90mm Frame Size Model (NEMA Size 34D) RATINGS and SPECIFICATIONS

MOTOR TYPE		CONNECTIONS		TYPICAL TIME FOR SINGLE STEP (mS) (1)	UNIPOLAR CONFIGURATION						BIPOLAR CONNECTIONS											
					NOMINAL DC VOLTS (3)	RATED AMPERES PER WINDING	NOMINAL RESISTANCE PER WINDING (25 C) OHMS (2)	NOMINAL INDUCTANCE PER PHASE (MILLI-HENRYS) (2) (4)	MINIMUM HOLDING TORQUE OZ-IN (Ncm)		SERIES CONNECTION						PARALLEL CONNECTION					
															MINIMUM HOLDING TORQUE OZ-IN (Ncm)						MINIMUM HOLDING TORQUE OZ-IN (Ncm)	
3% ACCURACY	5% ACCURACY	NUMBER	TYPE						2Ø ON	1Ø ON	VOLTS	AMPERES	R	L	2Ø ON	1Ø ON	VOLTS	AMPERES	R	L	2Ø ON	1Ø ON
—	M091-FD03	6	LEADS	8.5	5.3	1.6	3.3	16.5	150(106)	90(64)	7.25	1.1	6.6	66	180(127)	110(78)	—	—	—	—	—	—
M091-FC06	M091-FD06	6	LEADS	3.9	2.6	3.1	0.85	4.12	150(106)	90(64)	3.75	2.2	1.7	16.5	180(127)	110(78)	—	—	—	—	—	—
M091-FC09	M091-FD09	6	LEADS	3.1	1.7	4.7	0.36	1.5	150(106)	90(64)	2.4	3.3	0.72	6	180(127)	110(78)	—	—	—	—	—	—
—	M091-FF206	4	LEADS	—	—	—	—	—	—	—	3	3	1	10.4	180(127)	—	—	—	—	—	—	—
—	M091-FF-401	4	TERM.	—	—	—	—	—	—	—	6.8	1	6.8	52	180(127)	110(78)	—	—	—	—	—	—
—	M091-FD-8106	8	LEADS	3.9	2.6	3.1	0.85	4.12	150(106)	90(64)	3.75	2.2	1.7	16.5	180(127)	110(78)	1.9	4.4	0.425	4.12	180(127)	110(78)
—	M091-FD-8009	8	TERM.	3.1	1.7	4.7	0.36	1.5	150(106)	90(64)	2.4	3.3	0.72	6	180(127)	110(78)	1.2	6.6	0.18	1.5	180(127)	110(78)
—	M091-FD8109	8	LEADS	3.1	1.7	4.7	0.36	1.5	150(106)	90(64)	2.4	3.3	0.72	6	180(127)	110(78)	1.2	6.6	0.18	1.5	180(127)	110(78)
M092-FC08	M092-FD08	6	LEADS	4	3	4	0.75	3.56	300(212)	180(127)	4.2	2.8	1.5	14.24	370(261)	225(158)	—	—	—	—	—	—
M092-FC09	M092-FD09	6	LEADS	3.9	2.5	4.6	0.55	2.76	300(212)	180(127)	3.6	3.25	1.1	11.04	370(261)	225(158)	—	—	—	—	—	—
—	M092-FF206	4	LEADS	—	—	—	—	—	—	—	4	4	1	11.5	370(261)	—	—	—	—	—	—	—
—	M092-FD-310	6	TERM.	3.9	1.56	6.8	0.23	1.28	300(212)	180(127)	2.2	4.8	0.46	5.12	370(261)	225(158)	—	—	—	—	—	—
—	M092-FD-335(5)*	6	TERM.	3.9	1.56	6.8	0.23	1.28	300(212)	180(127)	2.2	4.8	0.46	5.12	370(261)	225(158)	—	—	—	—	—	—
—	M092-FF-402	4	TERM.	—	—	—	—	—	—	—	3.4	2	1.7	16.6	325(229)	195(138)	—	—	—	—	—	—
—	M092-FD-8008	8	TERM.	4	3	4	0.075	3.56	300(212)	180(127)	4.2	2.8	1.5	14.24	370(261)	225(158)	2.1	5.7	0.375	3.56	370(261)	225(158)
—	M092-FD-8108	8	LEADS	4	3	4	0.75	3.56	300(212)	180(127)	4.2	2.8	1.5	14.24	370(261)	225(158)	2.1	5.7	0.375	3.56	370(261)	225(158)
—	M092-FD-8009	8	TERM.	3.9	2.5	4.6	0.55	2.76	300(212)	180(127)	3.6	3.25	1.1	11.04	370(261)	225(158)	1.8	6.5	0.275	2.76	370(261)	225(158)
—	M092-FD-8109	8	LEADS	3.9	2.5	4.6	0.55	2.76	300(212)	180(127)	3.6	3.25	1.1	11.04	370(261)	225(158)	1.8	6.5	0.275	2.76	370(261)	225(158)
—	M092-FD-8114*	8	TERM.	3.9	1.65	6.8	0.023	1.18	300(212)	180(127)	2.3	4.8	0.46	4.72	370(261)	225(158)	1.2	9.6	0.115	1.18	370(261)	225(158)
M093-FC07	M093-FD07	6	LEADS	6.3	4.3	3.5	1.22	7.87	450(318)	270(191)	6.1	2.5	2.44	31.48	550(388)	330(233)	—	—	—	—	—	—
M093-FC11	M093-FD11	6	LEADS	4.1	2.64	5.5	0.48	3.19	450(318)	270(191)	3.75	3.9	0.96	12.76	550(388)	330(233)	—	—	—	—	—	—
M093-FC14	M093-FD14	6	LEADS	3.4	2.27	7	0.324	2	450(318)	270(191)	3.2	5	0.648	8	550(388)	330(233)	—	—	—	—	—	—
—	M093-FF206	4	LEADS	—	—	—	—	—	—	—	3.85	4	0.96	12.76	550(388)	—	—	—	—	—	—	—
—	M093-FD-301*	6	TERM.	3.4	1.54	11	0.14	0.85	450(318)	270(191)	2.2	7.8	0.28	3.4	550(388)	330(233)	—	—	—	—	—	—
—	M093-FD-315(5)*	6	TERM.	3.4	1.54	11	0.14	0.85	450(318)	270(191)	2.2	7.8	0.28	3.4	550(388)	330(233)	—	—	—	—	—	—
—	M093-FF-402	4	TERM.	—	—	—	—	—	—	—	4.5	3	1.5	16.9	550(388)	330(233)	—	—	—	—	—	—
—	M093-FD-8007*	8	TERM.	6.3	4.3	3.5	1.22	7.87	450(318)	270(191)	6.1	2.5	2.44	31.48	550(388)	330(233)	3	4.95	0.61	7.87	550(388)	330(233)
—	M093-FD-8107*	8	LEADS	6.3	4.3	3.5	1.22	7.87	450(318)	270(191)	6.1	2.5	2.44	31.48	550(388)	330(233)	3	4.95	0.61	7.87	550(388)	330(233)
—	M093-FD-8011	8	TERM.	4.1	2.64	5.5	0.48	3.19	450(318)	270(191)	3.75	3.9	0.96	12.76	550(388)	330(233)	1.9	7.8	0.24	3.19	550(388)	330(233)
—	M093-FD-8014	8	TERM.	3.4	2.27	7	0.324	2	450(318)	270(191)	3.2	5	0.648	8	550(388)	330(233)	1.6	9.9	0.612	2	550(388)	330(233)

(1) With 24 volts drive.
(2) Values shown are for reference only and are correct to the best of our knowledge at the time of publication, but are subject to change without notice. Parameters to be used as part of a specification should be verified with the factory.
(3) Voltage shown is per phase at rated current at zero steps per second, with winding at 25°C. Resistance tolerance and winding temperature will influence voltage.
(4) Tolerance is ±20%. Measured at 1 kHz with a General Radio #1650B impedance bridge having a 1 volt rms open circuit sinusoidal signal. Rotor position preconditioned by energizing same phase, then deenergizing same phase during measurement without changing rotor position.
(5) Has double end shaft.
* These motors are obsolete and should not be used in a new application design. They can be provided to support existing systems.