

RSM40B-T4A Datasheet



- 50 N load capacity
- 0.02° repeatability
- 21 mm total height
- 4 mm aperture
- Worm gear driven for continuous rotation
- Designed for use with an X-MCC Series stepper motor controller or any 2-phase stepper motor controller
- With AutoDetect, the X-MCC controller configures its settings automatically for the connected peripheral

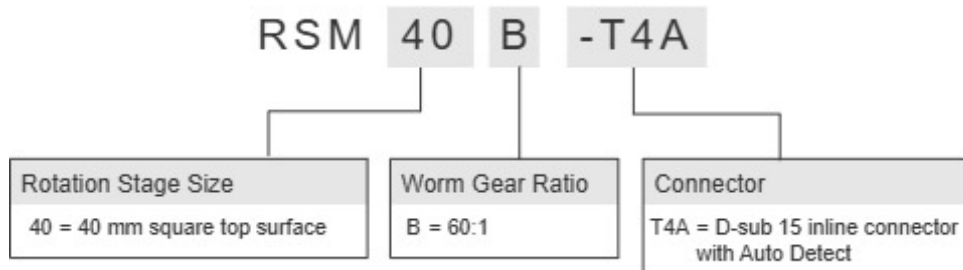
RSM Series Overview

Zaber's RSM Series rotation stages are our most compact stepper and worm gear driven devices. Self-aligning feet and mounting points make it easy to set up multi-axis tilt or gimbal systems using the GSM tilt devices or AP146 and AB147 brackets.

RSM stages are designed to interface with our X-MCC Series universal motor controllers. Set up is easy with AutoDetect. Once connected, the X-MCC controller will automatically detect and configure the RSM.

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

RSM Series Part Numbering & Options



RSM40B-T4A Drawings

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

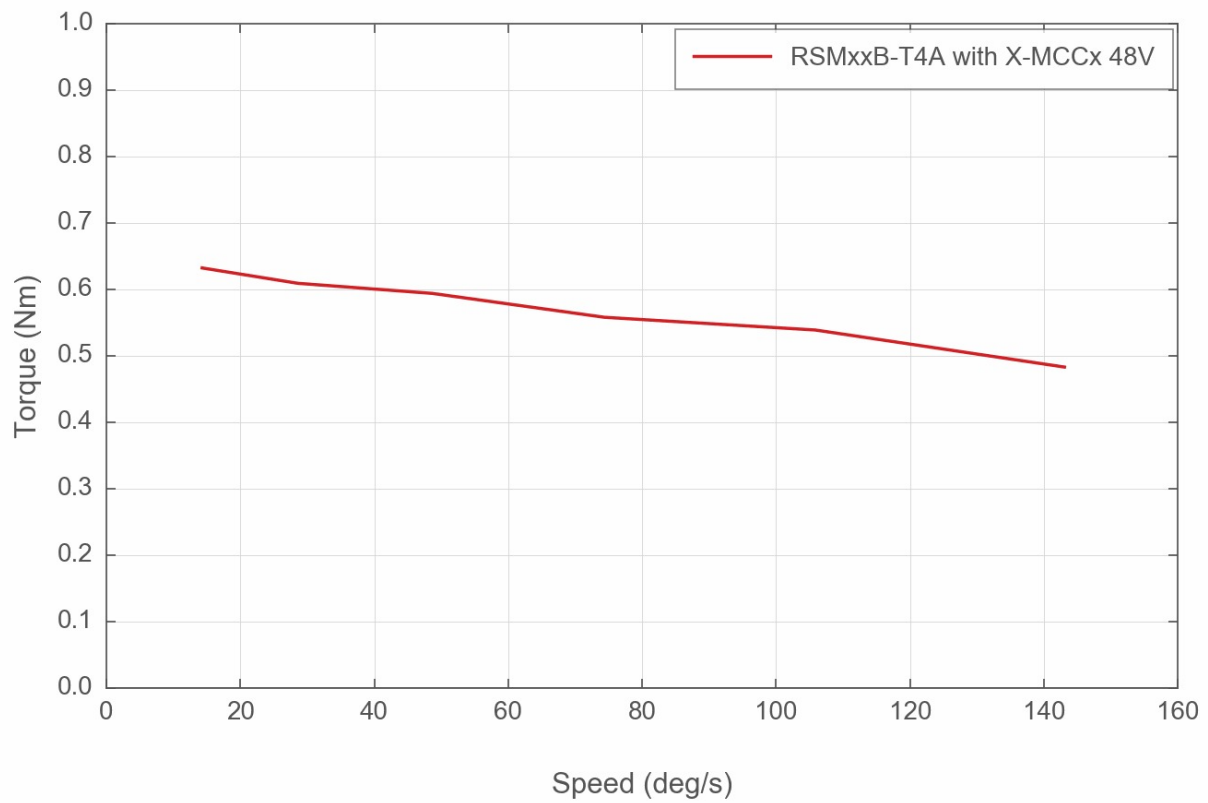
RSM40B-T4A Specifications

| | |
|--|---------------------------------|
| Microstep Size (Default Resolution) | 0.00046875° (8.181 µrad) |
| Built-in Controller | No |
| Recommended Controller | X-MCC (48 V) Recommended |
| AutoDetect | Yes |
| Range | 360° |
| Accuracy (unidirectional) | 0.14° (2.443000 mrad) |
| Repeatability | < 0.02° (< 0.349 mrad) |
| Backlash | < 0.04° (< 0.698 mrad) |
| Maximum Speed | 120°/s (20 rpm) |
| Minimum Speed | 0.000286°/s (4.992 µrad/s) |
| Speed Resolution | 0.000286°/s (4.992 µrad/s) |
| Encoder Type | No |
| Maximum Continuous Torque | 60 N-cm (85.0 oz-in) |
| Maximum Centered Load | 50 N (11.2 lb) |
| Maximum Moment (Transverse) | 100 N-cm (141.6 oz-in) |
| Stage Top Dimension | 40 mm (1.575") |
| Radial Error Motion | +/- 10 µm (+/- 0.000394") |
| Axial Error Motion | < 4 µm (< 0.000157") |
| Tilt Error Motion | +/- 0.011° (+/- 191.99 µrad) |
| Bearing Plane Offset | 11 mm (0.433") |
| Angular Motion Per Motor Rev | 6° |
| Motor Steps Per Rev | 200 |
| Motor Type | Stepper (2 phase) |
| Motor Rated Current | 600 mA/phase |
| Motor Winding Resistance | 6.5 ohms/phase |
| Inductance | 3.5 mH/phase |
| Motor Connection | D-sub 15 |
| Default Resolution | 1/64 of a step |
| Motor Frame Size | NEMA 08 |
| Mechanical Drive System | Precision Worm Gear |
| Limit or Home Sensing | Magnetic home sensor |

| | |
|--|---------------------------------|
| Microstep Size (Default Resolution) | 0.00046875° (8.181 μrad) |
| Manual Control | Yes |
| Mounting Interface | M2 and M3 mounting holes |
| Operating Temperature Range | 0-50 °C |
| CE Compliant | Yes |
| Vacuum Compatible | No |
| Weight | 0.24 kg (0.529 lb) |

RSM Series Charts

Torque Speed Performance



Contact

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