

T-LSR Series Datasheet



- 75, 150, 300 and 450 mm travel
- 20 kg load capacity
- Up to 76 mm/s speed and up to 100 N thrust
- Built-in controller; daisy-chains data and power with other T-Series products
- Custom versions available

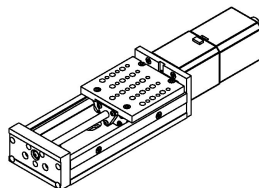
Zaber's T-LSR Series products are computer-controlled motorized linear slides with a variety of lead screw pitches and travels. They are stand-alone units requiring only a standard 15 V power supply. A potentiometer knob at the end of the unit permits smooth manual control; turn it fully to get maximum speed. The slides 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 T-Series products to share a single power supply.

Convenient 6-pin mini din cables on the unit allow for direct interconnection between units in close proximity. For longer distances, standard cable extension can be used.

Drawings

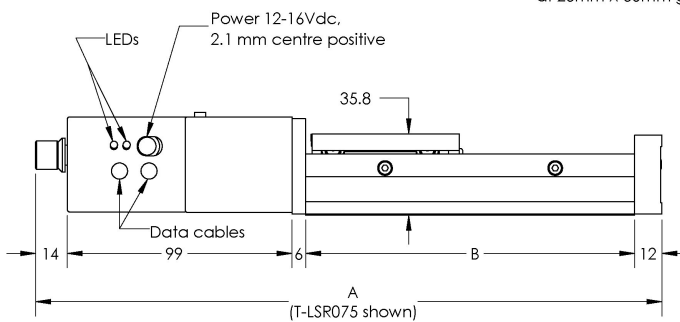
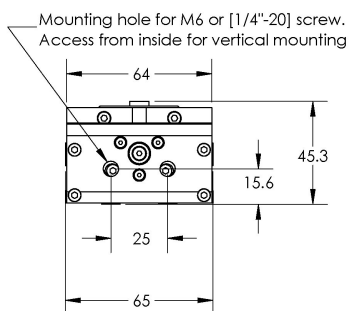
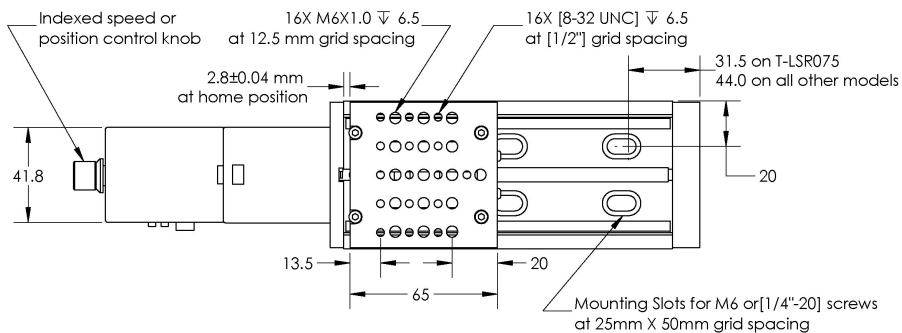
ZABER

T-LSR Motorized Linear Stage
dimensions in mm



Model Number*	Travel	A	B
T-LSR075	75.0	276.0	145.0
T-LSR150	150.0	351.0	220.0
T-LSR300	300.0	501.0	370.0
T-LSR450	450.0	651.0	520.0
T-LSR600	600.0	801.0	670.0

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



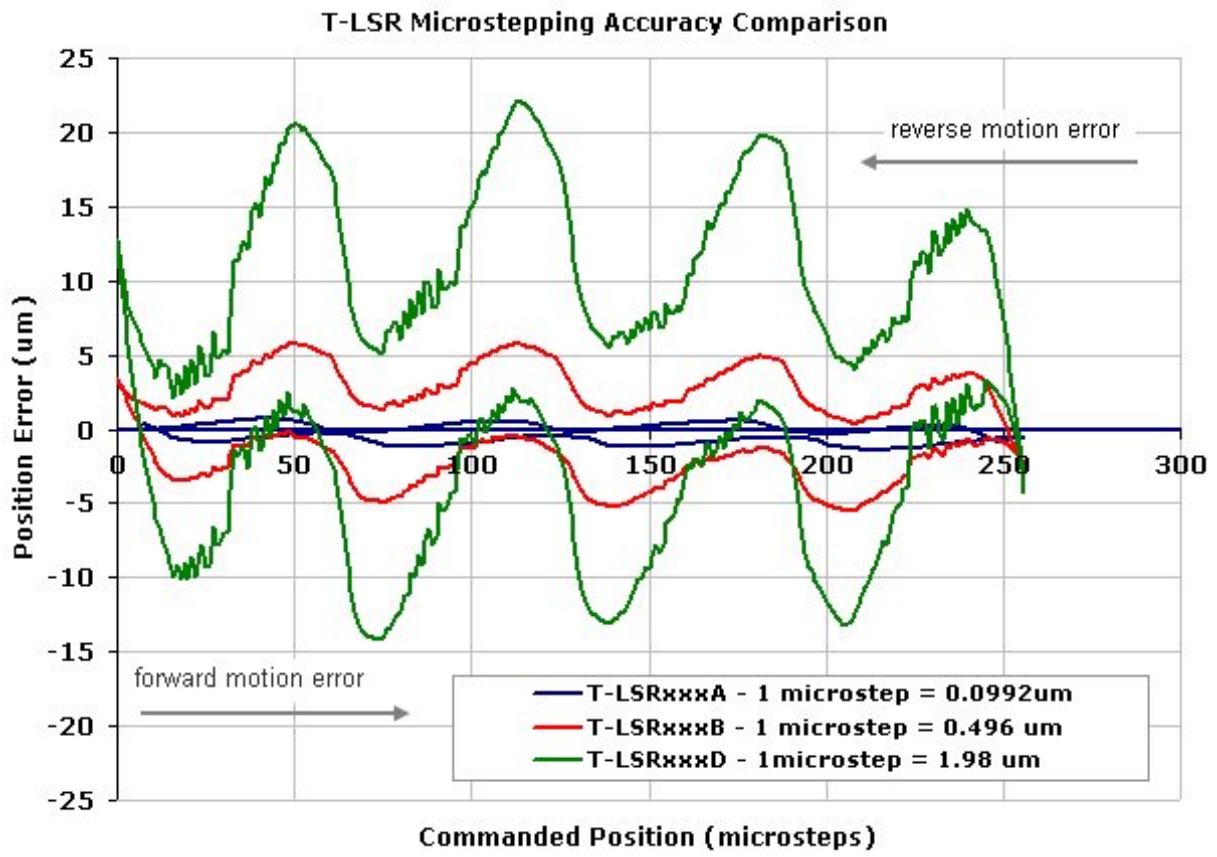
DWG 1092 901A

Specifications

Specification	Value	Alternate Unit
Stage Parallelism	< 100 μm	< 0.003937 "
Operating Temperature Range	0 to 50 °C	
Vacuum Compatible	No	
Mounting Interface	M6 threaded holes and 8-32 threaded holes	
LED Indicators	Yes	
Axes of Motion	1	
Manual Control	Knob with center detent	
Limit or Home Sensing	Magnetic home sensor	
Inductance	28 mH/phase	
Motor Type	Stepper (2 phase)	
Motor Steps Per Rev	200	
Peak Thrust	200 N	44.9 lb
CE Compliant	Yes	
RoHS Compliant	Yes	
Mechanical Drive System	Precision lead screw	
Data Cable Connection	Minidin 6 M/F	
Default Resolution	1/64 of a step	
Linear Motion Per Motor Rev	6.35 mm	0.250 "
Power Plug	2.1 mm center positive	
Power Supply	12-16 VDC	
Maximum Current Draw	550 mA	
Stiffness in Yaw	150 N-m/°	116 $\mu\text{rad/N-m}$
Yaw	0.02 °	0.349 mrad
Stiffness in Roll	150 N-m/°	116 $\mu\text{rad/N-m}$
Roll	0.01 °	0.175 mrad
Stiffness in Pitch	150 N-m/°	116 $\mu\text{rad/N-m}$
Pitch	0.05 °	0.873 mrad
Horizontal Runout	< 13 μm	< 0.000512 "
Vertical Runout	< 13 μm	< 0.000512 "

Specification	Value	Alternate Unit
Guide Type	Roller bearing	
Maximum Cantilever Load	800 N-cm	1132.9 oz-in
Maximum Centered Load	200 N	44.9 lb
Communication Protocol	Zaber Binary	
Communication Interface	RS-232	
Maximum Continuous Thrust	100 N	22.4 lb
Weight	1.81 kg	3.990 lb
Built-in Controller	Yes	
Microstep Size (Default Resolution)	0.49609375 μm	
Travel Range	150 mm	5.906 "
Accuracy (unidirectional)	50 μm	0.001968 "
Repeatability	< 2 μm	< 0.000079 "
Backlash	< 13 μm	< 0.000512 "
Maximum Speed	20 mm/s	0.787 "/s
Minimum Speed	0.00465 mm/s	0.000183 "/s
Encoder Type	None	
Speed Resolution	0.00465 mm/s	0.000183 "/s

Charts



T-LSR Thrust/Speed Curve

