

## RSW-E Series Datasheet



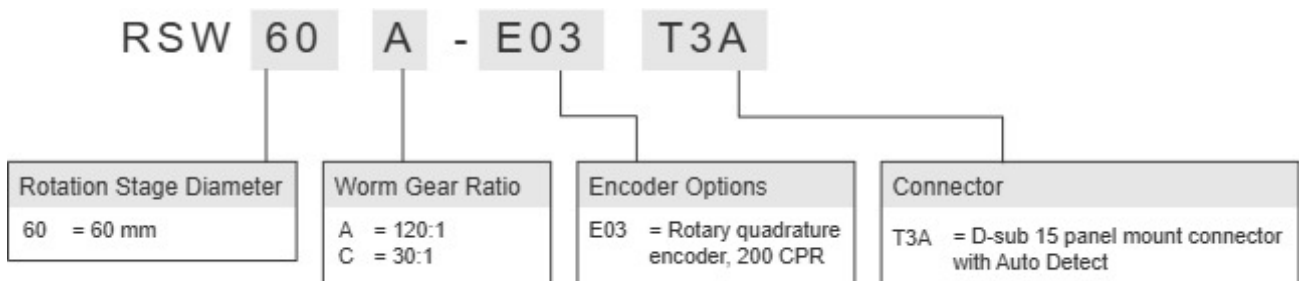
- Speed up to 75 rpm and torque up to 280 N-cm
- 23 mm aperture
- Worm gear driven for continuous rotation
- Two lens holders allow for use as a polarizer mount
- Encoder position feedback with slip/stall detection and automatic recovery
- Designed for use with an X-MCC Series stepper motor controller or any 2-phase stepper motor controller
- With AutoDetect, the X-MCC controller configures its settings automatically for the connected peripheral
- Custom versions available

## RSW-E Series Overview

Zaber's RSW-E precision motorized rotation stages, with integrated motor encoders, are stepper motor and worm gear driven and capable of continuous rotation. The stages are designed to connect directly to our X-MCC Series universal motor controllers, or they can be used with any 2-phase stepper motor controller through the panel mount DB15 connector. Set up is easy with AutoDetect. Once connected, the X-MCC controller will automatically detect and configure the RSW-E.

For more information visit: <https://www.zaber.com/products/rotary-stages/RSW-E>

## RSW-E Series Part Numbering & Options



## RSW-E Series Drawings

- [RSW-E.png \(Dimension Drawing for the RSW-E\)](#)

## RSW-E Series Specifications

<b>Built-in Controller</b>	
Recommended Controller	X-MCC (48 V) Recommended
AutoDetect	Yes
Range	360°
Accuracy (unidirectional)	0.08° (1.396000 mrad)
Repeatability	< 0.02° (< 0.349 mrad)
Backlash	< 0.04° (< 0.698 mrad)
Encoder Resolution	200 CPR (800 states/rev)
Encoder Type	Rotary quadrature encoder
Maximum Centered Load	200 N (44.9 lb)
Maximum Moment (Transverse)	410 N-cm (580.6 oz-in)
Stage Top Dimension	60 mm (2.362")
Radial Error Motion	+/- 4 µm (+/- 0.000157")
Axial Error Motion	< 4 µm (< 0.000157")
Tilt Error Motion	+/- 0.0033° (+/- 57.60 µrad)
Bearing Plane Offset	16.4 mm (0.646")
Motor Type	Stepper (2 phase)
Motor Rated Current	1500 mA/phase
Motor Winding Resistance	2.05 ohms/phase
Inductance	1 mH/phase
Motor Connection	D-sub 15
Default Resolution	1/64 of a step
Mechanical Drive System	Precision Worm Gear
Limit or Home Sensing	Magnetic home sensor
CE Compliant	Yes
Vacuum Compatible	No
Weight	0.64 kg (1.411 lb)

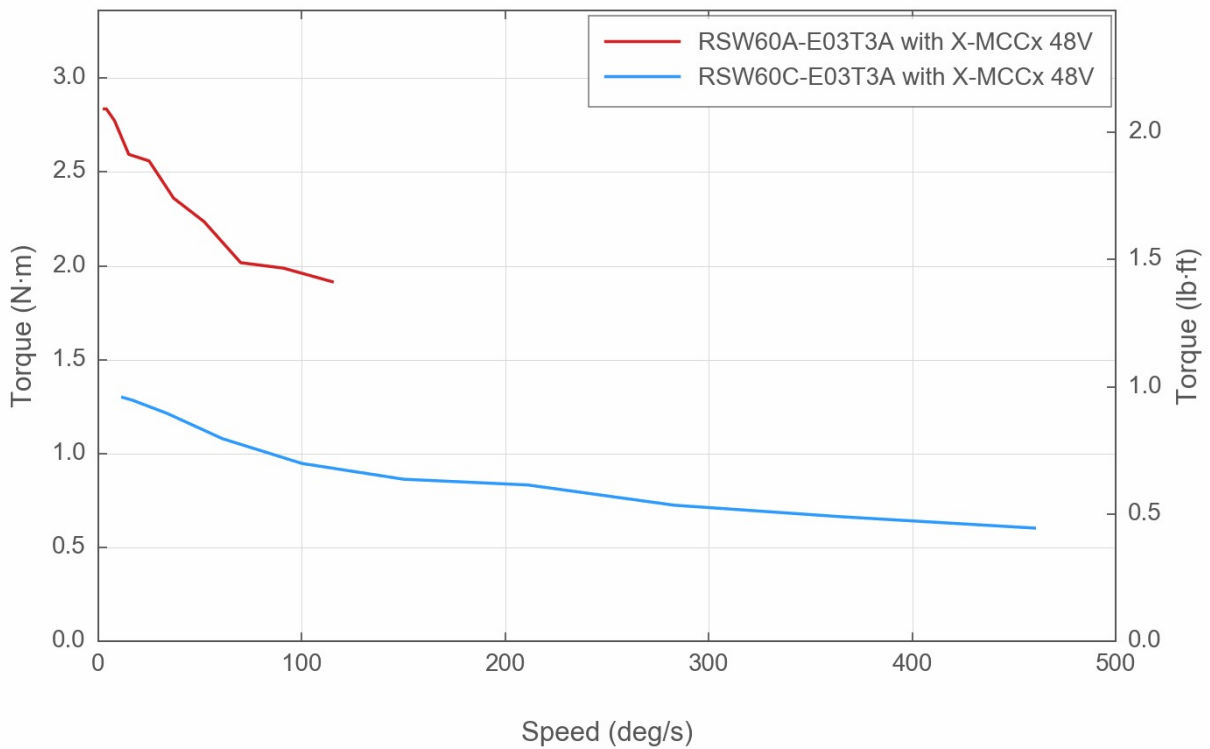
<b>Part Number</b>	<b>Microstep Size (Default Resolution)</b>	<b>Maximum Speed</b>	<b>Minimum Speed</b>	<b>Speed Resolution</b>
RSW60A-E03T3A	0.000234375°	115°/s (19 rpm)	0.000143°/s	0.000143°/s

Part Number	Microstep Size (Default Resolution)	Maximum Speed	Minimum Speed	Speed Resolution
	(4.091 $\mu$ rad)		(2.496 $\mu$ rad/s)	(2.496 $\mu$ rad/s)
RSW60C-E03T3A	0.0009375° (16.362 $\mu$ rad)	450°/s (75 rpm)	0.000572°/s (9.983 $\mu$ rad/s)	0.000572°/s (9.983 $\mu$ rad/s)

Part Number	Maximum Continuous Torque	Angular Motion Per Motor Rev
RSW60A-E03T3A	280 N-cm (396.5 oz-in)	3°
RSW60C-E03T3A	125 N-cm (177.0 oz-in)	12°

## RSW-E Series Charts

### Torque Speed Performance



## Contact

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