

## X-RSB060AD-E01 Datasheet



- Speeds up to 1,200 rpm
- Continuous 360° rotation stage
- Multiple motor configurations
- Encoder position feedback with slip/stall detection and automatic recovery
- Built-in controller; daisy-chains with other Zaber products
- Optional integrated power-off brake

### X-RSB-E Series Overview

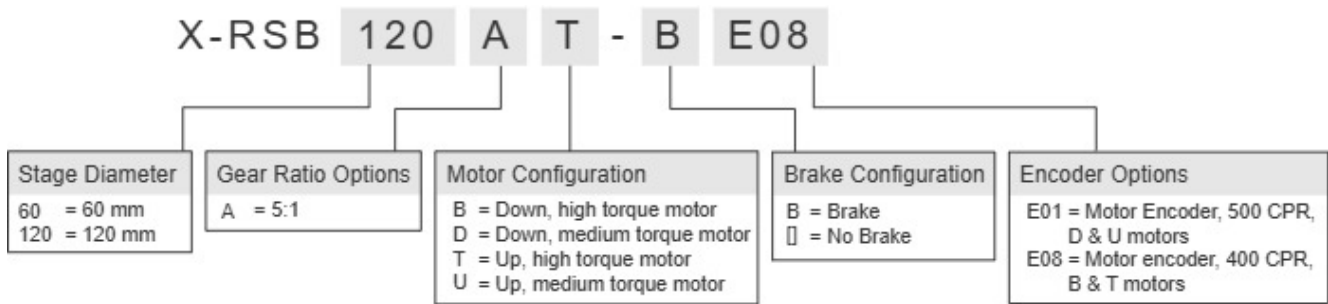
Zaber's X-RSB-E Series rotation stages feature a compact footprint, low profile, and a load capability of up to 50 kg. With a maximum speed of 1,200 rpm, these rotation stages are ideal for the rapid positioning of light loads to within a fraction of a degree.

They are stand-alone units requiring either a standard 24 V or 48 V power supply. A built-in motor encoder allows for closed-loop operation and slip/stall recovery features. 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 a full 360° movement of loads that extend past the edge of the stage top. An indexed knob provides convenient manual control for versatile operation even without a computer. An optional power-off brake is available to protect the payload from unintended motion in the event of power loss.

These stages connect to the RS-232 port or USB port of any computer, and they can be daisy-chained with any other Zaber products. The daisy-chain also shares power, making it possible for multiple X-Series products to share a single power supply. Convenient locking, 4-pin, M8 connectors on the unit allow for secure connection between units. Like all of Zaber's products, the X-RSB-E Series is designed to be 'plug and play' and very easy to set up and operate.

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

## X-RSB-E Series Part Numbering & Options



## X-RSB060AD-E01 Drawings

- [X-RSB060-E.png \(Drawing for the X-RSB060-E\)](#)

## X-RSB060AD-E01 Specifications

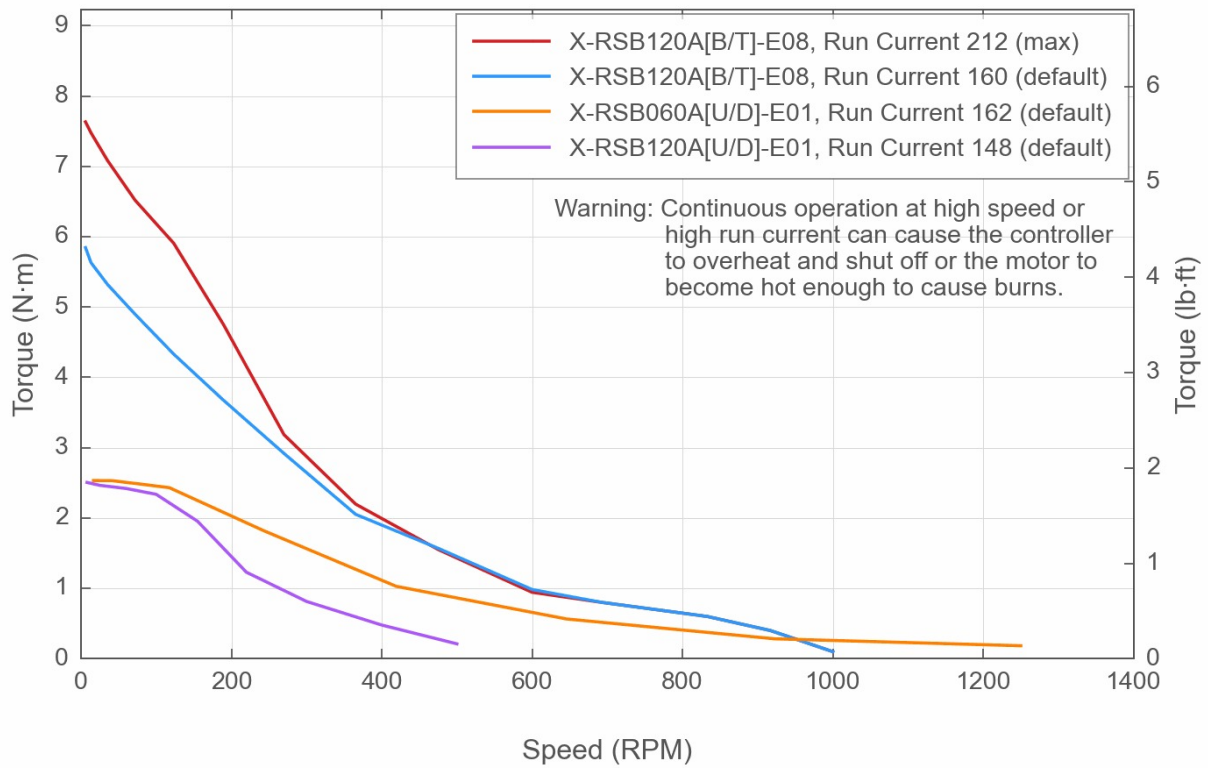
<b>Microstep Size (Default Resolution)</b>	<b>0.005625° (98.173 μrad)</b>
Built-in Controller	Yes
Range	360°
Accuracy (unidirectional)	0.2° (3.490000 mrad)
Repeatability	< 0.001° (< 0.017 mrad)
Backlash	< 0.1° (< 1.745 mrad)
Maximum Speed	7200°/s (1200 rpm)
Minimum Speed	0.003434°/s (59.934 μrad/s)
Speed Resolution	0.003434°/s (59.934 μrad/s)
Encoder Resolution	500 CPR (2000 states/rev)
Encoder Type	Rotary quadrature encoder
Communication Interface	RS-232
Communication Protocol	Zaber ASCII (Default), Zaber Binary
Data Cable Connection	Locking 4-pin M8
Maximum Continuous Torque	230 N-cm (325.7 oz-in)
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	16.37 mm (0.644")
Power Supply	24 - 48 VDC
Power Plug	2-pin Screw Terminal
Maximum Current Draw	2000 mA
Angular Motion Per Motor Rev	72°
Motor Steps Per Rev	200
Motor Type	Stepper (2-phase)
Motor Rated Current	2300 mA/phase
Inductance	2.8 mH/phase
Default Resolution	1/64 of a step

<b>Microstep Size (Default Resolution)</b>	<b>0.005625° (98.173 μrad)</b>
Mechanical Drive System	Synchronous belt
Limit or Home Sensing	Magnetic home sensor
Manual Control	Yes
Axes of Motion	1
LED Indicators	Yes
Mounting Interface	M6 and #8-32 threaded holes
Operating Temperature Range	0 - 50 °C
CE Compliant	Yes
Vacuum Compatible	No
Weight	0.88 kg (1.940 lb)

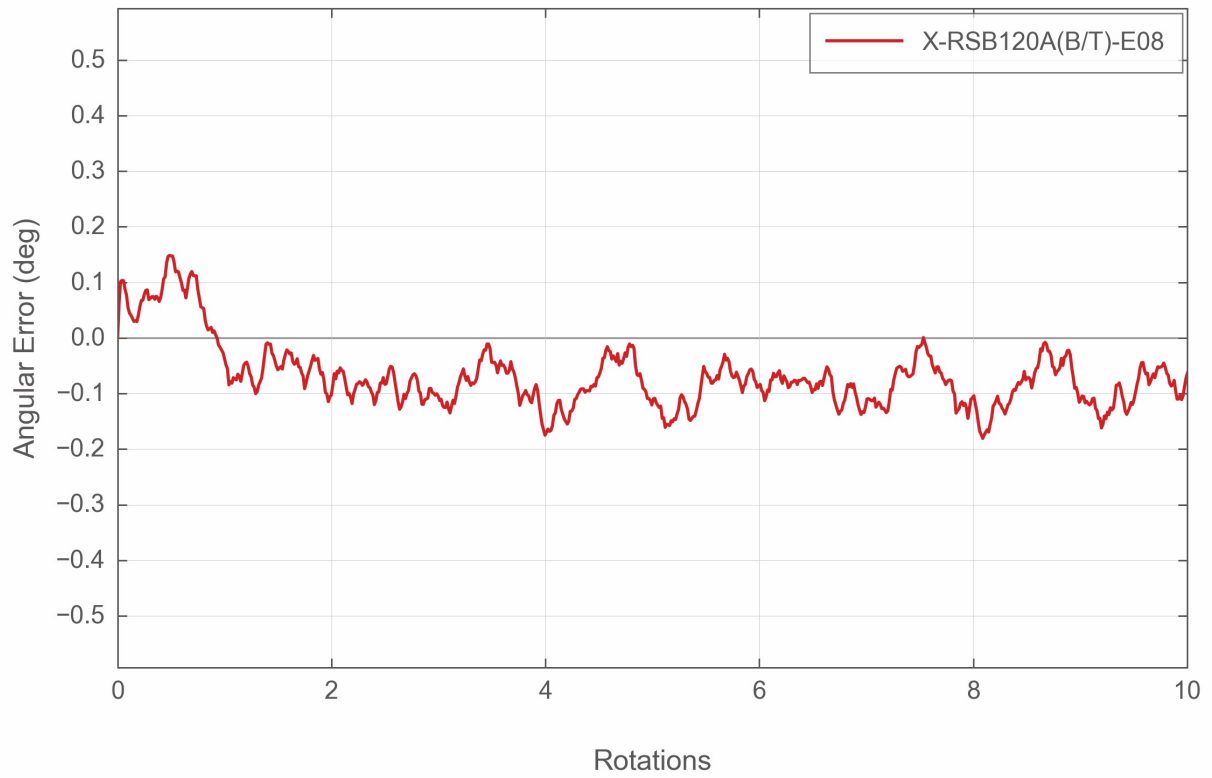
## X-RSB-E Series Charts

### Torque Speed Performance

48V

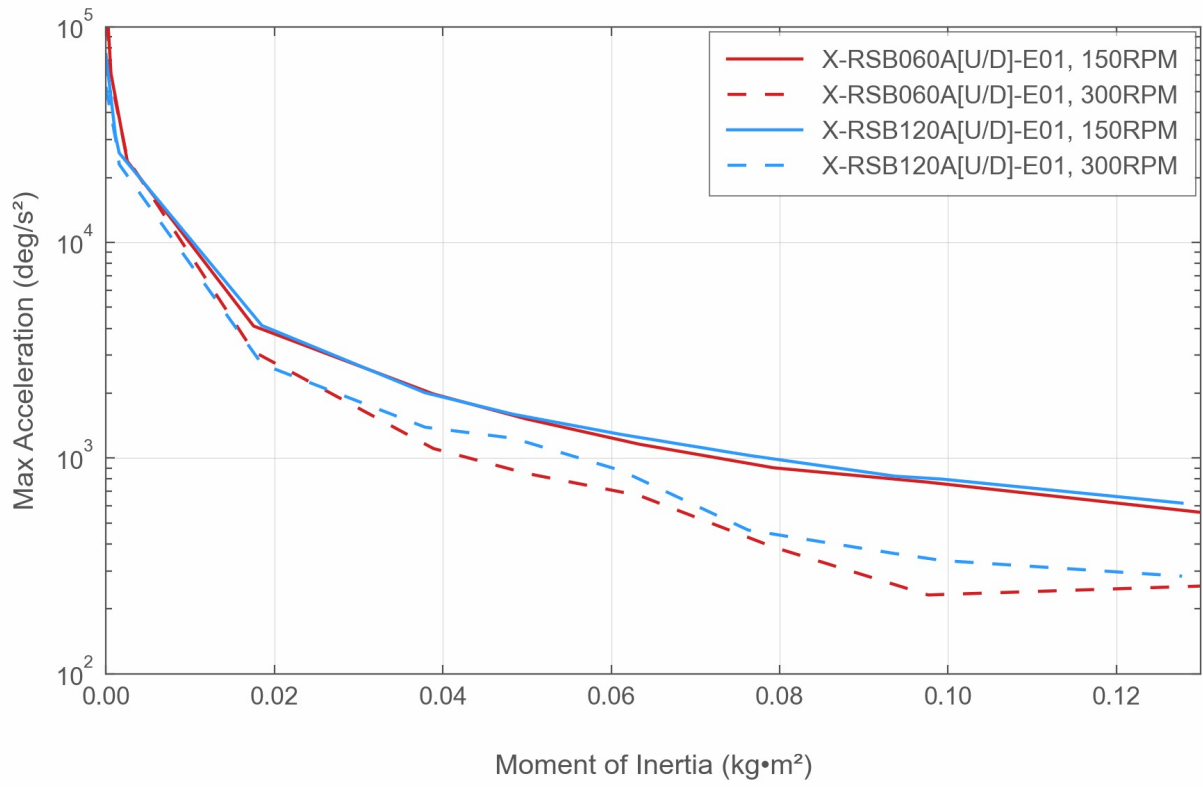


## Typical Accuracy



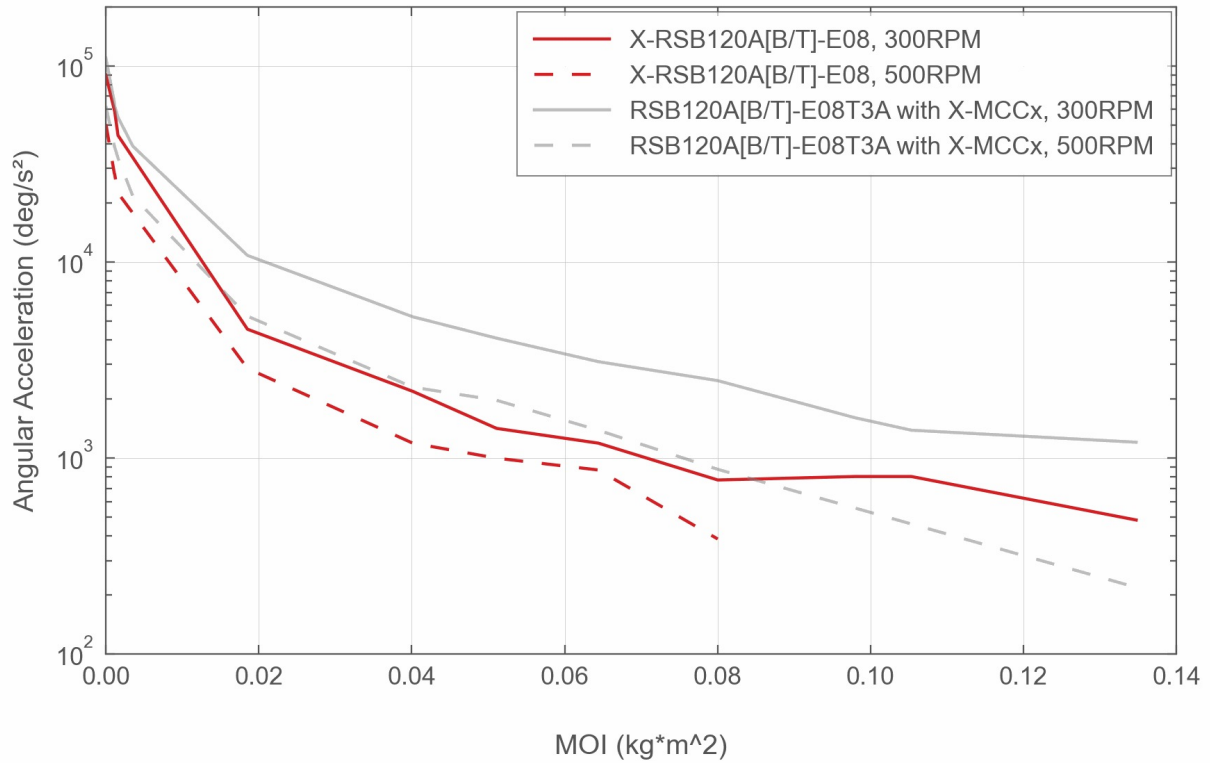
# Angular Acceleration

48V, Default Run Current



## Angular Acceleration

48V, Run Current 212 (max)



## Contact

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