

RSB120AB-T3A Datasheet



- Speeds up to 1,200 rpm
- Continuous 360° rotation stage
- Multiple motor configurations
- Designed for use with MCC Family controllers or any 2-phase stepper motor controller
- With AutoDetect, Zaber controllers automatically configure settings for the connected peripheral

RSB Series Overview

Zaber's RSB motorized rotation stages feature a compact footprint, low profile, and a load capability of up to 50 kg. With a maximum speed of 1,200 rpm, these rotation stages are ideal for the rapid positioning of light loads to within a fraction of a degree.

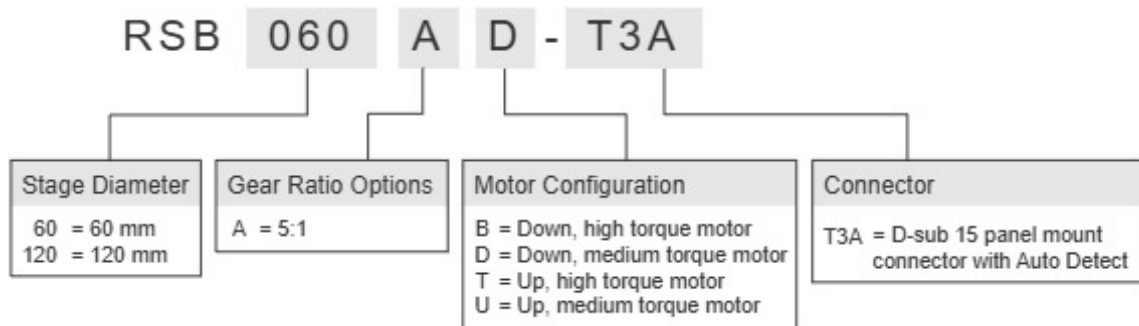
There are two motor configurations available: up and down. Motor up configurations allow flush mounting of the device to a flat surface, and motor down configurations allow for full 360° movement of loads that extend past the edge of the stage top.

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 RSB.

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

RSB Series Part Numbering & Options



RSB120AB-T3A Drawings

- [RSB120_B&T_configs.png](#) (Drawing for the RSB120 B&T configs)

RSB120AB-T3A Specifications

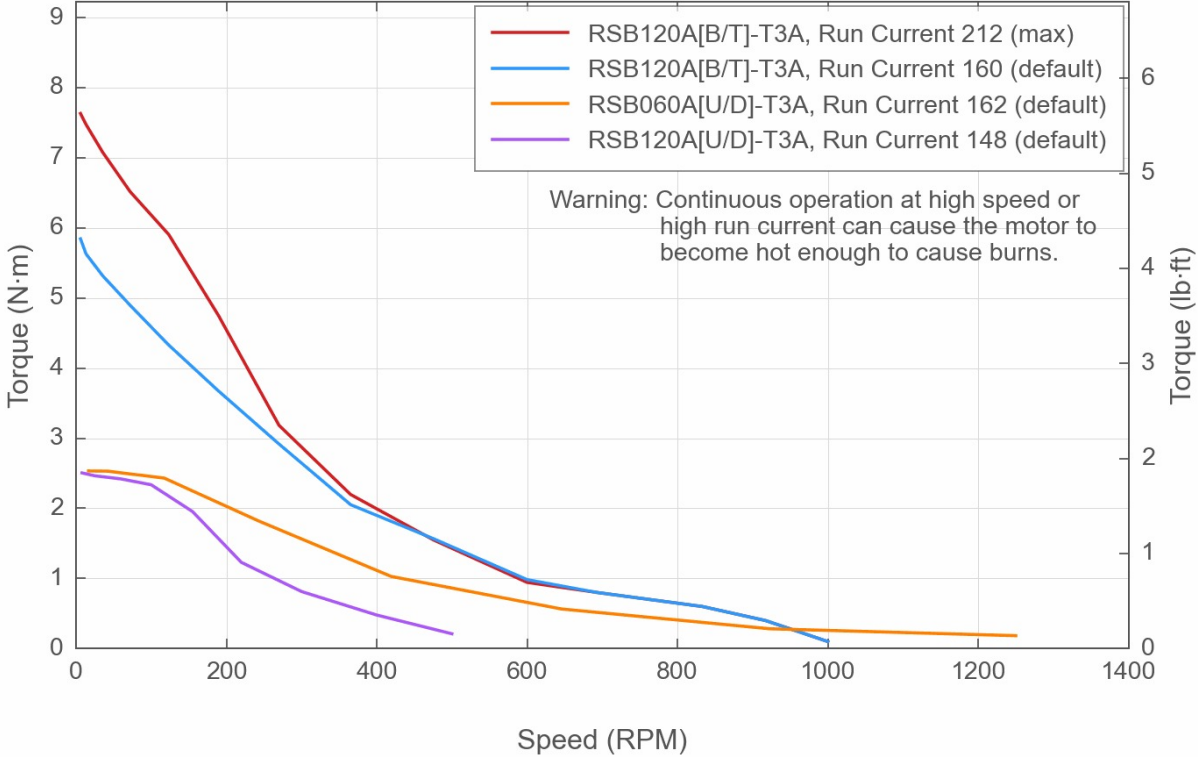
Microstep Size (Default Resolution)	0.005625° (98.173 μrad)
Built-in Controller	No
Recommended Controller	MCC (48 V) Recommended
AutoDetect	Yes
Range	360°
Accuracy (unidirectional)	0.28° (4.886000 mrad)
Repeatability	< 0.001° (< 0.017 mrad)
Backlash	< 0.25° (< 4.362 mrad)
Maximum Speed	5400°/s (900 rpm)
Minimum Speed	0.003434°/s (59.934 μrad/s)
Speed Resolution	0.003434°/s (59.934 μrad/s)
Encoder Type	No
Maximum Continuous Torque	750 N-cm (1062.1 oz-in)
Maximum Centered Load	500 N (112.1 lb)
Maximum Moment (Transverse)	2000 N-cm (2832.2 oz-in)
Stage Top Dimension	120 mm (4.724")
Radial Error Motion	+/- 3 μm (+/- 0.000118")
Axial Error Motion	< 3 μm (< 0.000118")
Tilt Error Motion	+/- 0.0014° (+/- 24.43 μrad)
Bearing Plane Offset	20 mm (0.787")
Angular Motion Per Motor Rev	72°
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
Mechanical Drive System	Synchronous belt
Limit or Home Sensing	Magnetic home sensor
Mounting Interface	Kinematic with M2.5 and M6 threaded holes
CE Compliant	Yes

Microstep Size (Default Resolution)	0.005625° (98.173 μrad)
Vacuum Compatible	No
Weight	2.0 kg (4.409 lb)

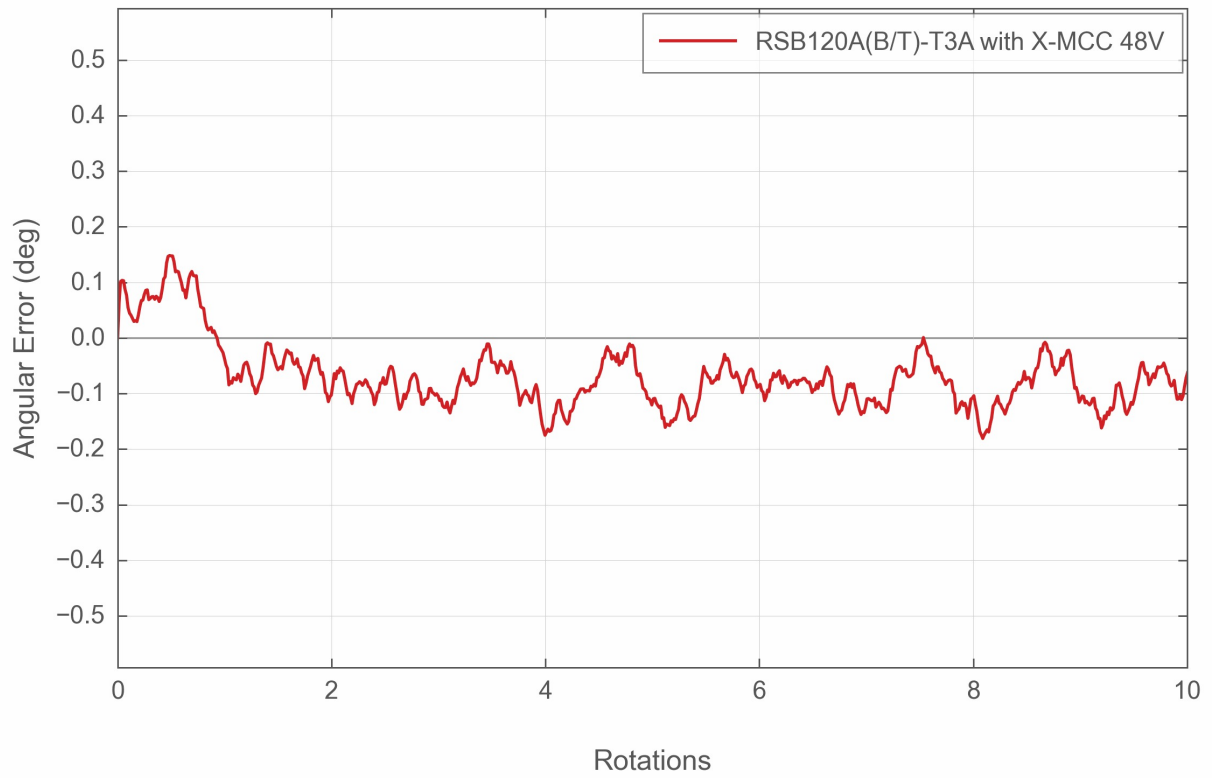
RSB Series Charts

Torque Speed Performance

with X-MCCx 48V

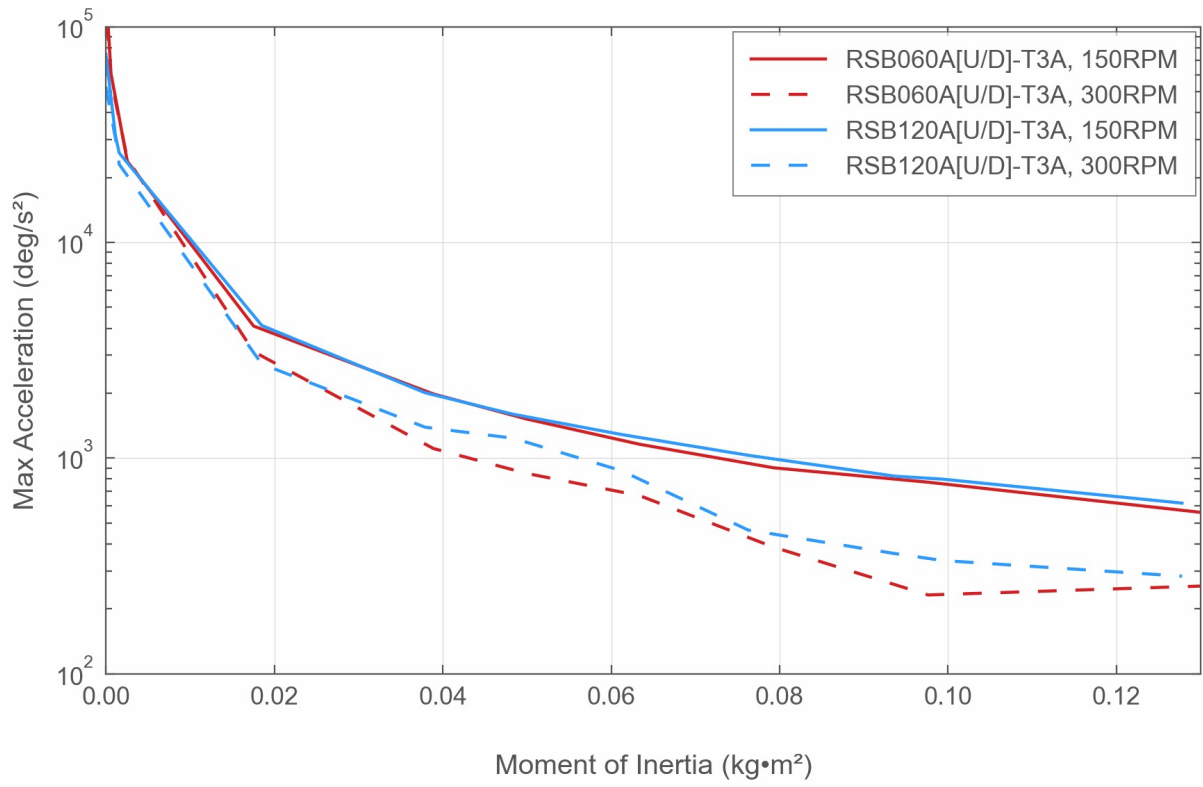


Typical Accuracy



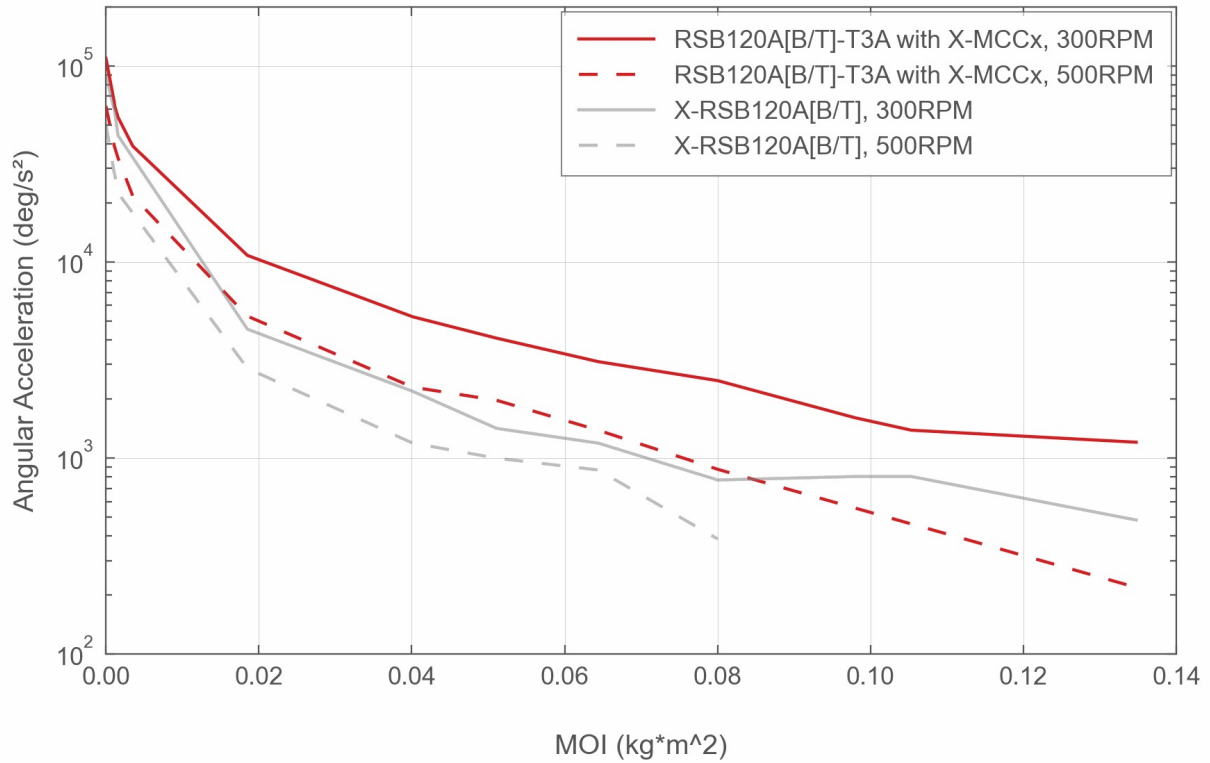
Angular Acceleration

with X-MCCx - 48V, Default Run Current



Angular Acceleration

48V, Run Current 212 (max)



Contact

Email: contact@zaber.com

Phone (toll free Canada/USA): 1-888-276-8033

Phone (direct): 1-604-569-3780

Fax: 1-604-648-8033

Zaber Technologies Inc.

#2 - 605 West Kent Ave. N.

Vancouver, British Columbia

Canada, V6P 6T7

<https://www.zaber.com>