

## RST240B-E08T3A Datasheet



- Speed up to 60 °/s and torque up to 70 N-m
- Continuous 360° rotation stage
- Up to 300 kg centered load capacity
- 50.8 mm (2") or 101.6 mm (4") aperture
- Encoder position feedback with slip/stall detection and automatic recovery
- Designed for use with MCC Family controllers or any 2-phase stepper motor controller
- Custom versions available

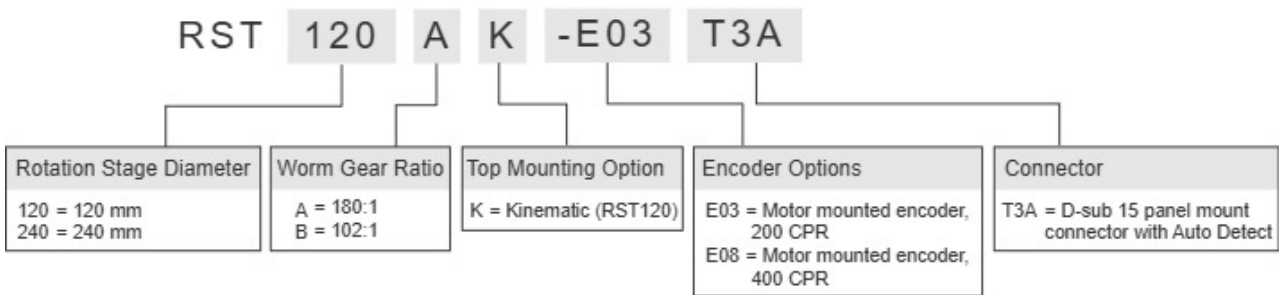
## RST-E Series Overview

Zaber's RST-E Series products are motorized rotation stages with built-in motor encoders. Rated for up to 300 kg centered load capacity and up to 70 N-m of torque, they are ideal for high load, angular positioning applications. They have large diameter apertures for a variety of thru-bore applications. RST-E stages are designed for plug-and-play use with any of Zaber's controllers.

The stages are designed to connect directly to our MCC Family 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 controller will automatically detect and configure the RST-E.

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

## RST-E Series Part Numbering & Options



## RST240B-E08T3A Drawings

- [RST240-E.png \(Drawing for the RST240-E\)](#)

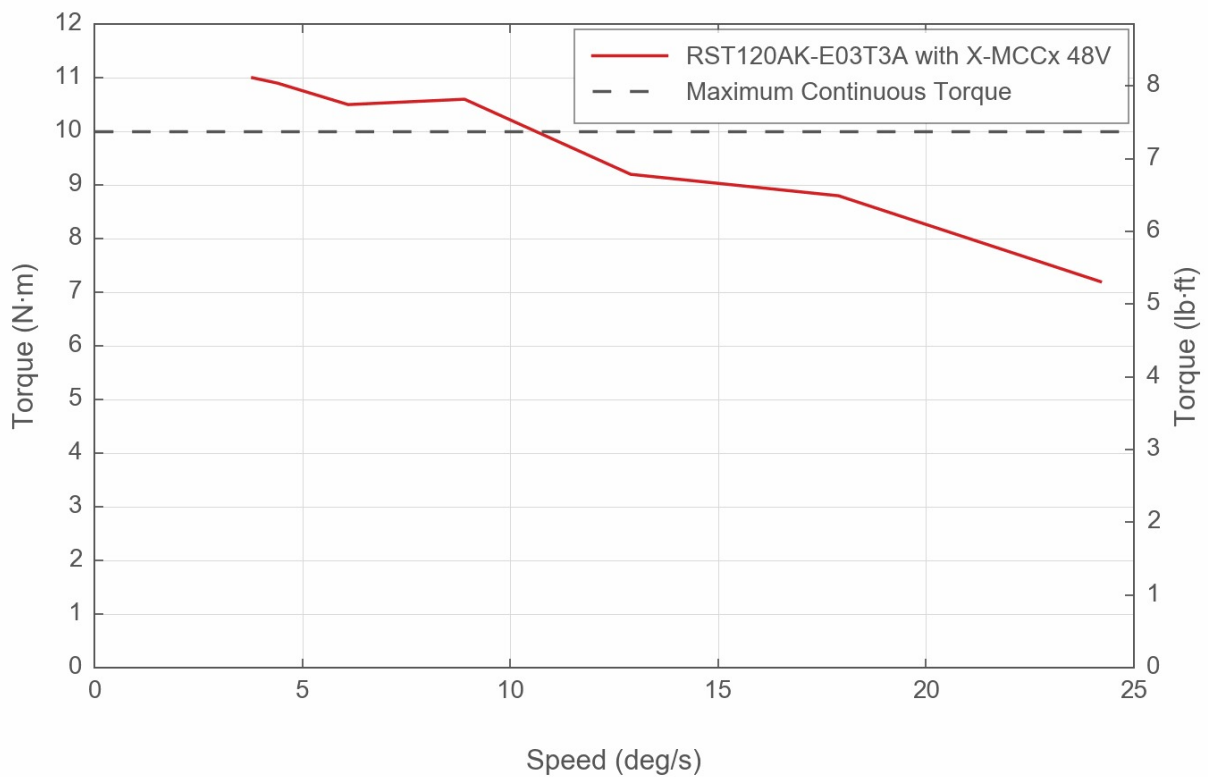
## RST240B-E08T3A Specifications

<b>Microstep Size (Default Resolution)</b>	<b>0.00027574° (4.812 μrad)</b>
Built-in Controller	No
Recommended Controller	MCC (48 V) Recommended
AutoDetect	Yes
Range	360°
Accuracy (unidirectional)	0.075° (1.308750 mrad)
Repeatability	< 0.0015° (< 0.026 mrad)
Backlash	< 0.05° (< 0.873 mrad)
Maximum Speed	60°/s (10 rpm)
Minimum Speed	0.000168°/s (2.932 μrad/s)
Speed Resolution	0.000168°/s (2.932 μrad/s)
Encoder Resolution	400 CPR (1600 states/rev)
Encoder Type	Rotary quadrature encoder
Maximum Torque	7000 N-cm (9912.8 oz-in)
Maximum Continuous Torque	4500 N-cm (6372.5 oz-in)
Maximum Centered Load	3000 N (672.8 lb)
Maximum Moment (Transverse)	20000 N-cm (28322.4 oz-in)
Stage Top Dimension	240 mm (9.449")
Radial Error Motion	+/- 2.5 μm (+/- 0.000098")
Axial Error Motion	< 4 μm (< 0.000157")
Tilt Error Motion	+/- 0.003° (+/- 52.36 μrad)
Bearing Plane Offset	30.75 mm (1.211")
Angular Motion Per Motor Rev	3.5294°
Motor Steps Per Rev	200
Motor Type	Stepper (2 phase)
Motor Rated Current	3000 mA/phase
Motor Winding Resistance	0.53 ohms/phase
Inductance	2 mH/phase
Motor Connection	D-sub 15
Default Resolution	1/64 of a step
Maximum Angular Momentum	1.6 kg-m <sup>2</sup> /s

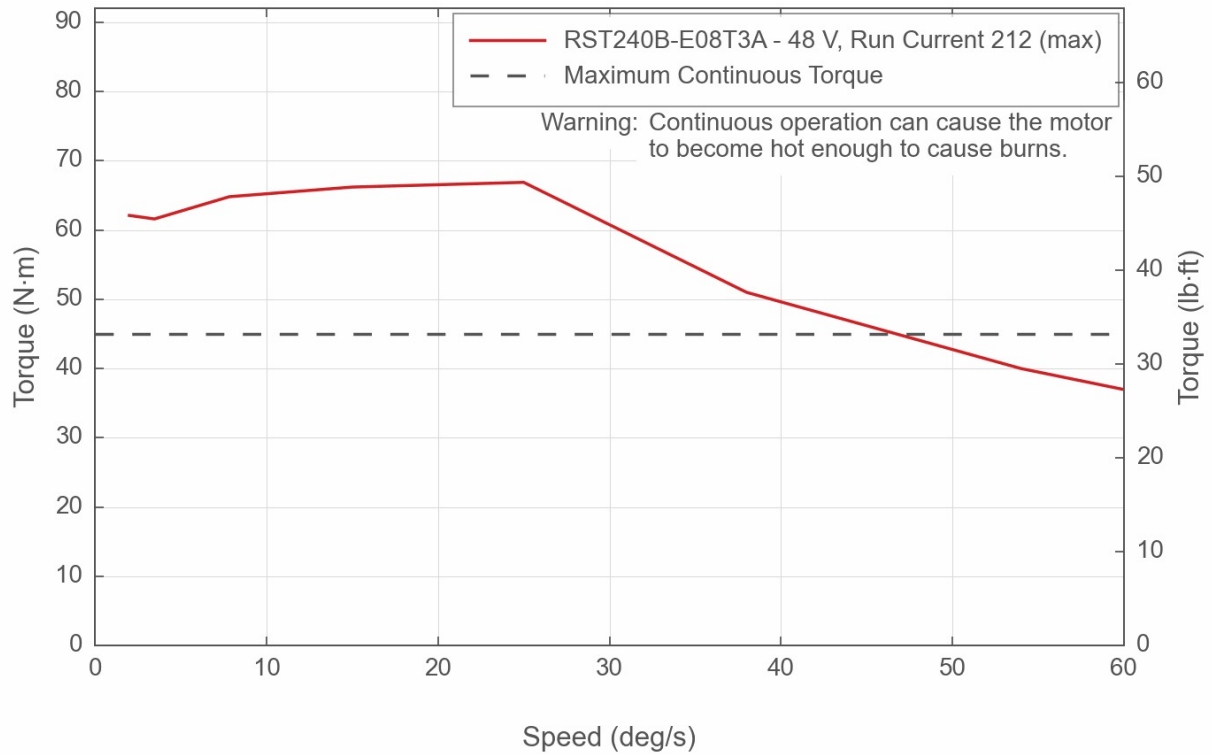
<b>Microstep Size (Default Resolution)</b>	<b>0.00027574° (4.812 μrad)</b>
Motor Frame Size	23
Guide Type	Crossed-Roller Bearing
Mechanical Drive System	Precision Worm Gear
Limit or Home Sensing	Magnetic home sensor
Gear Ratio	102:1
Mounting Interface	M6 threaded holes and M8 mounting holes
Operating Temperature Range	0-50 °C
CE Compliant	Yes
Vacuum Compatible	No
Weight	14.5 kg (31.967 lb)

## RST-E Series Charts

### Torque Speed Performance



## Torque Speed Performance



## Contact

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