



POWERED BY INNOVATION

C10 Series Connected Coil Performance Specification (V3.6)						
General and 6 Lead Motor Specifications	UNITS	Dash #	1	2	3	4
Force Constant	lbf/A		0.6	1.3	1.9	2.5
	N/A		2.8	5.6	8.4	11.2
Max Operating Temperature	°C		130	130	130	130
Maximum Temp. Rise	°C		110	110	110	110
Coil Resistance (6 lead @ 25°C)	Ω		4.24	8.5	12.7	17
Coil Resistance (6 lead @ Max. °C)	Ω		6.1	12.1	18.2	24.3
Inductance @ 1kHz	mH		0.5	1.1	1.6	2.2
Thermal Resistance	°C/W		2.00	1.00	0.67	0.50
Continuous Power std. Mount (Max. °C)	W		55	110	165	220
Continuous Power, mounted to plate**(Max. °C)	W		33.6	61.16	84.02	106.25
Motor Constant	lbf/sqrt(W)		0.3	0.4	0.4	0.5
	N/sqrt(W)		1.13	1.60	1.96	2.27
Peak Power (Max. °C, 10% Duty) ***	W		550	1100	1650	2200
Back EMF Constant	V/inch/s		0.07	0.14	0.21	0.28
	V/m/s		2.8	5.6	8.4	11.2
Electrical Time Constant (@ 25°C)	ms		0.13	0.13	0.13	0.13
	ms		0.09	0.09	0.09	0.09
Maximum Line to Line Voltage	Vrms & DC		250	250	250	250
Coil Weight	Pounds		0.05	0.10	0.16	0.21
	Kilograms		0.02	0.05	0.07	0.10
Coil length (inside magnet track)	inch		2.41	4.81	7.21	9.61
	mm		61.2	122.2	183.1	244.1
Delta Connected Specifications	UNITS	Dash #	1	2	3	4
Force Constant	lbf/A		0.6	1.3	1.9	2.5
	N/A		2.8	5.6	8.4	11.2
Phase Resistance (D @ 25°C)	Ω		2.8	5.7	8.5	11.3
Phase Resistance (D @ Max. °C)	Ω		4.0	8.1	12.1	16.2
Inductance @ 1kHz	mH		0.4	0.7	1.1	1.4
Continuous Force	lbf		1.9	3.8	5.7	7.6
	N		8.4	16.8	25.2	33.6
Continuous Current	A		3.00	3.00	3.00	3.00
Peak Force*	lbf		3.8	7.6	11.3	15.1
	N		17	34	50	67
Peak Current*	A		6.00	6.00	6.00	6.00
Continuous Force, aluminum plate heat sink** (see below)	lbf		1.8	3.3	4.8	6.3
	N		8.1	14.9	21.4	27.9
Back EMF Constant	V/inch/s		0.1	0.1	0.2	0.3
	V/m/s		2.8	5.6	8.4	11.2
WYE connected Specifications	UNITS	Dash #	1	2	3	4
Force Constant	lbf/A		1.1	2.2	3.3	4.4
	N/A		4.8	9.7	14.5	19.4
Phase Resistance (Y @ 25°C)	Ω		8.5	17.0	25.4	33.9
Phase Resistance (Y @ Max. °C)	Ω		12.1	24.3	36.4	48.6
Inductance @ 1kHz	mH		1.1	2.2	3.2	4.3
Continuous Force	lbf		2.3	4.6	7.0	9.3
	N		10.3	20.6	31.0	41.3
Continuous Current	A		2.13	2.13	2.13	2.13
Peak Force*	lbf		6.5	13.1	19.6	26.2
	N		29	58	87	116
Peak Current*	A		6.00	6.00	6.00	6.00
Continuous Force, aluminum plate heat sink** (see below)	lbf		1.8	3.3	4.8	6.3
	N		8.1	14.9	21.4	27.9
Back EMF Constant	V/inch/s		0.1	0.2	0.4	0.5
	V/m/s		4.8	9.7	14.5	19.4
<p>* Notes:</p> <ul style="list-style-type: none"> <li>Specifications based on heat sink maintained within 10°C of ambient temperature at motor bracket interface.</li> <li>On time of "Peak Power" (duration) less than 1 second.</li> <li>Back EMF plus IR drop must not exceed "Maximum Terminal Voltage" listed.</li> <li>Electrical cycle length is 1.2 inch (30.5mm).</li> <li>Resistance specifications do not include the cable resistance.</li> <li>*Do not exceed 3A continuous in Delta (2.12A WYE) or 6A peak (cable current limit)</li> <li>Cable adds 0.5Ω/m to Wye and Delta phase resistance. Cable adds 0.25Ωm/m to the bracket ground resistance.</li> <li>** Heat Sink is a 12" wide, 1/2" thick aluminum plate, extending 2" beyond each end of the coil bracket, in 258C free air.</li> <li>*** Theoretical - limited by cable capability.</li> <li>Magnet Track weight is 1.06kg/m (.71 pounds/foot).</li> </ul>						