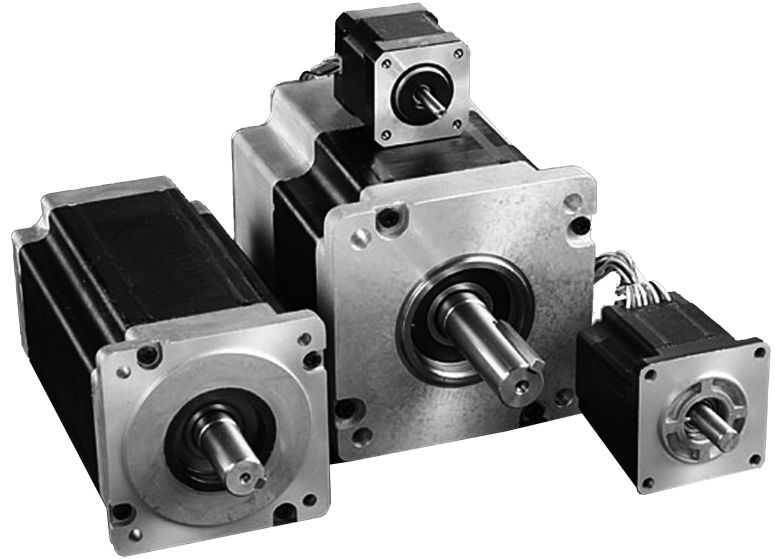


High Torque Step Motors - NEMA 34 and 42

4 Phase Hybrid, 1.8° ±1.5% - 3.0% Step Angle

- NEMA Frame Sizes 34 and 42
- Substantial Increase In Torque Over Standard Motors
- Holding Torque Ratings Up to 5700 oz.in.
- High Acceleration and Increased Rotor Inertia
- 1 to 4 Stack Lengths
- 1.8° Natural Step Angle
- Microstep Increments as Small as 0.0072°
- 1.5% Typical Step Accuracy on 34K and 42K Series
- 3% Typical Step Accuracy on 34N and 42N Series
- Rugged Construction
- Higher Temperature Characteristics



Anaheim Automation's High Torque Step Motors use advanced magnetic technologies to provide significantly higher torque levels than what is available in standard step motors. These motors are available in NEMA 34 and 42 frame sizes with a variety of windings to meet any application specific requirement. The torque levels reached with this step motor line make them cost effective alternatives to servo motors in many applications. These motors can be specified in place of standard motors to reduce system size and cost, or increase system performance, without the need to go to larger sized motors or drivers.

FEATURES

- Improved torque linearity (above rated current) providing high peak torque capability (duty cycle dependent)
- Low detent torque harmonic
- K Series develops 25% more torque than N Series
- Runs cooler than standard step motors with equal drive parameters
- Rugged "housingless" design
- Long life bearings withstand high radial and axial loads
- Four phase design with eight lead configuration
- Larger diameter shafts

BENEFITS

- Acceleration boost to move loads faster while providing more torque for intermittent duty applications
- Provides smoother microstepping performance
- Select from a broad performance range to meet your exact motion requirements
- Longer, more reliable motor life
- Efficient use of volume for magnetic optimization
- Prevents axial shaft movements for encoder applications
- Compatible with most drivers, smoother microstepping and lower input power required versus three phase motors with identical torque ratings
- Higher radial and axial load characteristics



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NEMA 34 Frame High Torque Step Motors

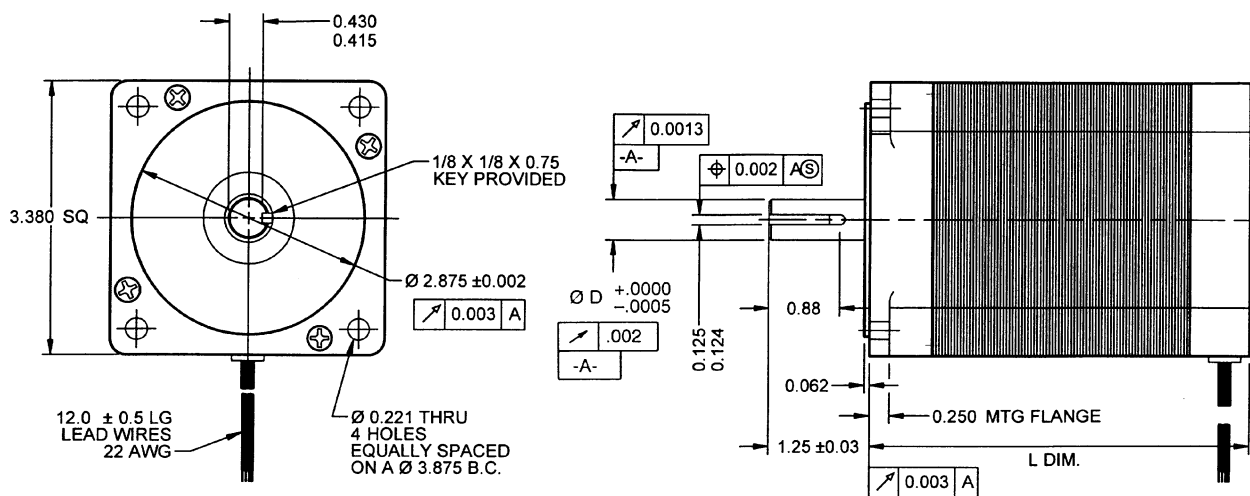
4 Phase Hybrid, 1.8°, Step Accuracy: $\pm 1.5\%$ - K Series
 $\pm 3.0\%$ - N Series

Torques to 2200 oz.in. - Unipolar, 2800 oz.in. - Bipolar

Model Number	Holding Torque 2 phases on (oz.in.)		Voltage per Phase (V/phase) Unipolar	Current per Phase (A/phase) Bipolar Series		Resistance per Phase (ohms/phase) Unipolar	Inductance per Phase (mH/phase) Unipolar	Nominal Rotor Inertia (oz.-in.-sec ²)	Shaft Diameter (in.)	Maximum Motor Length (in.)
	Unipolar	Bipolar		Unipolar	Series					
34K104_-LW8	570	805	6.2	2.0	1.4	3.10	10.2	.02	.500	3.13
34K108_-LW8	580	820	3.3	3.9	2.7	0.84	2.8			
34K112_-LW8	590	830	2.2	6.1	4.3	0.36	1.20			
34N104_-LW8	450	635	6.2	2.0	1.4	3.10	12.5			
34N108_-LW8	455	645	3.3	3.9	2.7	0.84	3.5			
34N112_-LW8	460	650	2.2	6.1	4.3	0.36	1.4			
34K207_-LW8	1065	1510	4.6	3.5	2.5	1.30	5.1	.038		4.65
34K214_-LW8	1085	1535	2.5	7.1	5.0	0.35	1.40			
34N207_-LW8	845	1195	4.6	3.5	2.5	1.30	6.50			
34N214_-LW8	860	1195	2.5	7.1	5.0	0.35	1.80	.057	.625	6.17
34K307_-LW8	1515	2145	5.8	3.5	2.5	1.65	7.00			
34K314_-LW8	1520	2150	3.1	7.0	5.0	0.44	1.70			
34N307_-LW8	1210	1710	5.8	3.5	2.5	1.65	9.00	.075	.625	7.68
34N314_-LW8	1215	1715	3.1	7.0	5.0	0.44	2.30			
34K412_-LW8	1975	2790	4.1	6.2	4.4	0.66	3.60			
34K416_-LW8	1930	2725	3.3	8.0	5.6	0.41	2.00			
34N412_-LW8	1545	2180	4.1	6.2	4.4	0.66	4.70			
34N416_-LW8	1510	2140	3.3	8.0	5.6	0.41	2.60			

Note: LW8 = Lead Wire

For seventh digit, choose S or D: S = Single Shaft, D = Double Shaft



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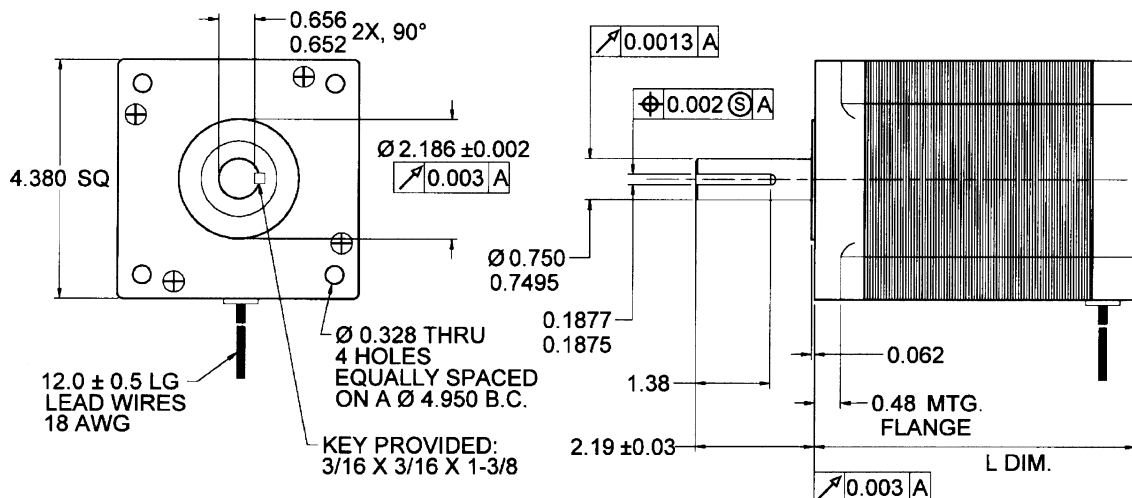
NEMA 42 Frame High Torque Step Motors

4 Phase Hybrid, 1.8°, Step Accuracy: $\pm 1.5\%$ - K Series
 $\pm 3.0\%$ - N Series

Torques to 4030 oz.in. - Unipolar, 5700 oz.in. - Bipolar

Model Number	Holding Torque 2 phases on (oz.in.)		Voltage per Phase (V/phase)		Current per Phase (A/phase)		Resistance per Phase (ohms/phase)		Inductance per Phase (mH/phase)		Nominal Rotor Inertia (oz-in-sec ²)	Shaft Diameter (in.)	Maximum Motor Length (in.)
	Unipolar	Bipolar	Unipolar	Bipolar	Unipolar	Bipolar	Unipolar	Bipolar	Unipolar	Bipolar			
42K112_-CB	1480	2090	2.9	6.2	4.4	0.47	3.10	.0783	.750	3.9			
42K115_-CB	1510	2135	2.3	7.5	5.3	0.31	2.20						
42N112_-CB	1150	1625	2.9	6.2	4.4	0.47	3.90						
42N115_-CB	1170	1655	2.3	7.5	5.3	0.31	2.80						
42K209_-CB	2805	3965	5.4	4.5	3.2	1.20	9.80	.1546	.750	5.9			
42K214_-CB	2845	4025	3.6	7.0	4.9	0.51	4.20						
42K222_-CB	2830	4000	2.3	11.2	7.9	0.21	1.60						
42N209_-CB	2200	3105	5.4	4.5	3.2	1.20	12.8						
42N214_-CB	2225	3145	3.6	7.0	4.9	0.51	5.50						
42N222_-CB	2215	3130	2.3	11.2	7.9	0.21	2.10	.2293	.750	7.9			
42K314_-CB	3985	5630	4.6	7.0	4.9	0.66	5.9						
42K322_-CB	4030	5700	3.0	10.9	7.7	0.28	2.5						
42N314_-CB	3055	4320	4.6	7.0	4.9	0.66	7.7						
42N322_-CB	3090	4365	3.0	10.9	7.7	0.28	3.2						

Note: CB = Conduit Box, 8 Screw Terminals
 For double shaft contact Anaheim Automation



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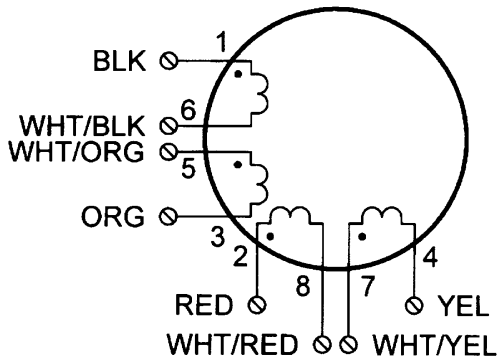
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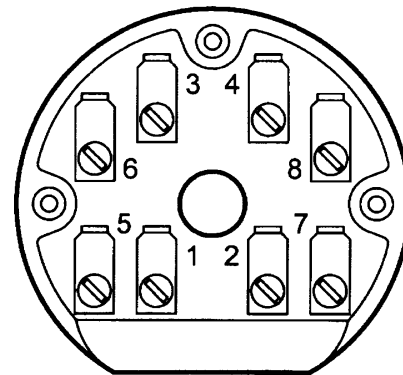
Wiring Chart

Connection	Lead Name	Lead Color	Terminal #
4 Lead Bipolar Series	A	Black (BLK)	1
	A	Orange (ORG)	3
	B	Red	2
	B	Yellow (YEL)	4
	None	WHT/BLK & WHT/ORG	6 & 5
	None	WHT/RED & WHT/YEL	8 & 7
4 Lead Bipolar Parallel	A	BLK & WHT/ORG	1 & 5
	A	ORG & WHT/BLK	3 & 6
	B	RED & WHT/YEL	2 & 7
	B	YEL & WHT/RED	4 & 8
6 Lead Unipolar	Phase 1	Black (BLK)	1
	Phase 3	Orange (ORG)	3
	Phase 2	Red	2
	Phase 4	Yellow (YEL)	4
	Common 1 & 3	WHT/BLK & WHT/ORG	6 & 5
	Common 2 & 4	WHT/RED & WHT/YEL	8 & 7
Ground		Green/Yellow	Motor Frame

Terminal/Wiring Diagrams



**8-Lead Configuration
(flying leads)**



**Terminal Board
NEMA 34 and 42**



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