

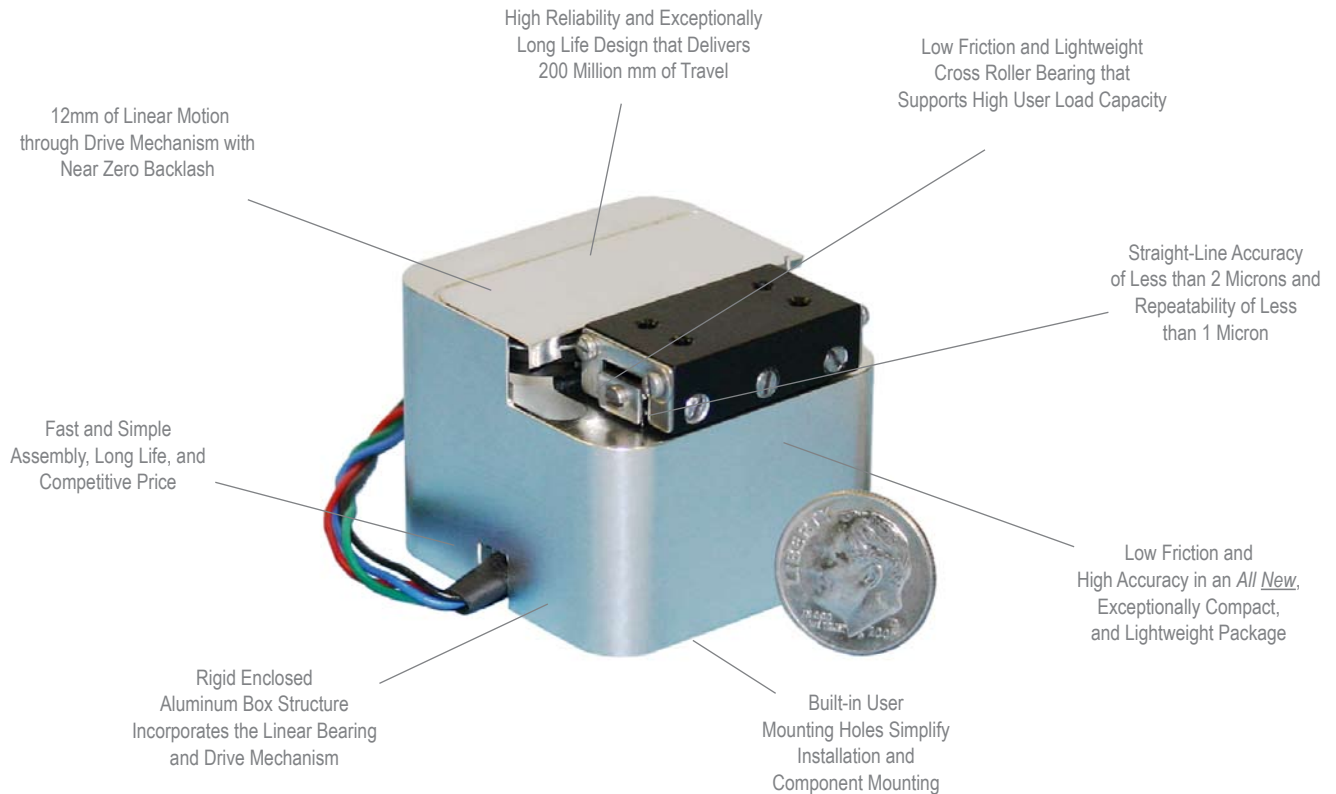


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New SMS Series of Linear Actuators

The Technology Employed Within the SMS Also Gives the Stage—Near Infinite Life

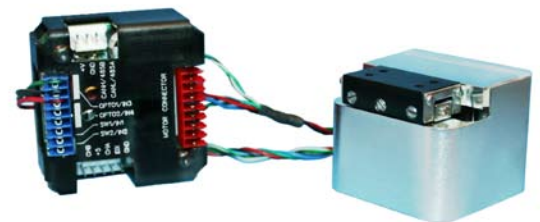
precision instrumentation + controlled motion > www.equipsolutions.com 461 East Evelyn Avenue / Sunnyvale, CA 94086 / T: 408-245-7161 / F: 428-245-7160



Equipment Solutions's *New* SMS series of linear actuators offer the benefits of an exceptionally compact design, fast and simple assembly, long life, and a competitive price. The rigid, enclosed, aluminum box structure provides a compact envelope incorporating both the linear bearing and the drive mechanism. Integrating all components into a single unit that includes the motor mount, saves assembly time and eliminates the need to source additional parts. These new, SMS linear actuators are competitively priced and will *outlast* unsupported and unenclosed, bearing-drive assemblies.

Equipment Solutions integrated design offers low friction and high accuracy in a compact, lightweight package. The new, SMS series linear actuators are presently offered in travel lengths of up to 12 millimeters—with additional models having greater motion and load capabilities planned for the near future. All feature an integrated drive mechanism that provides high acceleration and velocities with near zero backlash. Technology employed within the SMS also gives the stage—*near infinite life*. These new units offer straight-line accuracy of less than 2 microns and repeatability of less than 1 micron, and can deliver 200 million mm of travel of their full load rating. The optional SMC2 drive mechanism can be directly integrated onto the SMS actuator or mounted separately.

The SMS actuator includes a high sensitivity homing switch located at one end of its travel. This switch provides it with the ability to reliably reestablish its reference "home" position within ± 1 micron. The SMS actuator can be optionally configured with a high-accuracy, 1 micron digital quadrature encoder. The SMC2 can interpret this signal to servo the stage and report the position across its RS232 or USB interface.

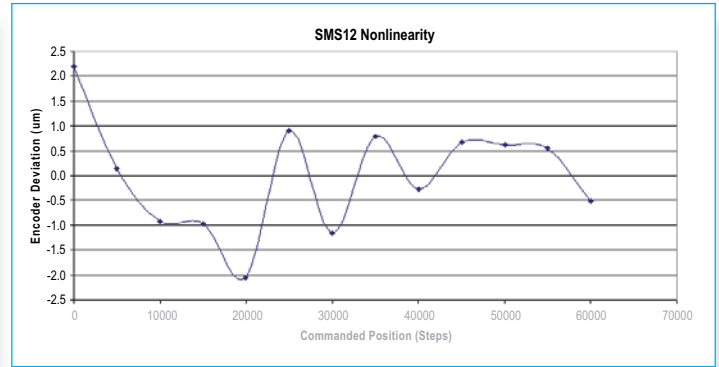
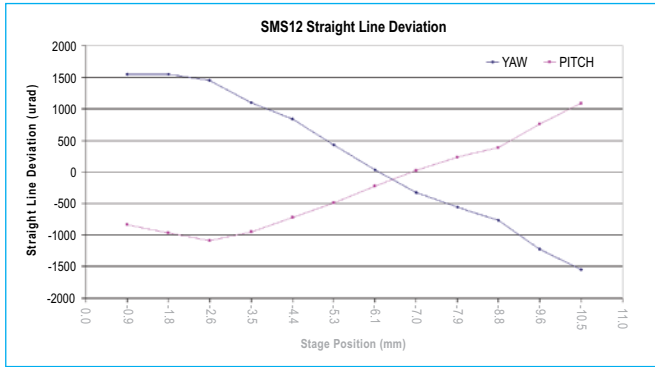


The SMC2 Stepper Motor Controller is also available as an option with the new *Equipment Solutions* SMS Linear Actuator.

New SMS Series of Linear Actuators

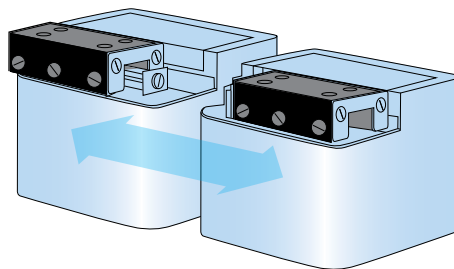
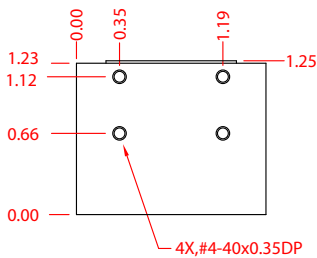
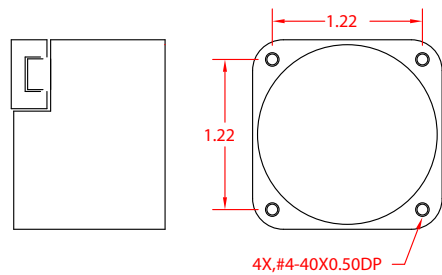
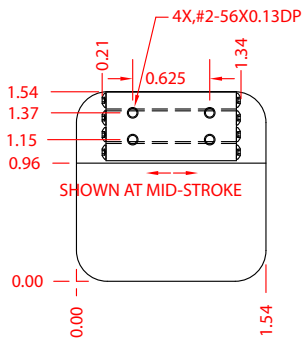
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This graph shows how much the moving element twists about the two axes perpendicular to the motion axis.

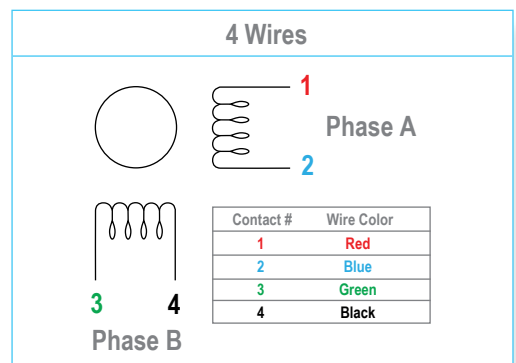


YAW should be interpreted as the twisting that the carriage is experiencing as it moves along its path. PITCH is rotation about the remaining axis — how much looks up and down as it moves along its path.

Think of the user commanding the stage to some point along a ruler of arbitrary scale. How well does the stage get to the exact position you intended for it to get to?



Translation	43µm/step
	0.67µm @ 64µstep/step
Maximum Travel	12mm
Maximum Acceleration	2G
Maximum Velocity	250mm/sec
Maximum Load Capacity	13kg
Maximum Moment Load	1.8kg
Positioning Accuracy	±2µm
Bidirectional Repeatability	±1µm
Homing Repeatability	±1µm
Motor Amps/Phase	0.3
Dimensions	39.1 x 39.1 x 31.75mm
Weight	125g



Equipment Solutions prides itself in giving OEMs and VARs precisely the tools they need to make the best systems possible—our highest priority is applications support. Our knowledgeable engineers will help you analyze your objectives to achieve the very best solutions, even before you become a customer. Undivided attention and long term relationships ensures your success—and ours. Please contact Paul Swanson or our office by phone: (408) 245-7161, fax: (408) 245-7160, mail: 461 East Evelyn Avenue / Sunnyvale, California 94086, or email: pa.swanson@equipsolutions.com

