




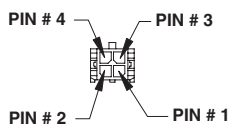


# Surestep™ STEPPING SYSTEMS

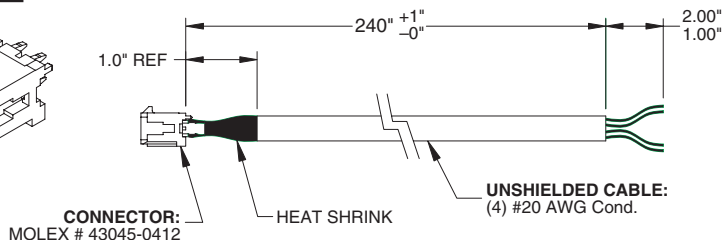
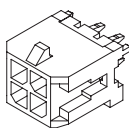
## SureStep™ Series Specifications – High Torque Bipolar Stepping Motors

Bipolar Stepping Motors				
	STP-MTR-17048	STP-MTR-23055	STP-MTR-23079	STP-MTR-34066
Price	<-->	<-->	<-->	<-->
Stepping Motor Face Plate	NEMA 17	NEMA 23	NEMA 23	NEMA 34
Maximum Holding Torque	5.2 lb-in	10.38 lb-in	17.25 lb-in	27.1 lb-in
	83 oz-in	166 oz-in	276 oz-in	434 oz-in
	0.59 Nm	1.17 Nm	1.95 Nm	3.06 Nm
Rotor Inertia	0.00006 lb-in-s <sup>2</sup>	0.00024 lb-in-s <sup>2</sup>	0.00042 lb-in-s <sup>2</sup>	0.0012 lb-in-s <sup>2</sup>
	0.45 oz-in <sup>2</sup>	1.483 oz-in <sup>2</sup>	2.596 oz-in <sup>2</sup>	7.66 oz-in <sup>2</sup>
	0.0000068 kg-m <sup>2</sup>	0.000027 kg-m <sup>2</sup>	0.000047 kg-m <sup>2</sup>	0.00014 kg-m <sup>2</sup>
Rated Current	2.0 A/phase	2.8 A/phase	2.8 A/phase	2.8 A/phase
Basic Step Angle	1.8° (2-phase motors with connectorized pigtail)			
Weight	0.7 lbs	1.50 lbs	2.2 lbs	3.85 lbs
Shaft Runout	0.002 in			
Shaft Radial Play @ 1 lb load	0.001 in max			
Perpendicularity	0.003 in			
Concentricity	0.002 in			
Operating Temperature Range	-20 °C to 50 °C (motor case temperature should be kept below 100 °C (212 °F))			
Maximum Radial Load	6.0 lb	15.0 lb	15.0 lb	39.0 lb
Maximum Thrust Load	6.0 lb	13.0 lb	13.0 lb	25.0 lb
Agency Approvals	130 °C Class B			
Agency Approvals	CE (complies with EN55014-1 (1993) and EN60034-1.5.11)			
Design Tips	Allow sufficient time to accelerate the load and size the step motor with a 100% torque safety factor. DO NOT disassemble step motors because motor performance will be reduced and the warranty will be voided. DO NOT connect or disconnect the step motor during operation. Mount the motor to a surface with good thermal conductivity, such as steel or aluminum, to allow heat dissipation. Use a flexible coupling with "clamp-on" connections to both the motor shaft and the load shaft to prevent thrust loading on bearings from minor mis-alignment.			
Extension Cable - 20 Foot (motor to drive)	<-->	Part Number STP-EXT-020		

## Extension Cable Wiring Diagram



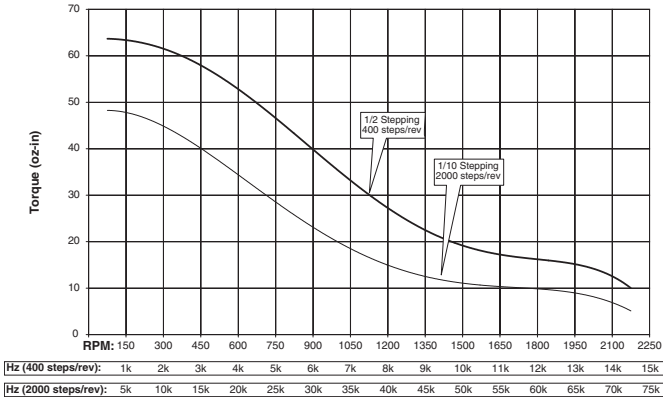
PIN #	COLOR
1	RED
2	WHITE
3	GREEN
4	BLACK



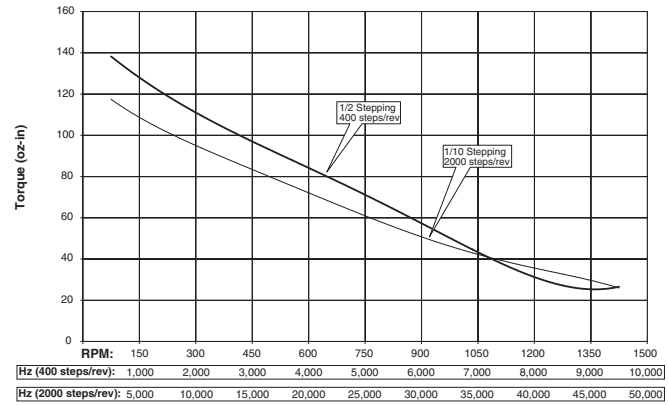
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## Torque vs. Speed Chart

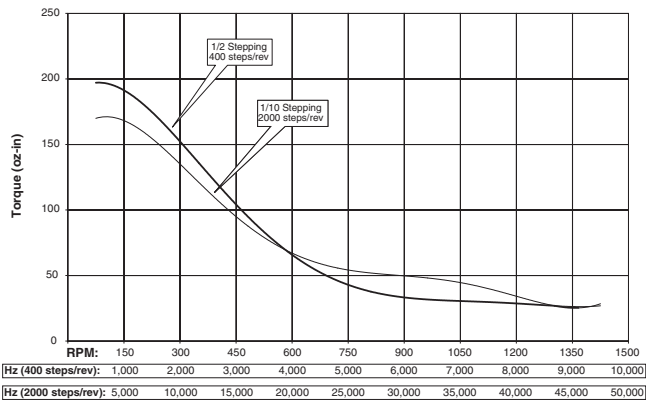
STP-MTR-17048



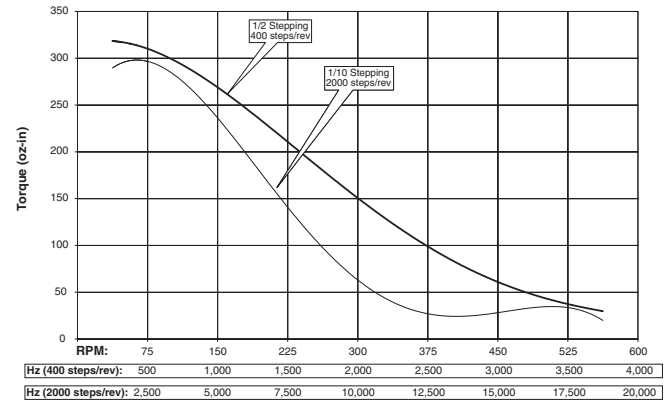
STP-MTR-23055



STP-MTR-23079



STP-MTR-34066

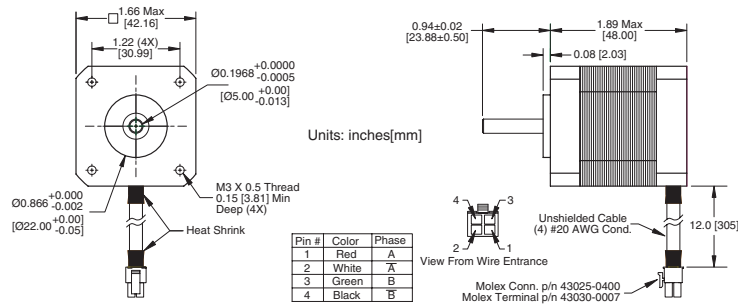


**NOTE:** THE TORQUE VS. SPEED CURVE VALUES SHOWN ABOVE WERE OBTAINED AT NOMINAL AC INPUT VOLTAGE USING SURESTEP™ STEP MOTORS DESCRIBED IN THIS DATA SHEET, THE STP-PWR-3204 STEP MOTOR POWER SUPPLY AND FULL LENGTH STP-EXT-020 EXTENSION CABLE.

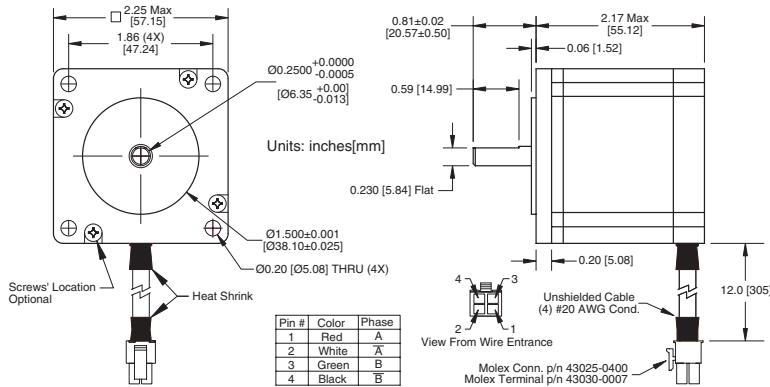
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## Dimensions

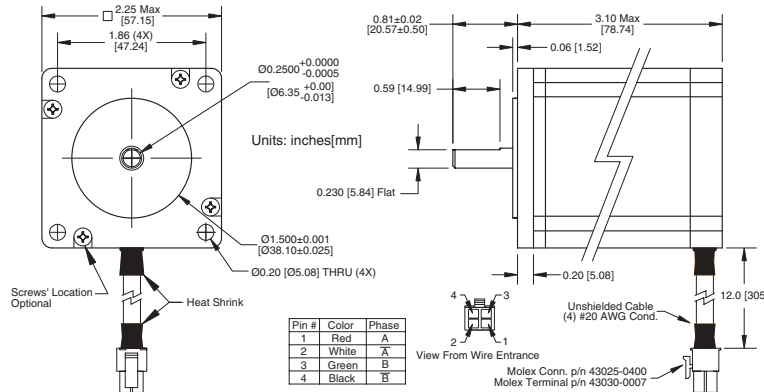
STP-MTR-17048



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STP-MTR-23079



STP-MTR-34066

