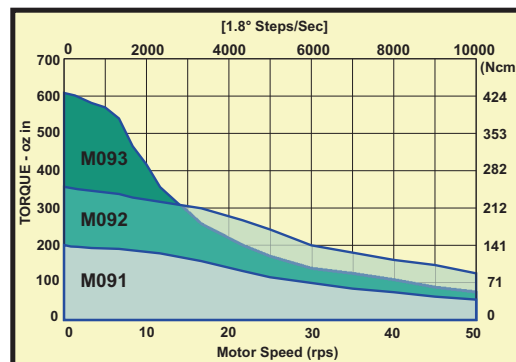
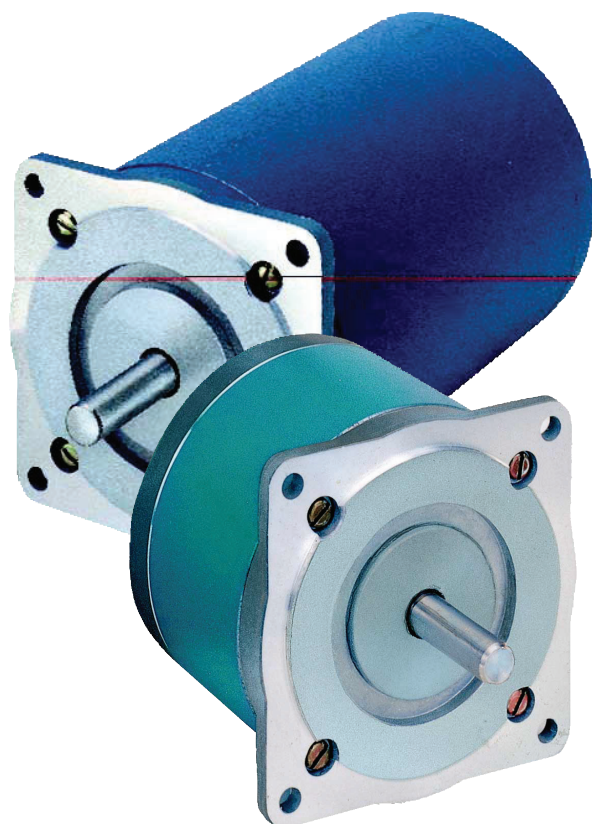


M09

Standard 90mm Frame Size (NEMA Size 34)

Performance Envelope

(see page DC21 for detailed torque-speed curves)



- ◆ Up to 150% rated torque reserve capacity
- ◆ ± 3% typical step accuracy
- ◆ CE conforming motors available
- ◆ Standard terminal box, encoders, and precision gearheads available
- ◆ Available with four or six leads
- ◆ Customized configurations available

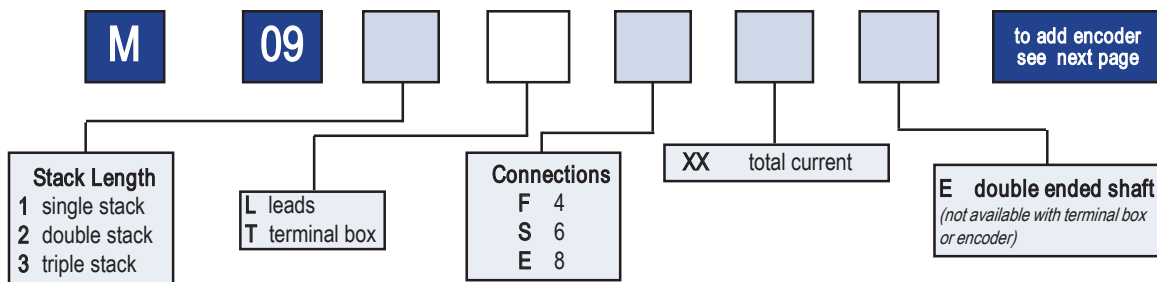


Motor Frame	Minimum Holding Torque		Rotor Inertia	Weight		Maximum Shaft Load		Minimum Residual Torque
	Unipolar 2Ø on	Bipolar 2Ø on		Net*	Ship*	Overhang	Thrust	
	oz-in (Ncm)	oz-in (Ncm)		oz-in-s ² (kg-cm ²)	lb (kg)	lb (kg)	lb (kg)	
M091	150 (106)	180 (127)	0.0095 (0.67)	3.3 (1.5)	4.0 (1.8)	25 (11)	50 (23)	2.0 (1.4)
M092	300 (212)	370 (261)	0.0174 (1.23)	5.5 (2.5)	6.8 (3.1)	25 (11)	50 (23)	4.0 (2.8)
M093	450 (318)	550 (388)	0.0265 (1.87)	7.8 (3.5)	9.0 (4.1)	25 (11)	50 (23)	7.0 (4.9)

* Weight for motor with leads

SLO-SYN® DC STEP MOTORS

M09



See next page for detailed model number information

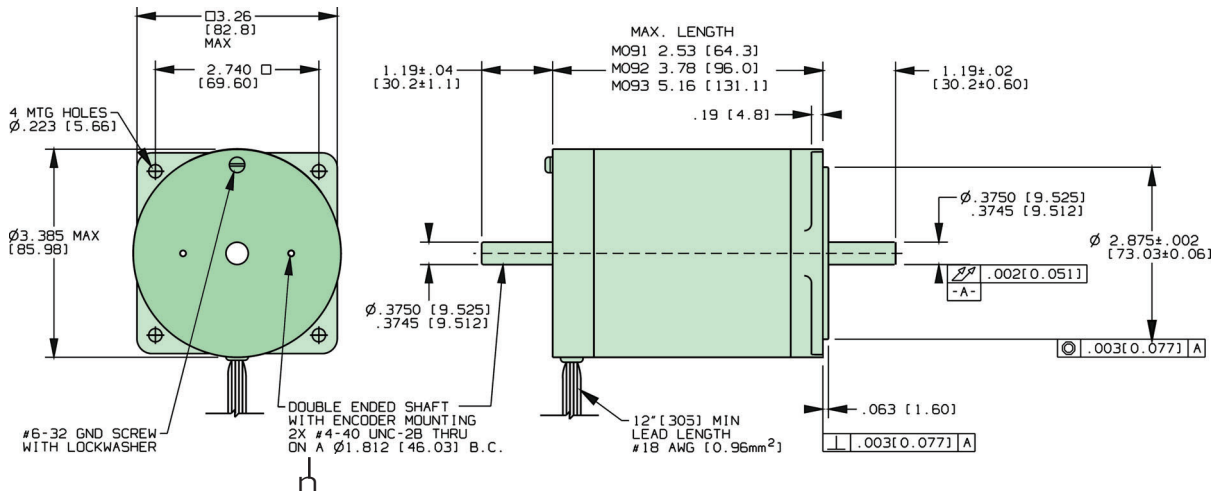
4-CONNECTION STEP MOTORS					
Model Number [◇]		Winding Specifications			
New	Old	Voltage VDC	Current Amperes	Resistance ohms	Inductance mH
See next page for options					
M091-□F02	M091-FF-401 [♦]	6.8	1.0	6.8	52
M091-□F06	M091-FF-206 [*]	3.0	3.0	1.0	10
M092-□F04	M092-FF-402 [♦]	3.4	2.0	1.7	17
M092-□F08	M092-FF-206 [*]	4.0	4.0	1.0	11
M093-□F06	M093-FF-402 [♦]	4.5	3.0	1.5	17
M093-□F08	M093-FF-206 [*]	3.9	4.0	0.96	13

6-CONNECTION STEP MOTORS									
Model Number [◇]		Winding Specifications							
New	Old (Leads)	Unipolar				Bipolar Series			
See next page for options		Voltage VDC	Current Amperes	Resistance ohms	Inductance mH	Voltage VDC	Current Amperes	Resistance ohms	Inductance mH
M091-□S03	M091-FD03	5.3	1.6	3.3	17	7.3	1.1	6.6	66
M091-□S06	M091-FD06	2.6	3.1	0.85	4.1	4.8	2.2	1.7	17
M091-□S09	M091-FD09	1.7	4.7	0.36	1.5	2.4	3.3	0.72	6.0
M092-□S08	M092-FD08	3.0	4.0	0.75	3.6	4.2	2.8	1.5	14
M092-□S09	M092-FD09	2.5	4.6	0.55	2.8	3.6	3.3	1.1	11
M093-□S07	M093-FD07	4.3	3.5	1.2	7.9	6.1	2.5	2.4	31
M093-□S11	M093-FD11	2.7	5.5	0.48	3.2	3.8	3.9	0.96	13
M093-□S14	M093-FD14	2.3	7.0	0.33	2.0	3.2	5.0	0.65	8.0

8-CONNECTION STEP MOTORS									
Model Number [◇]		Winding Specifications							
New	Old (Leads)	Unipolar				Bipolar Parallel [*]			
See next page for options		Voltage VDC	Current Amperes	Resistance ohms	Inductance mH	Voltage VDC	Current Amperes	Resistance ohms	Inductance mH
M091-□E06	M091-FD-8106	2.6	3.1	0.85	4.1	1.9	4.4	0.43	4.1
M091-□E09	M091-FD-8109	1.7	4.7	0.35	1.5	1.2	6.6	0.18	1.5
M092-□E08	M092-FD-8108	3.0	4.0	0.75	3.6	2.1	5.7	0.38	3.6
M092-□E09	M092-FD-8109	2.6	4.6	0.55	2.8	1.8	6.5	0.28	2.8
M093-□E11	M093-FD-8111	2.6	5.5	0.48	3.2	1.9	7.8	0.24	3.2
M093-□E14	M093-FD-8114	2.3	7.0	0.33	2.0	1.6	9.9	0.16	2.0

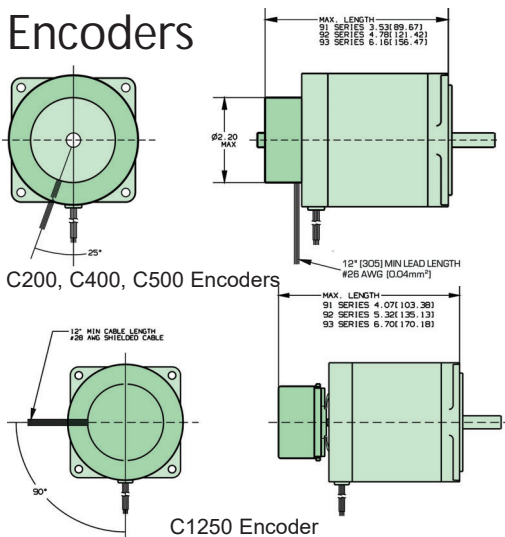
[◇] Nameplate may reference old model number
[♦] Terminal box motor
^{*} See 6-lead table for 8-lead bipolar ratings
^{*} Leaded motor

Motor Dimensions



Add "E" to model number for double ended shaft. Example: M092-LS08E

Encoders



Add to Model Number:

C

500

6

Pulses per Revolution

200, 400, 500, or 1250

Number of Outputs

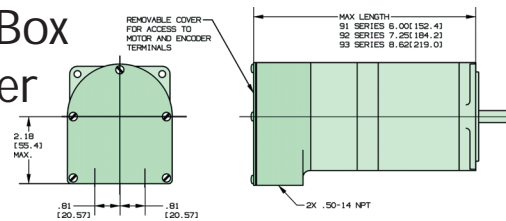
2 A, B (not available with 1250)
 3 A, B, Index (not available with 1250)
 6 A, B, Index, A, B, Index
 Differential Line Drivers supplied with 6 outputs

M091-LE08C2003

M092-LS09C12506

single stack, eight leads, 8 amps, 200 pulse encoder with A, B outputs
 double stack, six leads, 9 amps, 1250 pulse encoder with 6 outputs.

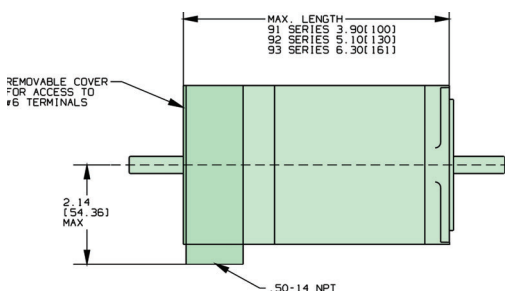
Terminal Box W/Encoder



Available on four(4) and six (6) connection motors.

Consult factory for order information

Terminal Box



Change Model Number:

Example: M092-TE09 (double stack, terminal box, eight leads, 9 amp winding)

(consult factory for encoder with terminal box)

SLO-SYN® DC STEP MOTORS

M09

36 V Bipolar - Full Step

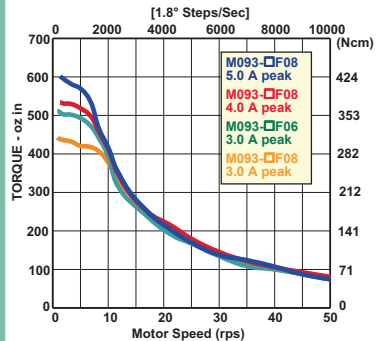
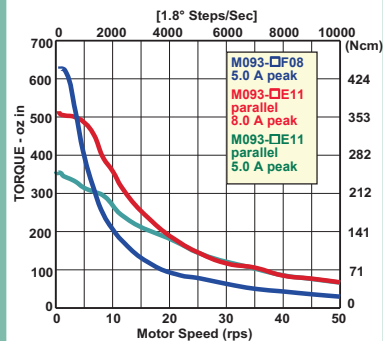
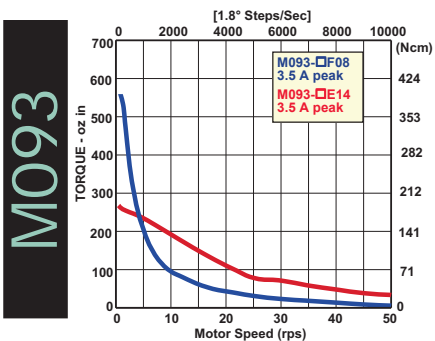
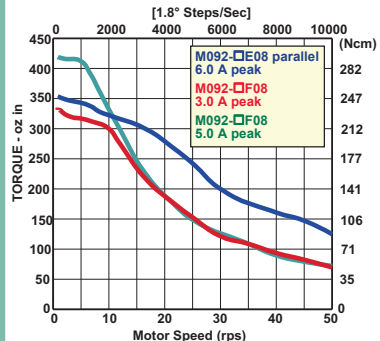
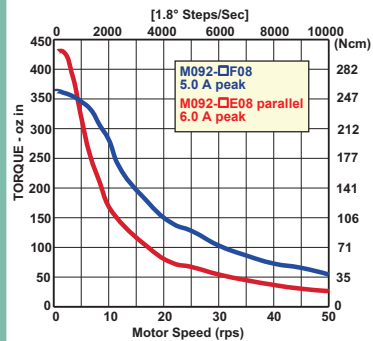
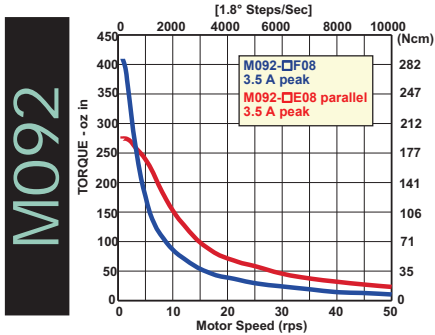
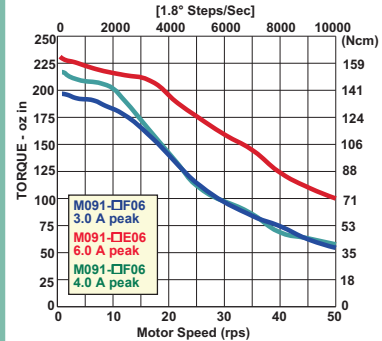
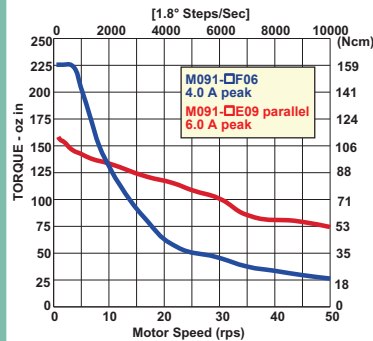
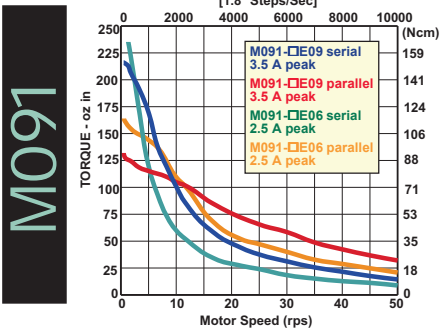
72 V Bipolar - Microstep

170 V Bipolar - Microstep

◆ 36 volt data measured with SS2000MD4 Modular Drive.

◆ 72 volt data measured with MD808 Modular Drive.

◆ 170 volt data measured with SS2000D3 or D6 Packaged Drive



- ◆ The curves do not show system resonances which will vary with system mechanical parameters.
- ◆ Duty cycle is dependent on torque, speed, Drive parameters, and heat sink conditions. Maximum case temperature is 100°C.