

RST240B-AE56T10A Datasheet



- Speed up to 60°/s and torque up to 70 N-m
- 300 kg centered load capacity
- 101.6 mm (4") aperture
- Direct reading encoder for position correction; stage accuracy to 0.008°
- 200 Nm tilting moment capacity
- Ultra-smooth crossed roller bearings provide long life and excellent tilt, axial and radial error motion specifications

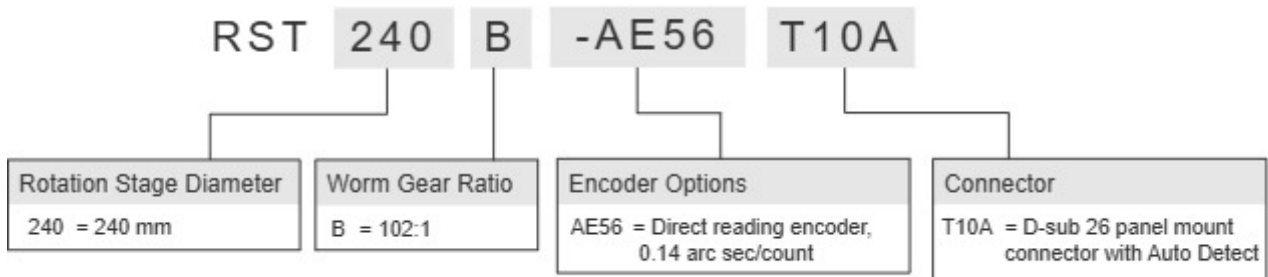
RST-AE Series Overview

Zaber's RST-AE Series products are motorized rotation stage devices with built-in direct reading encoders for high accuracy motion. Rated for a 300 kg centered load capacity and 70 N-m of torque, they are ideal for high load, high precision, angular positioning applications. They have a large diameter 101.6 mm (4") aperture for a variety of thru-bore applications.

RST-AE stages are designed for plug-and-play use with any of Zaber's controllers. Set up is easy with AutoDetect. Once connected, the X-MCC controller will automatically detect and configure the RST-AE.

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

RST-AE Series Part Numbering & Options



RST240B-AE56T10A Drawings

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

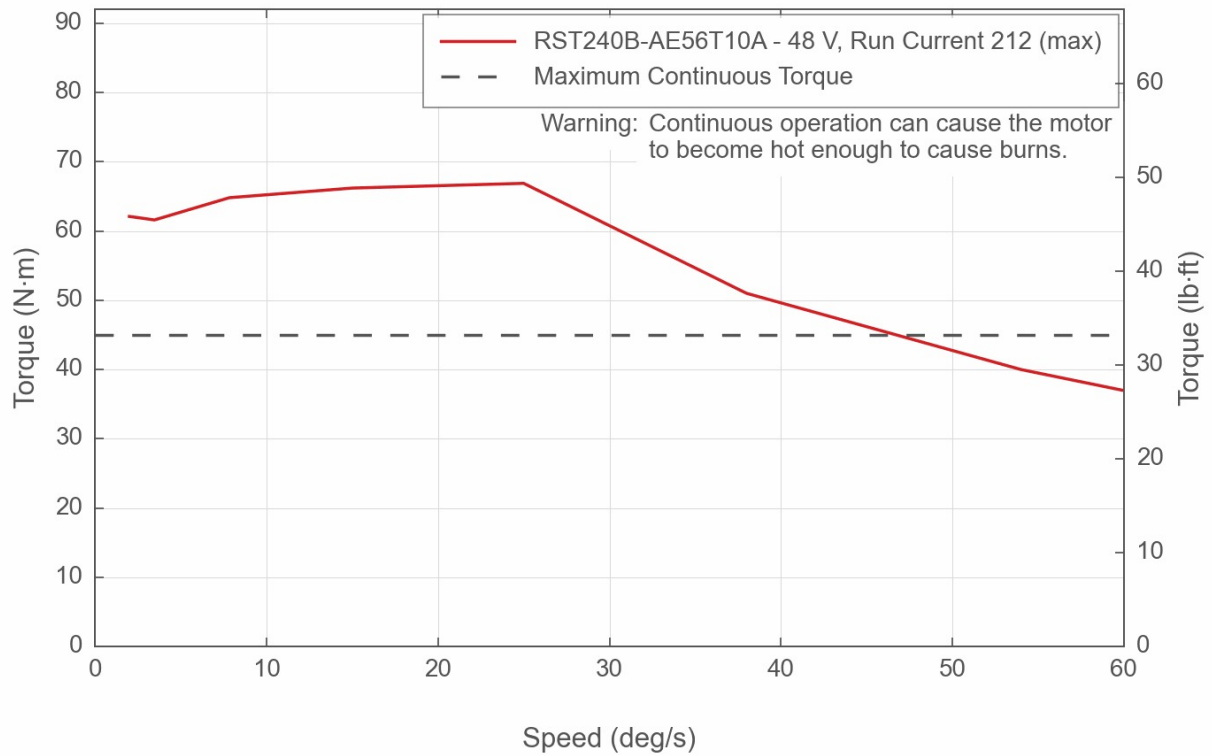
RST240B-AE56T10A Specifications

Microstep Size (Default Resolution)	0.00027574° (4.812 μrad)
Built-in Controller	No
Recommended Controller	X-MCC (48 V) Recommended
AutoDetect	Yes
Range	360°
Accuracy (unidirectional)	0.008° (0.139600 mrad)
Repeatability	< 0.0015° (< 0.026 mrad)
Backlash	< 0.005° (< 0.087 mrad)
Maximum Speed	60°/s (10 rpm)
Encoder Count Size	0.00003814°/count (0.137304 arcseconds/count)
Minimum Speed	0.000168°/s (2.932 μrad/s)
Speed Resolution	0.000168°/s (2.932 μrad/s)
Encoder Resolution	23600 CPR (94400 states/rev)
Encoder Type	Direct reading optical 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)	200 N-m (147.6 ft-lb)
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 26
Default Resolution	1/64 of a step

Microstep Size (Default Resolution)	0.00027574° (4.812 μrad)
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	Optical Index Mark
Gear Ratio	102:1
LED Indicators	No
Mounting Interface	M6 threaded holes and M8 mounting holes
Operating Temperature Range	0-50 °C
CE Compliant	Yes
Vacuum Compatible	No
Weight	15.6 kg (34.392 lb)

RST-AE Series Charts

Torque Speed Performance



Contact

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