



**SABRE
SERIES**

The Mark of Linear Motion

LSA Linear Servo Actuator



PACKAGE DEAL
PLUG-N-PLAY INSTALLATION



LM SYSTEM LM SYSTEM LM SYSTEM LM SYSTEM

LSA-2E

LSA LINEAR SERVO ACTUATOR



THK's groundbreaking LSA Linear Servo Actuator brings the world of high-performance linear motors down to earth. Our LSA goes beyond use in industries such as semiconductor and biotech, and makes linear motors a reality in non-traditional fields. The LSA is comparable in price to a precision ballscrew actuator (including a servo package), but comes without the speed limitations, lead errors and frequent maintenance down time. The LSA will take your system to the next level of performance.

- Plug-and-Play operation - out of the box to fully wired in ten minutes.
- Incorporates THK's revolutionary Type SSR Caged Ball technology.
- Twelve standard base lengths: 466mm to 2446mm.
- Three standard coil sizes: peak forces up to 1080N.
- Pre-configured, plug-and-play digital amplifier included.
- Velocity up to 4 meters per second.
- High acceleration capability.
- Incorporates an integrated heat sink to minimize thermal effects of coil heating on the LSA carriage surface.
- Configurable for multiple, independent carriages on a common axis.
- 0.5µm encoder resolution standard; 0.3µm resolution capable.
- Part of the "Sabre" family of actuators, which includes a ballscrew-driven actuator, a belt-driven actuator, a low-cost leadscrew actuator, and a linear motor. All these actuators have exactly the same cross-sectional dimensions.
- "Open-Architecture" version available for non-standard amplifiers.
- Non-contact drive system + Type SSR LM guides equal cleaner operation and extremely low maintenance.
- Pre-wired cable track assembly and all connecting cables included.
- Convenient T-slot mounting cleats included, 3 mounting configurations available.
- Designed and built in the USA.
- Standard multi-axis mounting brackets now available.

Product Code Specification "Quick Reference" (Actual part number to be specified by THK upon comprehensive application review.)												
DESIGNATION	COIL TYPE	BASE LENGTH	STANDARD OPTION CODES									
ME - LSA -	036A +	1366	L -	1	0	0	0	0	0	0	0	0
"SHORT"	036 A or B	0466	036 only!	Number of Carriages: (1 minimum, only same size carriage allowed, cable track assembly included for up to two carriages)								
"MEDIUM"	072 A or B	0646	036/072 only!	Carriage Size: "0" for short (4-LM guides), "1" for medium (8-LM guides), "2" for long (10-LM guides) - (see notes)								
"LONG"	108 B	0826		Carriage Type: "0" standard, "1" with 2 x 3/8" + 0.0002" oversized fixturing pins								
		1006		LM Guide Type: "0" SSR15W (standard), "1" Stainless SSR15W, "2" SR15W (see notes)								
		1186		Grease: "0" AFB (standard), "1" AFA, "2" AFC, "3" AFE, "4" AFF, "5" Customer provided								
		1366		Armor Plate: "0" standard, "1" Armor Plate (see notes)								
		1546		Amplifier Type: "0" standard, "1" Open-Architecture type, "2" Economy (with amp)								
		1726										
		1906										
		2086										
		2266										
		2446										

- Notes
- Due to base length VS. carriage length limitations, LSA-072X units are not available in "+466L" length. LSA-108B units are not available in "+466L" and "+646L" lengths.
 - Standard cable track assemblies (included in LSA price) are available for single and dual carriage LSA's only. - Cable track assemblies may also be ordered separately based on carriage/base length.
 - Standard 220VAC digital amplifier (-036X single phase, all others 3-phase) accepts standard +/-10VDC analog force command controller input and provides 0.5µm encoder resolution.
 - NPN/PNP photo or proximity sensor kits are available for the LSA and may be purchased separately. Includes 2-N/C & 1-N/O sensor, target, & fasteners. Contact a THK Engineer for more info.
 - Standard 5m length extension cables for signal feedback and power supply are included with the price of the LSA. Additional cables or non-standard lengths may be purchased separately.
 - Serial converter modules (SCM's) corresponding to coil size are included in the price of the LSA unit with the "standard" amplifier option. Additional SCM units may be purchased separately.
 - **036X COILS** can be used with ALL carriage options, **072X COILS** can be used only with carriage options 1 and 2, **108B COILS** can only be used with carriage option 2.
 - AFB grease standard for SSR15W type LM guides. All other THK-manufactured grease for SSR15W will be custom ordered from THK Japan. Custom grease can ONLY be used with SR15 guides.
 - "Open Architecture"- type LSA units incorporate 0.5µm resolution digital encoder & cable track with "flying leads" output; THK does not guarantee the performance of the LSA with an amplifier other than the "Standard" option.
 - Armor plate option available ONLY with SR15W or stainless steel SSR15W LM guides. Includes vented, stainless steel fasteners and stainless steel balls.

THK LSA Linear Servo Actuator

Products from our Sabre Series include:

- LSA (Linear Motor Driven)
- LBA (Ballscrew Driven)
- LLA (Low-Cost Leadscrew Driven)
- LTA (Belt Driven)



Specifications are subject to change without notice.

THK T H K CO., LTD.

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