

VSR Series Datasheet



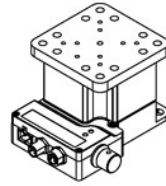
- 20 mm or 40 mm travel
- Up to 48 mm/s speed and up to 200 N thrust
- 10 kg load capacity
- 55 or 85 mm retracted height
- Built-in controller; daisy-chains with other Zaber products

Zaber's VSR vertical lift stages are stepper actuator driven platforms capable of moving 10 kg loads. They deliver exceptional travel and load capacity for their compact sizes, measuring only 55 mm (VSR20) or 85 mm (VSR40) tall when closed. With small footprints these stages can also mount directly onto Zaber's LST and LSQ series of linear stages. The VSR stage is designed for plug-and-play use with Zaber's X-MCB1 and X-MCB2 controllers.

Drawings

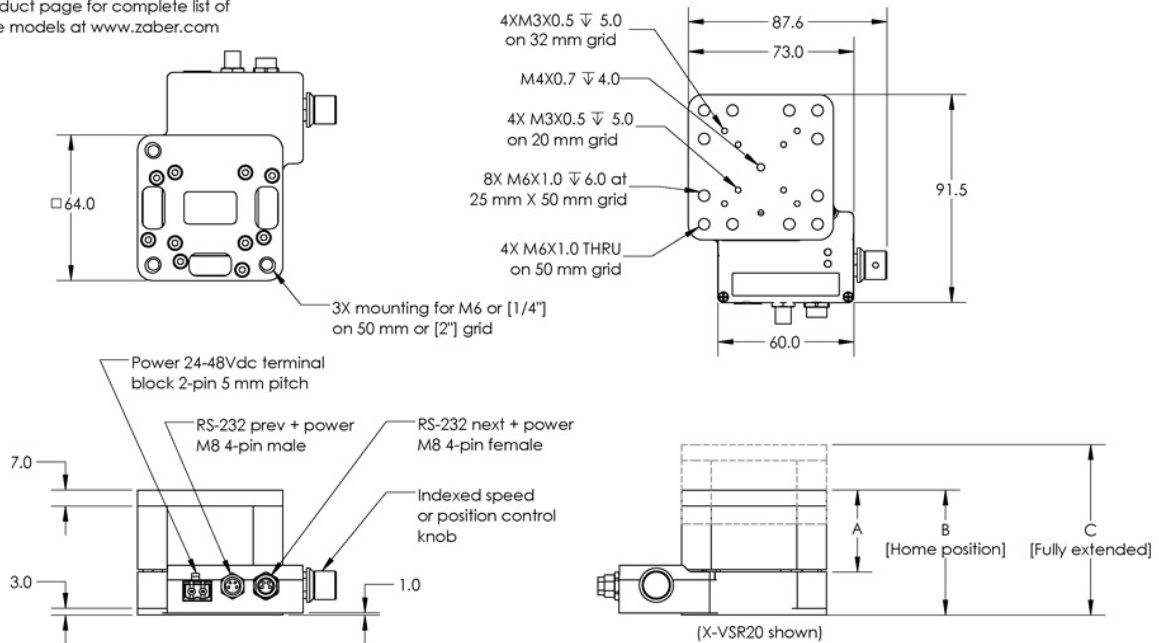
ZABER

X-VSR Vertical Lift Stage
dimensions in mm



Model Number*	Travel	A	B	C
X-VSR20	20.0	36.0	55.0	75.0
X-VSR40	40.0	66.0	85.0	125.0

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



DWG 1007 R03

Specifications

Specification	Value	Alternate Unit
Microstep Size (Default Resolution)	0.09525 μm	
Built-in Controller	Yes	
Accuracy (unidirectional)	35 μm	0.001378 "
Repeatability	< 1 μm	< 0.000039 "
Maximum Speed	48 mm/s	1.890 "/s
Peak Thrust	200 N	44.9 lb
Maximum Continuous Thrust	100 N	22.4 lb
Communication Interface	RS-232	
Communication Protocol	Zaber ASCII (Default), Zaber Binary	
Maximum Centered Load	100 N	22.4 lb
Maximum Cantilever Load	300 N-cm	424.8 oz-in
Pitch	0.08 $^{\circ}$	1.396 mrad
Roll	0.08 $^{\circ}$	1.396 mrad
Maximum Current Draw	950 mA	
Power Supply	24-48 VDC	
Power Plug	2-pin Screw Terminal	
Linear Motion Per Motor Rev	1.2182 mm	0.048 "
Motor Steps Per Rev	200	
Motor Type	Stepper (2 phase)	
Motor Rated Current	1500 mA/phase	
Inductance	1.9 mH/phase	
Default Resolution	1/64 of a step	
Data Cable Connection	Locking 4-pin M8	
Mechanical Drive System	Precision Lead Screw	
Limit or Home Sensing	Magnetic home sensor	
Manual Control	Yes	
Axes of Motion	1	
Mounting Interface	M6 and M3 threaded holes	
Vacuum Compatible	No	
Operating Temperature Range	0-50 $^{\circ}\text{C}$	

Specification	Value	Alternate Unit
RoHS Compliant	Yes	
CE Compliant	Yes	
Loaded Backlash (10 N)	< 10 μm	< 0.000394 "

Part Number	Travel Range	Backlash	Guide Type	Horizontal Runout
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Part Number	Weight
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Charts

Thrust Speed Performance

