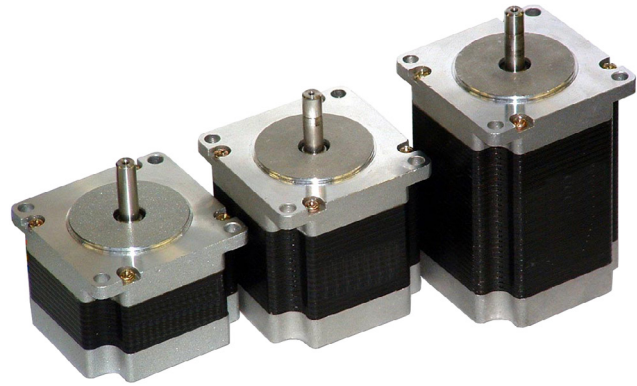


# 23Y9 Series - High Torque 0.9° Stepper Motor



## FEATURES

- **NEMA 23 Frame Size**
- **0.9° Step Angle**
- **IP50 Rated**
- **High Torque - Up to 270 oz-in**
- **High Step Accuracy and Resolution**
- **Shaft Flat as Standard**
- **Can be Customized for**
  - **Winding Current**
  - **Shaft Options**
  - **Cables and Connectors**
- **CE Certified and RoHS Compliant**



## DESCRIPTION

The 23Y9 Series High Torque Stepper Motors offer a great value without sacrificing quality. These motors have a 0.9° step angle making them higher precision than the typical 1.8° version. However, like the standard versions, these motors were designed to offer the highest possible torque while minimizing vibration and audible noise. A broad line of motor windings and stack lengths are available. The standard 8-lead motors 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 voltage, current, and maximum operating speed to meet your requirements.

See [Accessories](#) on this website for optional motor adders such as encoders, brakes, cables and connectors. For gearbox options, see [Gearboxes](#). For compatible drivers for the 23Y9 Series, see the [MBC050641](#), [MBC12101](#) or [Driver Packs](#).

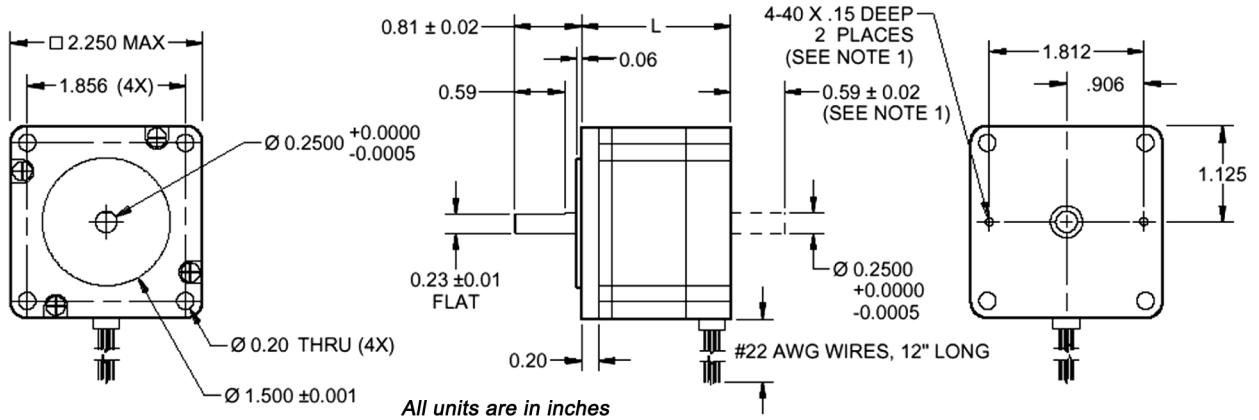
## SPECIFICATIONS

Model #	Shaft Type	NEMA Size	Bipolar Torque (oz-in)	Series Current (A)	Bipolar 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)
23Y9006S-LW4	Single	23	76	2.2	2.5	1.15	3.6	0.0017	0.25	4	0.81	1.6
23Y9106S-LW8	Single	23	178	2.12	2.3	1.5	7.6	0.00425	0.25	8	1.54	2.2
23Y9106D-LW8	Double	23	178	2.12	2.3	1.5	7.6	0.00425	0.25	8	1.54	2.2
23Y9206S-LW8	Single	23	262	2.12	3.0	2.0	3.3	0.00680	0.25	8	2.20	3.0
23Y9206D-LW8	Double	23	262	2.12	3.0	2.0	3.3	0.00680	0.25	8	2.20	3.0

Notes: The 8th character "S" denotes single shaft. Use "D" for dual shaft. Custom leadwires, cables, connectors, and windings are available upon request.

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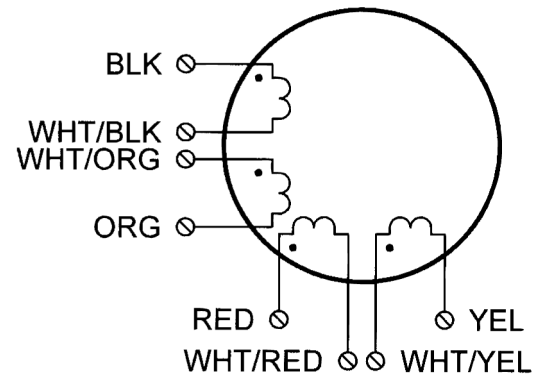
FEATURES



WIRING INFORMATION

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 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 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



SPECIFICATIONS

Step Angle Accuracy:	±5% (Full Step, No Load)	Insulation Resistance:	100M Ohm Min, 500 VDC
Resistance Accuracy:	±10%	Dielectric Strength:	500VDC for one minute
Inductance Accuracy:	±20%	Radial Play:	0.02" at 1.0 lb
Temperature Rise:	80°C Max (2 Phases On)	End Play:	0.08" at 1.0 lb
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