

X-RST240B-E08 Datasheet



- Speed up to 60°/s and torque up to 70 N-m
- 300 kg centered load capacity
- 50.8 mm (2") or 101.6 mm (4") aperture
- Multiple X-Series products in a daisy-chain can share a single power supply
- Encoder position feedback with slip/stall detection and automatic recovery
- Built-in controller; daisy-chains with other Zaber products
- Custom versions available

X-RST-E Series Overview

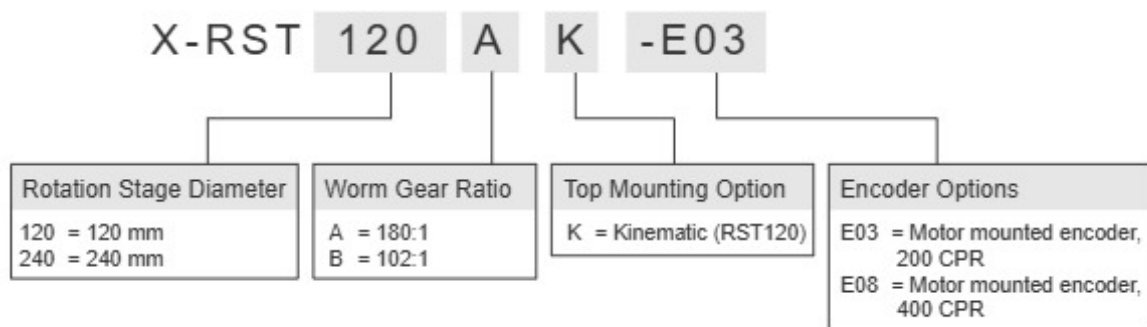
Zaber's X-RST-E Series products are motorized rotation stages with built-in controllers and motor encoders. Rated for up to 300 kg centered load capacity and 70 N-m of torque, they are ideal for high load, angular positioning applications. They have large diameter apertures for a variety of thru-bore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

They are stand-alone units requiring only a standard 24-48 V power supply. An indexed knob provides smooth manual control at variable speeds in both directions for versatile operation even without a computer. Press and hold to switch between velocity mode and position mode, turn to move the stage, and press to stop.

The stages connect to the USB 2.0 or RS-232 port of any computer and can be chained with several units per chain. They can be chained with any other Zaber products. Convenient locking, 4-pin, M8 connectors on the unit allow for an easy and secure connection. The chain also shares power, so multiple X-Series products can use a single power supply.

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

X-RST-E Series Part Numbering & Options



X-RST240B-E08 Drawings

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

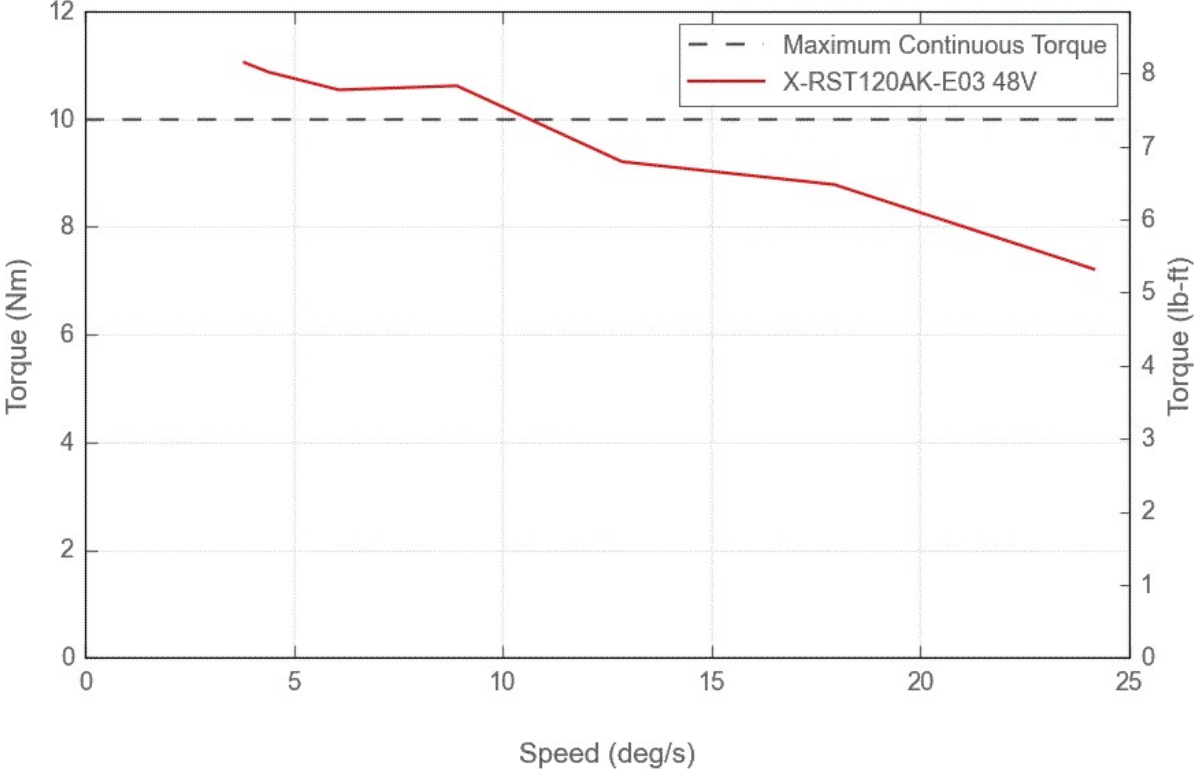
X-RST240B-E08 Specifications

Microstep Size (Default Resolution)	0.00027574° (4.812 μrad)
Built-in Controller	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
Communication Interface	RS-232
Communication Protocol	Zaber ASCII (Default), Zaber Binary
Data Cable Connection	Locking 4-pin M8
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")
Power Supply	24-48 VDC
Power Plug	2-pin Screw Terminal
Maximum Current Draw	3600 mA
Angular Motion Per Motor Rev	3.5294°
Motor Steps Per Rev	200

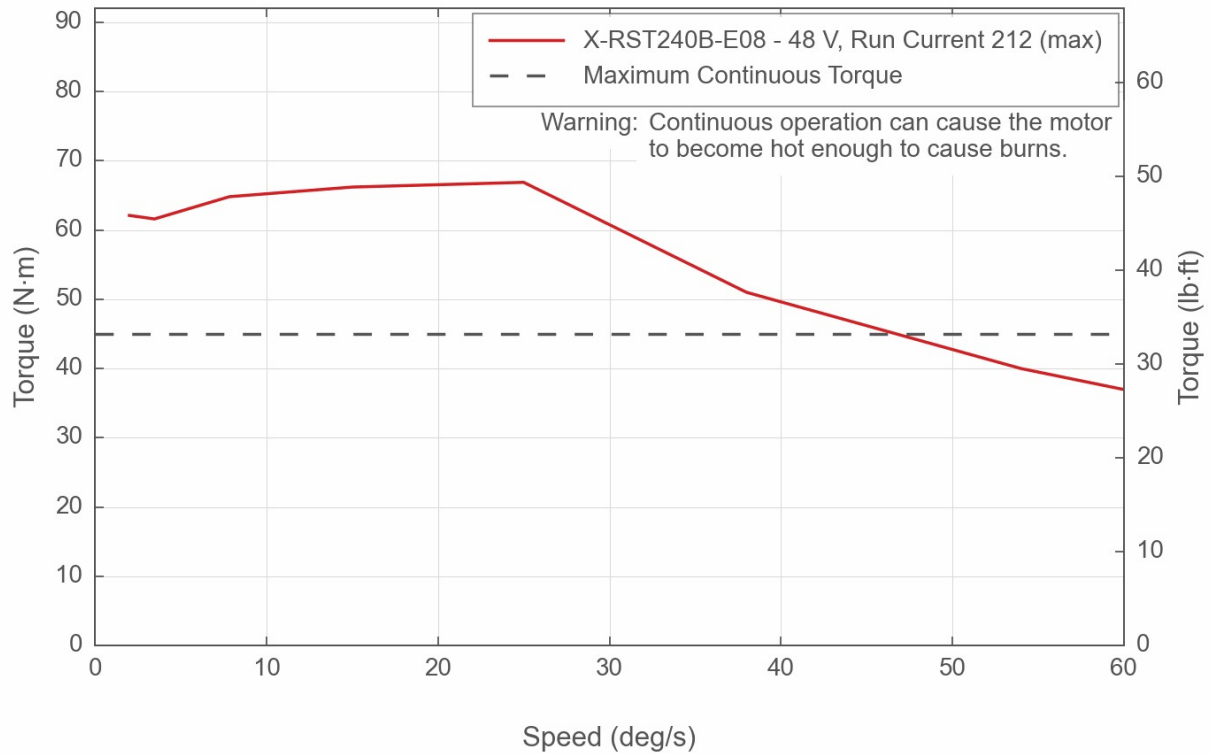
Microstep Size (Default Resolution)	0.00027574° (4.812 μrad)
Motor Type	Stepper (2 phase)
Motor Rated Current	3000 mA/phase
Motor Winding Resistance	0.53 ohms/phase
Inductance	2 mH/phase
Default Resolution	1/64 of a step
Maximum Angular Momentum	1.6 kg-m ² /s
Motor Frame Size	23
Guide Type	Crossed-Roller Bearing
Mechanical Drive System	Precision Worm Gear
Limit or Home Sensing	Magnetic home sensor
Gear Ratio	102:1
Manual Control	Yes
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)

X-RST-E Series Charts

Torque Speed Performance



Torque Speed Performance



Contact

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