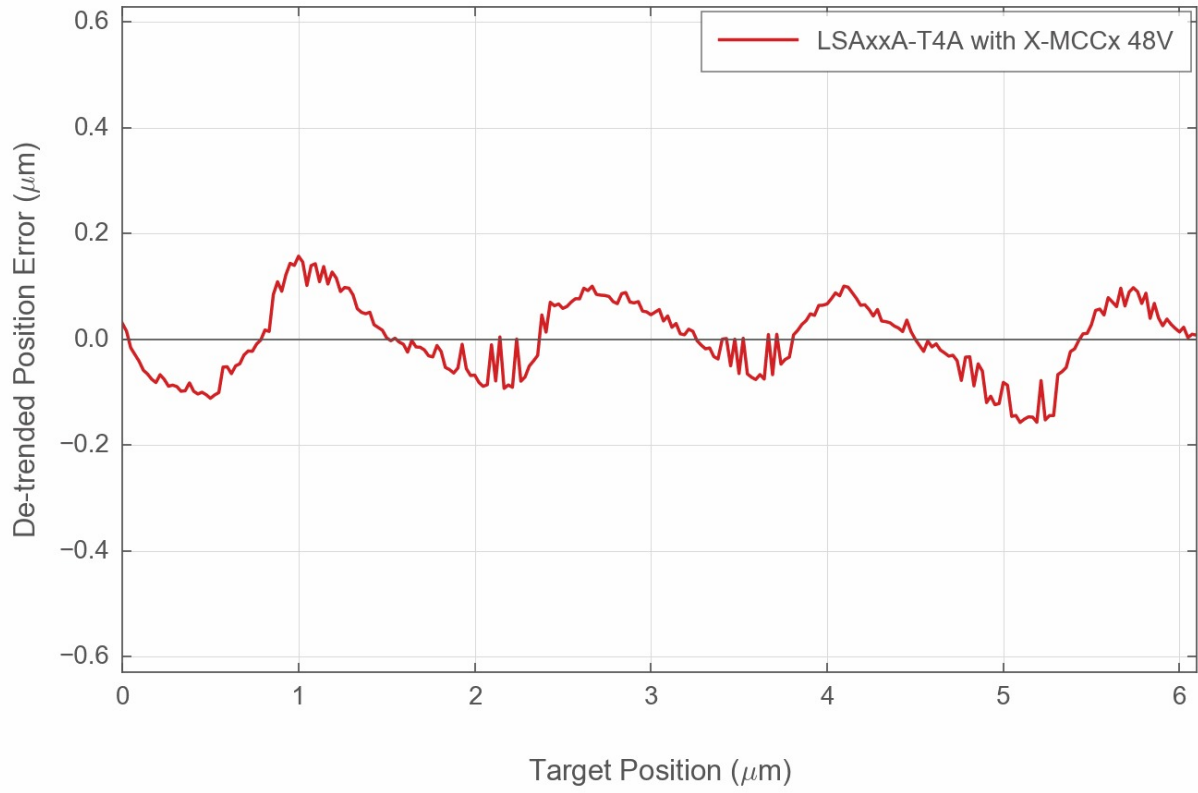
<b>Microstep Size (Default Resolution)</b>	<b>0.0238125 µm</b>
Default Resolution	1/64 of a step
Motor Frame Size	NEMA 08
Guide Type	Ball bearing
Mechanical Drive System	Precision lead screw
Limit or Home Sensing	Magnetic hall sensor
Axes of Motion	1
Mounting Interface	M2 and M3 threaded holes and M4 threaded centre hole
Operating Temperature Range	0 to 50 °C
CE Compliant	Yes
Vacuum Compatible	No
Weight	0.132 kg (0.291 lb)

LSA Series Charts

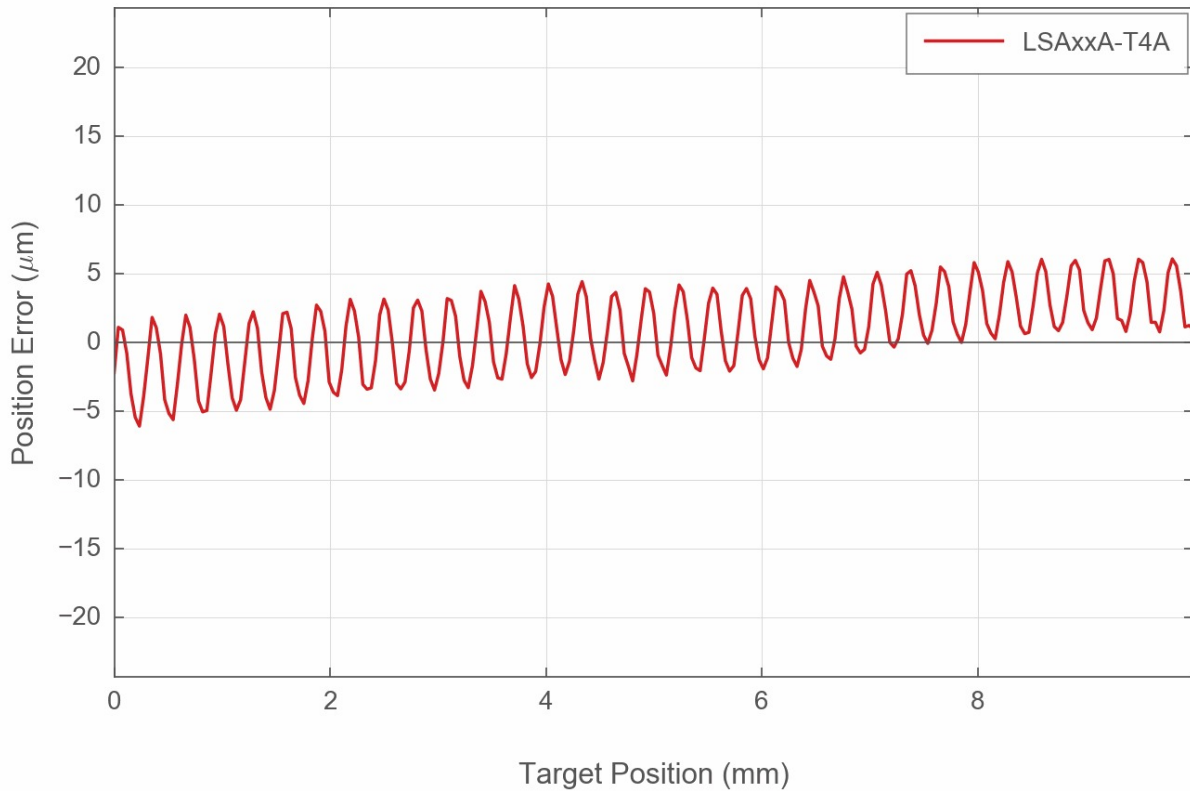
Thrust Speed Performance



## Typical Microstepping Accuracy



## Typical Accuracy



## Contact

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