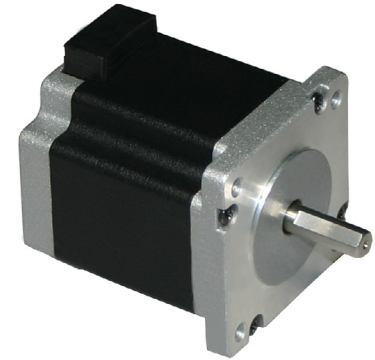


# 24Y Series - High Torque Stepper Motors



FEATURES

- **NEMA 24 Frame Size (Same Mounting and Shaft Dimensions as NEMA 23 Size, but 30%-50% More Torque than NEMA 23 Motors)**
- **1.8° Step Angle**
- **IP50 Rated**
- **Higher Torque than Other Motor Manufacturers**
- **Up to 475 oz-in of Peak Torque**
- **Shaft Flat as Standard**
- **Can be Customized for**
  - **Winding Current**
  - **Shaft Options**
  - **Cables and Connectors**



DESCRIPTION

If you need more torque from a NEMA 23 motor but can't move to a NEMA 34, then the 24Y Series is your answer! They are bulkier than the standard 23 Frame motors, but have the same mounting and shaft dimensions as well as higher torque. A broad line of motor windings and stack lengths are available off-the-shelf, or the motors can be customized to fit your machine requirements. The standard 8-lead motor can be connected in all possible configurations: series, unipolar, or parallel, to allow the maximum flexibility for your application. We can also customize the winding to perfectly match your voltage, current, and maximum torque at operating speeds.

See [Accessories](#) on our website for optional motor adders such as encoders, brakes, cables, and connectors. For compatible drivers, see the [MBC25081TB](#), [MBC05641](#), [MBC12101](#), and [Driver Packs](#).

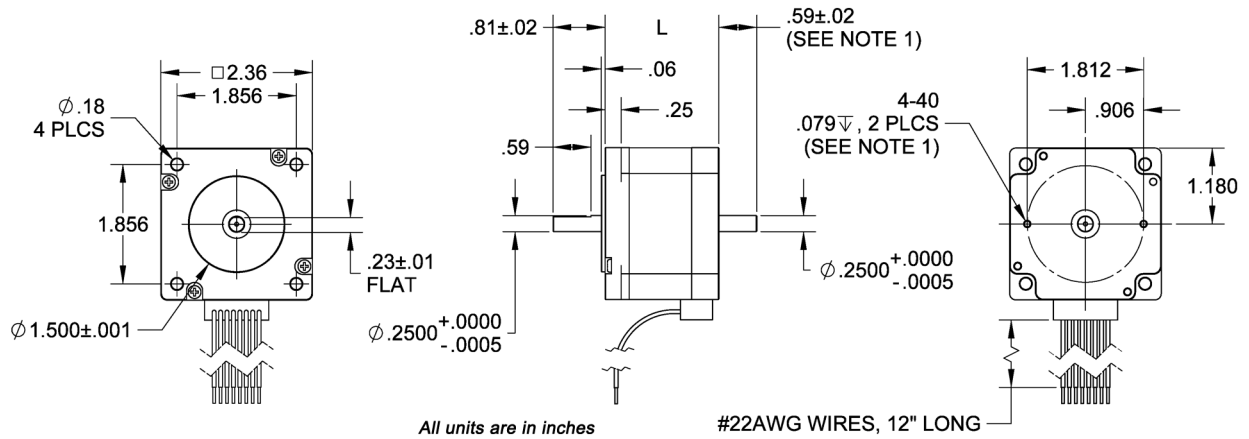
SPECIFICATIONS

Model #	NEMA Size	Bipolar Torque (oz-in)	Series RMS Current (A)	Series Voltage (V)	Series Resistance (ohm)	Series Inductance (mH)	Rotor Inertia (oz-in-sec <sup>2</sup> )	Shaft Diameter (in)	# of Lead Wires	Weight (lbs)	"L" Length (in)
24Y104S-LW8	24	153	1.4	4.2	3.0	8.0	0.0039	0.25	8	1.32	1.85
24Y204S-LW8	24	229	1.4	5.04	3.6	14.4	0.0057	0.25	8	1.70	2.20
24Y304S-LW8	24	292	1.4	6.72	4.8	18.4	0.0081	0.25	8	2.5	2.64
24Y308S-LW8	24	292	2.8	4.48	1.6	6.8	0.0081	0.25	8	2.65	2.64
24Y404S-LW8	24	380	1.4	6.16	4.4	20.0	0.0012	0.25	8	2.65	3.03
24Y504S-LW8	24	431	1.4	8.4	6.0	27.2	0.0119	0.25	8	3.09	3.46
24Y506S-LW8	24	431	2.1	5.46	2.6	12.8	0.0119	0.25	8	3.09	3.46
24Y508S-LW8	24	431	2.8	3.92	1.4	7.2	0.0119	0.25	8	3.09	3.46

Note: The 7<sup>th</sup> character "S" denotes a single shaft. Custom leadwires, cables, connectors and windings are available upon request.

Step Angle Accuracy:	± 5% (Full Step, No Load)	Insulation Resistance:	100M Ohm Min, 500VDC
Resistance Accuracy:	± 10%	Dielectric Strength:	500VDC for 1 minute
Inductance Accuracy:	± 20%	Shaft Radial Play:	0.02" Max (1.0 lbs)
Temperature Rise:	80°C Max (2 Phases On)	End Play:	0.08" Max (1.0 lbs)
Ambient Temperature:	-20° to +50° C	Max Radial Force:	16.9 lbs (0.79" from flange)
Insulation Type:	Class B (130°C Internal)	Max Axial Force:	3.4 lbs-Force

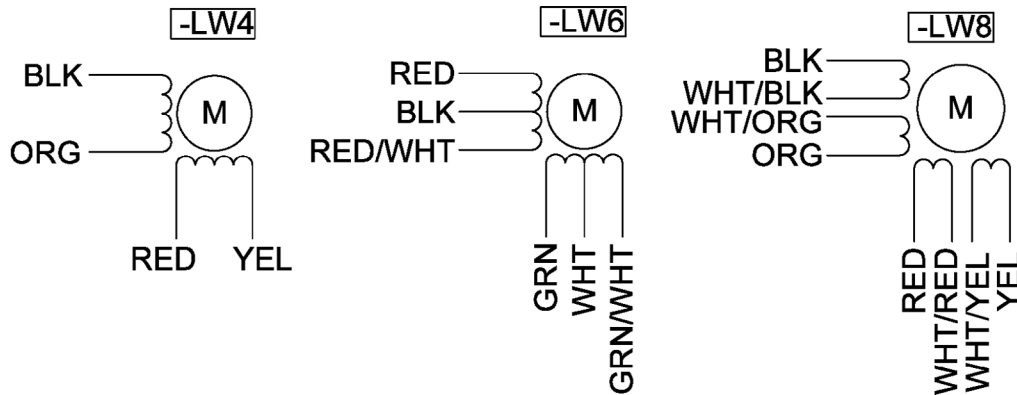
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Note 1: Applies to dual shaft option only

SPECIFICATION CONVERSION TABLE

Connection	Current (A)	Resistance (R)	Inductance (L)
Series Standard	A	R	L
Parallel	2A	R / 4	L / 4
Unipolar	1.414A	R / 2	L / 4



Connection	Lead Wire Connection	Lead Wire Color
4 - Lead Bipolar Series MBC or MLP Series	Phase 1 (A)	Black
	Phase 3 (/A)	Orange
	Phase 2 (B)	Red
	Phase 4 (/B)	Yellow
	Connect Wires with Wire Nut	White/Black & White/Orange
4 - Lead Bipolar Parallel MBC or MLP Series	Phase 1 (A)	Black & White/Orange
	Phase 3 (/A)	Orange & White/Black
	Phase 2 (B)	Red & White/Yellow
	Phase 4 (/B)	Yellow & White/Red
	Connect Wires with Wire Nut	White/Red & White/Yellow
6 - Lead Unipolar BLD, TM Series	Phase 1	Black
	Phase 3	Orange
	Phase 2	Red
	Phase 4	Yellow
	Common Phase 1 & 3	White/Black & White/Orange
Common Phase 2 & 4	White/Red & White/Yellow	