

# Stepper Motor Quick Reference Chart

Permanent Magnet Stepper Motor							
SERIES	Holding Torque (Min.) (mN•m/oz-in)	Step Angle (Degrees)	Steps/Rev	DC Operating Voltage	Resistance/Windings $\Omega$ Unipolar		Page for full Specs
					5 Vdc	12 Vdc	
15M020D	3.33/.55	18	20	5	40	–	17
26M048B	7.0/0.99	7.5	48	5 or 12	20	110	18
26M024B	5.5/0.78	15	24	5 or 12	20	110	19
35M048B	17.4/2.6	7.5	48	5 or 12	12.5	72	20
35M024B	16.2/.2.3	15	24	5 or 12	12.5	72	20
35M020B	13.4/1.9	18	20	5 or 12	12.5	72	20
35L048B	25.0/3.5	7.5	24	5 or 12	11.0	64	21
35L024B	21.1/3.0	15	24	5 or 12	11.0	64	21
35L020B	17.7/2.5	18	20	5 or 12	11.0	64	21
42M048C	73.4/10.4	7.5	48	5 or 12	9.1	52.4	22
42M100B	33/4.8	3.6	100	5 or 12	12.5	75	23
57L048B	113/16.0	7.5	48	5 or 12	6.3	36	24
57M024B	55/7.8	15	24	5 or 12	6.3	36	24
57M048B	74/10.5	7.5	48	5 or 12	6.3	36	24
60L048B	198/28	7.5	48	5 or 12	4.6	26.0	25
60L024B	141/20	15	24	5 or 12	4.6	26.0	25
4SQ	65/9.2	1.8	200	12	–	74.0	26
4SHG (46mm)	388/55	1.8	200	6 to 12	7 $\Omega$ @ 6 Vdc	104 $\Omega$ @ 24 Vdc	27
4SHG (56mm)	600/85	1.8	200	6 to 12	4.7 $\Omega$ @ 6 Vdc	79 $\Omega$ @ 24 Vdc	27
Permanent Magnet Stepper Motor with Gear Trains							
SERIES	Gear Train Rating (Running) (Static) (mN•m/oz-in)		Shape of Gear Box	DC Operating Voltage	Resistance/Windings $\Omega$ Unipolar		Page for full Specs
					5 Vdc	12Vdc	
26M048B-V	70.6/10	141.2/20	Football	5 or 12	20.0	110.0	28
35M048B-X	35.3/5	141.2/20	Pear	5 or 12	12.5	72.0	29
42M048C-R	706/100	1.06 N•m/150	Round	5 or 12	9.1	52.4	30
42M048C-Z	1.4 N•m/200	2.12 N•m/300	Pear	5 or 12	9.1	52.4	31
Digital Linear Actuator							
SERIES	Linear Travel Per Step mm/in	Maximum Force	Min. Holding Force (Unenergized)	DC Operating Voltage	Resistance/Windings $\Omega$ Unipolar		Page for full Specs
					5 Vdc	12Vdc	
K & L 92100	.25/.001 .05/.002 .10/.004	12.5 N/45 oz	16.68 N/60 oz @ .025 mm/.001"	5 or 12	15.0	84.0	34-35
K & L 92200	.25/.001 .05/.002 .76/.003	20.9 N/75 oz	11.1 N/40 oz @ .025 mm/.001"	5 or 12	10.0	58.0	36-37
L92400	.025/.001 .05/.002	88 N/20 lb	88 N/20 lb @ .025 mm/.001"	5 or 12	4.3	25.0	38-39

The L/R torque/speed curves are intended as guides for motor selection and are considered to be typical. Improved performance can be achieved through the use of various drive methods (several approaches are described on pages 8 and 9 of this engineering guide) or by using high-energy magnet materials. For more specific recommendations to cover your application — contact one of our experienced sales engineers.

Note: Inductance is measured using an LRC bridge with  $L_S$  scale and internal 1 KC oscillator..

All above data as well as data shown on proceeding pages are specified at room temperature, with operating voltage at the motor leads.

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