

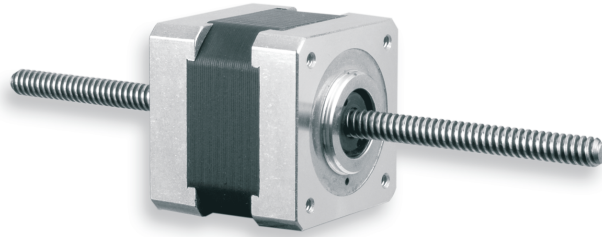
SIZE

L1

1.65"
SQ

DuraPlus Linear Actuator

High Torque



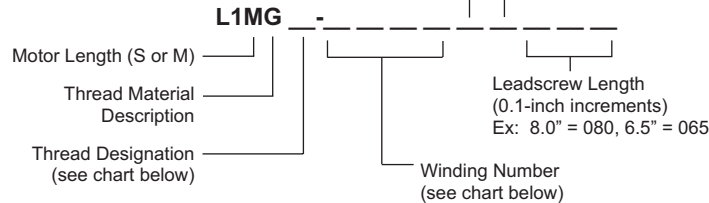
EADmotors high torque Size 17 stepping motors and our new *DuraPlus* system have been combined in our L1 series actuator. The L1 frame *DuraPlus* actuator is a precision engineered device based on a high performance 1.8° stepping motor with an integrated rotating nut. The nut is fabricated from a wide range of optional engineered polymers or SAE 660 bearing bronze to suit the application requirement. The standard polymer used for the catalog offering is Delrin AF. For details, visit www.eadmotors.com.

The actuating screw is made of precision rolled stainless steel designed to minimize tolerances in positioning applications. When combined with the polymer nut, the *DuraPlus* system provides longer life and smoother, quieter operation than conventional designs.

Leadscrew lubrication is not required for polymer nuts; however, it is recommended for maximum life. Consult the factory for assistance with choice of lubricants.

Note: Anti-backlash nuts, custom leadscrews, and anti-rotation options are available.

Part Number Description



Encoder Option	
B	100 CPR
C	200 CPR
E	400 CPR
F	500 CPR
X	No Encoder

* Consult factory for encoder details.

Standard Leadscrew End Features	
A	#8-32 UNC-2A
B	#10-32 UNF-2A
C	M4 x 0.7
D	M5 x 0.8
E	∅ .187/.186 (3/16)
F	∅ .196/.195 (5mm)
G	∅ .157/.156 (4mm)
X	None

Electrical Ratings

Model Number	Number of Leads	Unipolar/Bipolar	Phase Voltage (VDC)	Phase Current (amps)	Phase Resistance (ohms)	Phase Inductance (mH)	Model Number	Number of Leads	Unipolar/Bipolar	Phase Voltage (VDC)	Phase Current (amps)	Phase Resistance (ohms)	Phase Inductance (mH)
L1SG_-H10	6	U	4.0	0.95	4.2	2.5	L1MG_-H10	6	U	4.0	1.2	3.3	3.2
L1SG_-H11	6	U	6.0	0.62	9.6	5.8	L1MG_-H11	6	U	6.0	0.8	7.5	7.0
L1SG_-H12	6	U	12.0	0.31	38.5	23	L1MG_-H12	6	U	12.0	0.4	30	28
L1SG_-H13	6	U	9.6	0.40	24	15	L1MG_-H13	6	U	24.0	0.2	120	112
L1SG_-M100	4	B	3.8	1.00	3.8	4.8	L1MG_-M100	4	B	4.7	1.0	4.7	9.1
L1SG_-M150	4	B	2.8	1.50	1.9	2.3	L1MG_-M150	4	B	3.6	1.5	2.4	4.7
L1SG_-M200	4	B	1.9	2.00	0.95	1.2	L1MG_-M200	4	B	2.4	2.0	1.2	2.3

6-wire/Unipolar available as 4-wire/Bipolar (e.g., "-H10" is then "-M10"). See page 6 (LH1713=L1S; LH1715=L1M).
NOTE: 6 lead motors-Unipolar data shown.

Leadscrew Specifications

Letter Designation	Thread Description*	Thread Lead (inches)	Linear Travel per 1.8° Step (inches)	Approximate Linear Holding Force (pounds)**			
				L1S Unipolar	L1S Biipolar	L1M Unipolar	L1M Bipolar
J	1/4-40UN(1)	0.025	0.000125	29	48	43	70
V	1/4-32ACME(1)	0.03125	0.00015625	27	45	41	67
E	1/4-20ACME(1)	0.050	0.000250	26	43	38	63
A	1/4-16ACME(1)	0.0625	0.0003125	26	43	38	63
B	1/4-16ACME(2)	0.125	0.000625	21	35	32	52
F	1/4-20ACME(4)	0.200	0.001000	17	29	25	42
C	1/4-16ACME(4)	0.250	0.001250	14	24	20	34

* Number of starts to the leadscrew: (1) = 1 start, (2) = 2 starts, etc.
** Recommended maximum linear force = 50 lb. (bearing performance limitation).

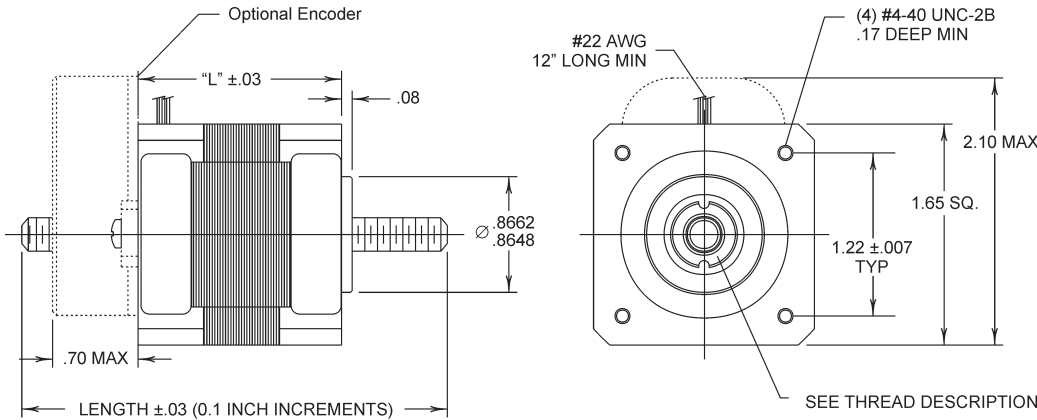
Solutions in motion



DuraPlus Linear Actuator

High Torque

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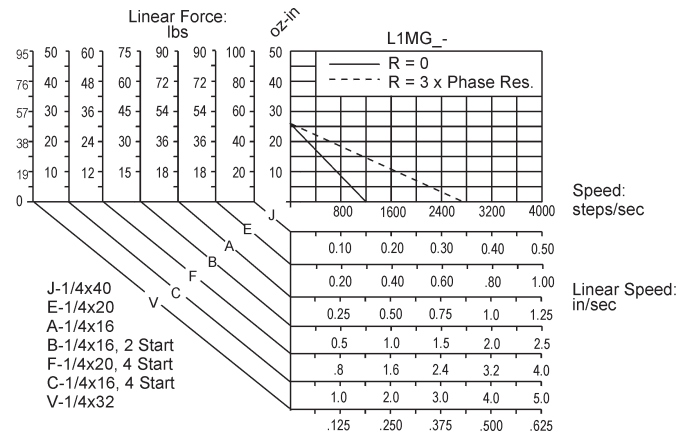
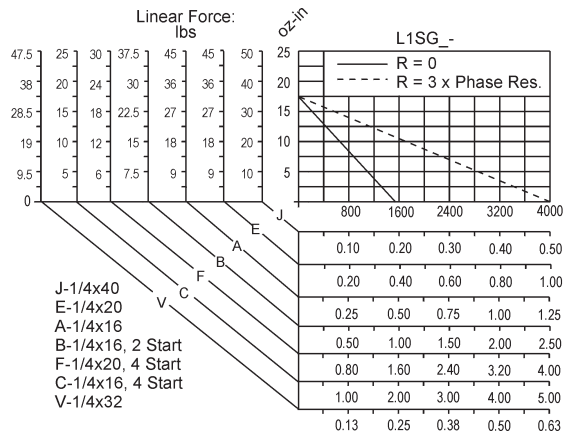


Size L1

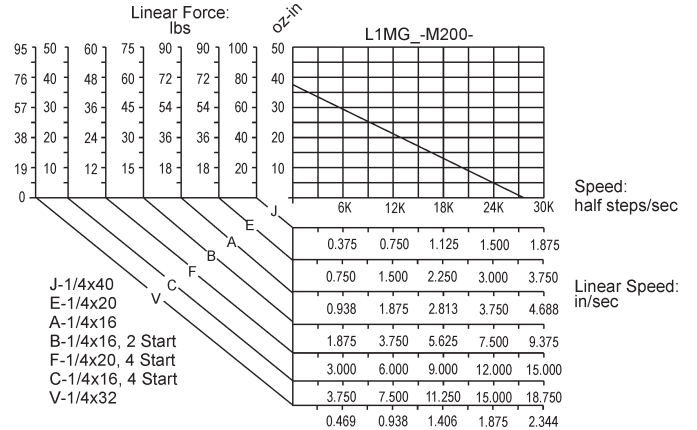
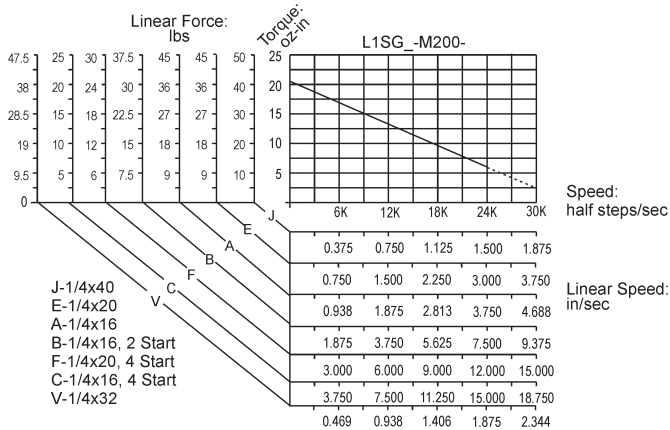
Model Series	L1S	L1M
Dimension "L" (inches)	1.28	1.52
Holding Torque (oz.in)	22	28
Rotor Inertia (oz-in-sec ²)	0.00053	0.00081
Weight (oz)	7	9

See page 38 for Connection Diagrams.

Typical Unipolar Performance (6 Lead Motor): Constant Voltage Drive (L/R), 2 Phase On



Typical Bipolar Performance: 40 VDC Power Supply, 2 Amps/Phase



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