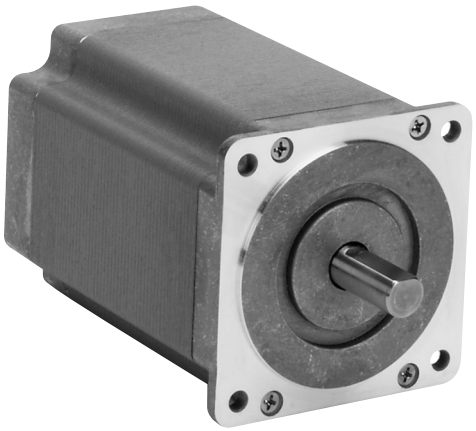
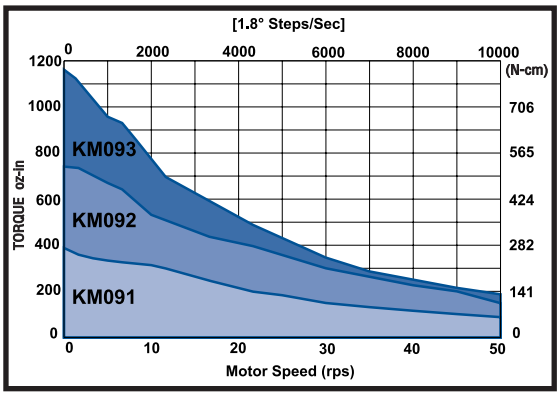
KM09

High Torque 90mm Frame Size (NEMA Size 34)



Performance Envelope

(see page 13 for detailed torque-speed curves)

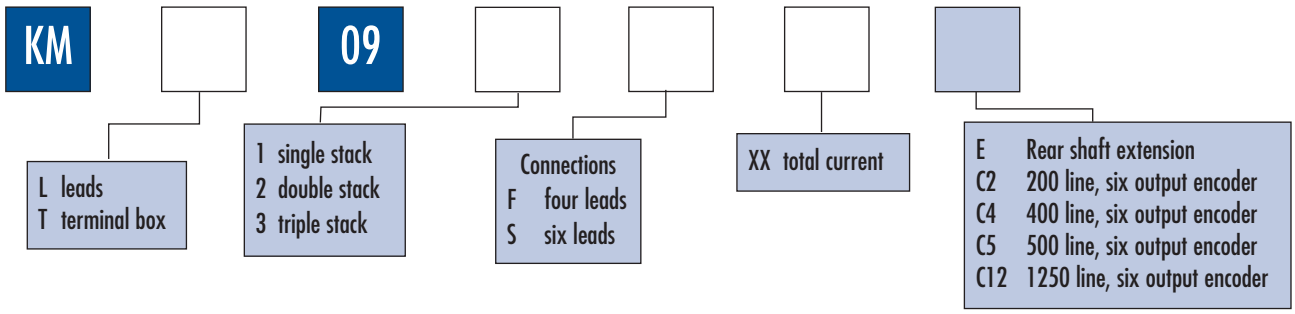


- Up to 200% rated torque reserve capacity
- ± 2% typical step accuracy
- Standard terminal box, encoders, and precision gearheads available
- Available with four or six leads
- Customized configurations available

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 (N-cm)	oz-in (N-cm)	oz-in-s^2 (kg-cm^2)	lb (kg)	lb (kg)	lb (kg)	lb (kg)	oz-in (N-cm)
KM091	305 (215)	385 (272)	.016 (1.13)	3.8 (1.73)	4.0 (1.81)	25 (11)	50 (23)	10 (7.1)
KM092	610 (431)	770 (544)	.031 (2.19)	6.2 (2.82)	6.4 (2.90)	25 (11)	50 (23)	15 (11)
KM093	915 (646)	1155 (816)	.047 (3.32)	8.7 (3.95)	8.9 (4.03)	25 (11)	50 (23)	23 (16)

* Weight for motor with leads.

KM09

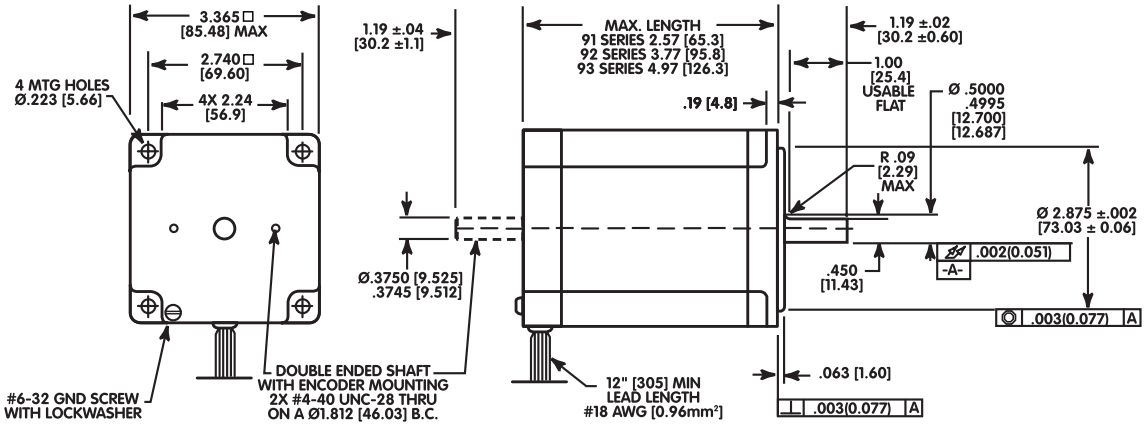


See next page for additional KM09 information

4-CONNECTION STEP MOTORS				
Model Number	Winding Specifications			
See Next page for options	Voltage (VDC)	Current (amperes)	Resistance (ohms)	Inductance (mH)
KM□091F05	3.0	2.7	1.1	11
KM□091F07	2.5	3.3	0.76	7.5
KM□091F13	1.3	6.6	0.19	1.9
KM□092F07	3.5	3.3	1.1	11
KM□092F13	1.7	6.5	0.27	2.9
KM□093F07	4.9	3.4	1.4	18
KM□093F08	4.0	4.0	0.99	13
KM□093F10	3.2	5.1	0.63	8.3
KM□093F14	2.5	6.8	0.36	4.5

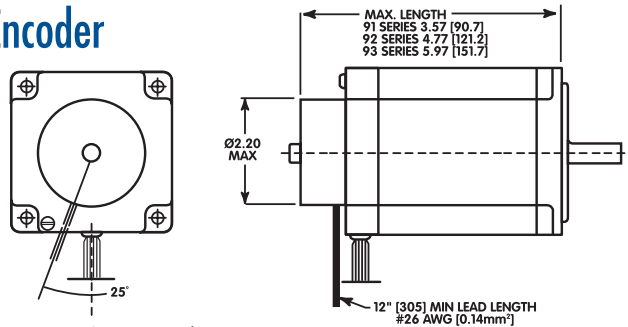
6-CONNECTION STEP MOTORS								
Model Number	Winding Specifications							
	Unipolar				Bipolar Series			
See Next page for options	Voltage (VDC)	Current (amperes)	Resistance (ohms)	Inductance (mH)	Voltage (VDC)	Current (amperes)	Resistance (ohms)	Inductance (mH)
KM□091S02	9.3	1.0	9.3	47	13	0.70	19	190
KM□091S06	2.9	3.1	0.94	4.7	4.1	2.2	1.9	19
KM□091S08	2.1	3.8	0.55	2.9	2.9	2.7	1.1	11
KM□091S09	1.8	4.7	0.38	1.9	2.5	3.3	0.76	7.5
KM□092S09	2.5	4.6	0.54	2.8	3.4	3.2	1.1	11
KM□093S07	4.4	3.5	1.3	8.3	6.2	2.5	2.5	3.3
KM□093S10	3.5	4.8	0.72	4.5	4.8	3.4	1.4	18

KM09: Motor Dimensions

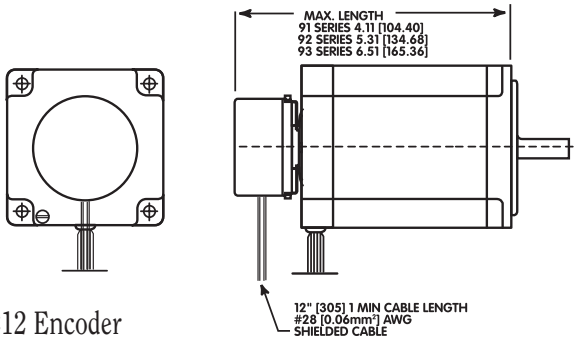


Add "E" to model number for double ended shaft. Example: KML092F07E

Encoder



C2, C4, C500 Encoders



C12 Encoder

Add to Model Number:

C2	200 lines per rev.
C4	400 lines per rev.
C5	500 lines per rev.
C12	1250 lines per rev.

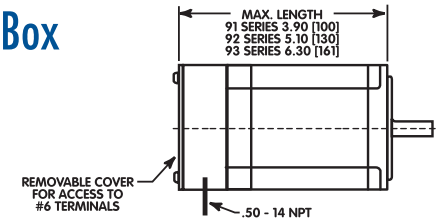
Outputs: A, B, Index,
$\overline{A}$, $\overline{B}$, $\overline{Index}$,

Differential Line Drivers supplied

Example: KML093S07C5 (triple stack, leaded, six leads, 3.5 amp winding)

For encoder specification see page 22-23

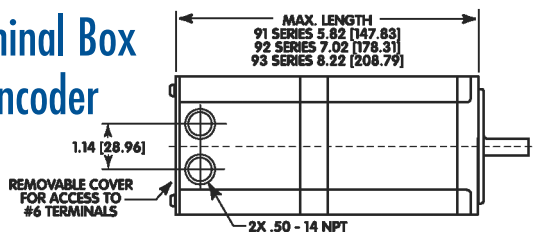
Terminal Box



Change to Model Number:

Example: KMT093S07 (triple stack, terminal box, six leads, 3.5 amp winding)

Terminal Box w/Encoder



Change to Model Number:

Example: KMT092F07C12 (double stack, terminal box, four leads, 3.3 amp winding, C12 encoder)

KM09

36 V Bipolar - Full Step

36 volt data measured with the SS2000MD4 Modular Drive.

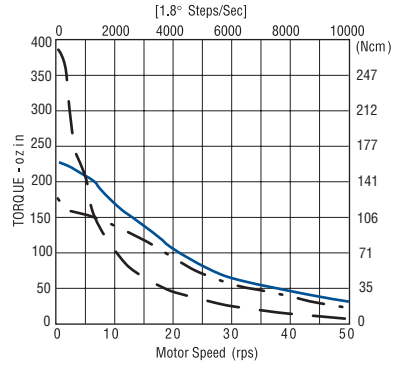
72 V Bipolar - Microstep

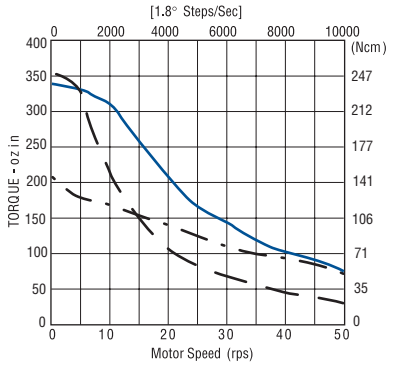
72 volt data measured with MD808 Modular Drive

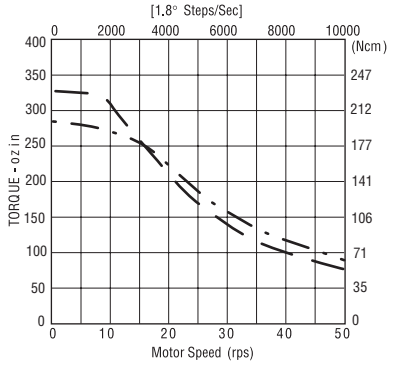
170 V Bipolar - Microstep

170 volt data measured with SS2000D3, D3i, D6, or D6i Packaged Drive

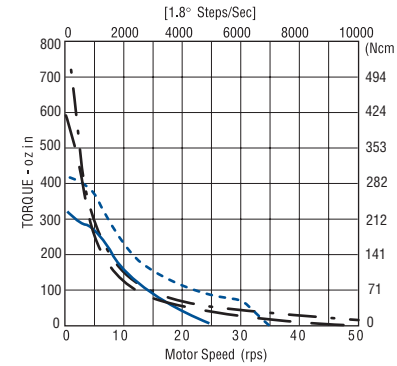
KM091

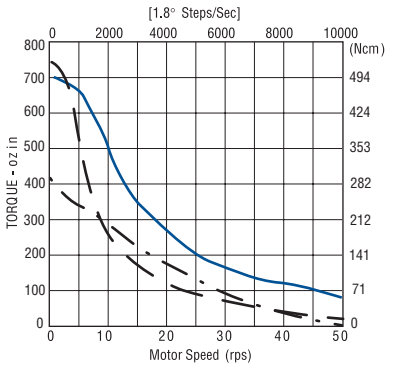


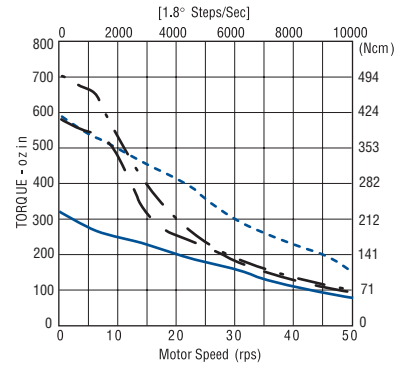




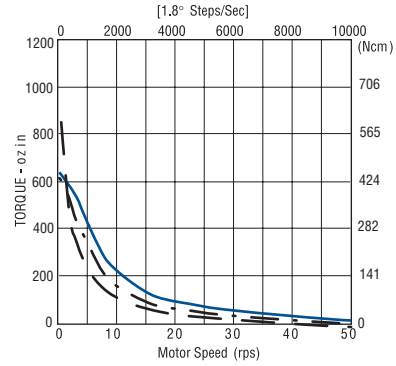
KM092

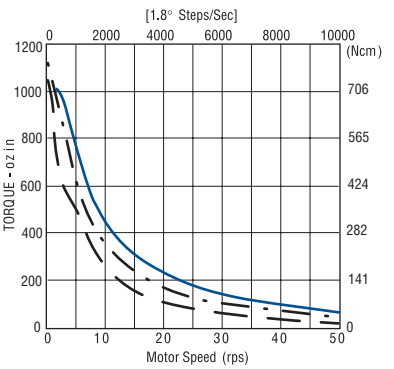


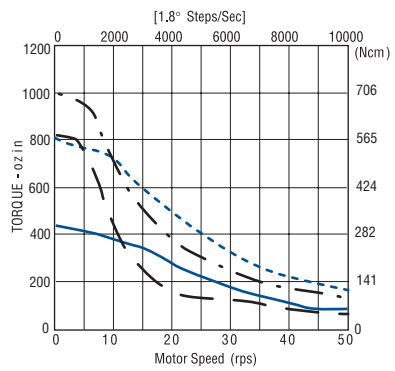




KM093







- 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.