

## RSM-E Series Datasheet



- 21 mm total height
- 0.02° repeatability
- 4 mm aperture
- 50 N load capacity
- Worm gear driven for continuous rotation
- Encoder position feedback with slip/stall detection and automatic recovery
- Designed for use with a X-MCB1 controller or can be used with any 2-phase stepper motor controller

Zaber's RSM-E Series rotation stages are our most compact stepper and worm gear driven devices. Self-aligning feet and mounting points make it easy to set up multi-axis tilt or gimbal systems using the GSM tilt devices or AP146 and AB147 brackets. RSM-E stages are designed for plug-and-play use with any of Zaber's controllers.

## Drawings

## Specifications

Specification	Value	Alternate Unit
Microstep Size (Default Resolution)	0.00046875 °	8.181 μrad
Built-in Controller	No	
Recommended Controller	X-MCB1 (48 V) Recommended	
Range	360 °	
Accuracy (unidirectional)	0.14 °	2.443000 mrad
Repeatability	< 0.02 °	< 0.349 mrad
Backlash	< 0.04 °	< 0.698 mrad
Maximum Speed	120 °/s	20.0 rpm
Minimum Speed	0.000286 °/s	4.992 μrad/s
Encoder Resolution	200 CPR	800 states/rev
Encoder Type	Rotary quadrature encoder	
Maximum Continuous Torque	60 N-cm	85.0 oz-in
Maximum Centered Load	50 N	11.2 lb
Maximum Cantilever Load	100 N-cm	141.6 oz-in
Stage Top Dimension	40 mm	1.575 "
Angular Motion Per Motor Rev	6 °	
Motor Steps Per Rev	200	
Motor Type	Stepper (2 phase)	
Motor Rated Current	600 mA/phase	
Motor Winding Resistance	6.5 ohms/phase	
Inductance	3.5 mH/phase	
Motor Connection	D-sub 15	
Default Resolution	1/64 of a step	
Motor Frame Size	NEMA 08	
Mechanical Drive System	Precision Worm Gear	
Limit or Home Sensing	Magnetic home sensor	
Manual Control	Yes	
Mounting Interface	M2 and M3 mounting holes	
Vacuum Compatible	No	
Operating Temperature Range	0-50 °C	

Specification	Value	Alternate Unit
RoHS Compliant	Yes	
CE Compliant	Yes	
Weight	0.278 kg	0.613 lb

## Charts

**Torque Speed Performance**

