

ELWOOD HIGH PERFORMANCE MOTORS
SF-SERIES MOTOR DATA

MOTOR MODEL		M422-L 115V	M423-S 115V	M422-L 230V	M423-S 230V
MECHANICAL DATA (1)					
Rated Torque, Cont (Stall)	Nm	0.62	0.99	0.62	0.99
	lb-in	5.49	8.81	5.49	8.81
Peak Torque (Stall)	Nm	1.86	2.97	1.86	2.97
	lb-in	16.47	26.43	16.47	26.43
Rated Current	Arms	0.85	1.59	1.7	3.18
Rated Power	kW	0.36	0.62	0.36	0.62
	hp	0.49	0.83	0.49	0.83
Rated Voltage	Vrms	230	230	230	230
Rotor Moment of Inertia	kg-m ²	0.0000831	0.0000131	0.0000831	0.0000131
	lb-in-s ²	0.0000738	0.000116	0.0000738	0.000116
Rotor Moment of Inertia Brake Motors	kg-m ²	0.0000103	0.0000151	0.0000103	0.0000151
	lb-in-s ²	0.0000911	0.0001333	0.0000911	0.0001333
Motor Shipping Weight	kg	1.6	1.6	1.6	1.6
	lb	3.5	3.5	3.5	3.5
Motor Shipping Weight Brake Motors	kg	1.83	1.83	1.83	1.83
	lb	4	4	4	4
Friction Torque	Nm	0.030	0.028	0.030	0.028
	lb-in	0.266	0.248	0.266	0.248
Max. Operating Speed	rpm	8000	7471	8000	7471
WINDING DATA (1)					
Poles		4	4	4	4
Sine Wave KT Torque Constant (2)	Nm/A	0.43	0.32	0.86	0.64
	lb-in/A	3.85	2.81	7.7	5.62
KE Voltage Constant (3)	V/krpm	27.9	20.8	27.9	20.8
Winding Resistance Phase to Phase at 25±5°C	Ohms ±15%	12.5	4.2	25	8.4
Winding Inductance Phase to Phase	mH	17.9	7.6	35.8	15.2
Thermal Resistance	°C/Watt	1.45	1.20	1.45	1.20
Dielectric Rating		Power Leads (R,S,T) to Ground:1500 VACrms 50/60 Hz for 1 minute.			
(1) Specifications are at 25°C unless otherwise noted.		(3) Peak value of sinusoidal phase to phase Volts			
(2) Peak value of per phase sine wave Amperes					

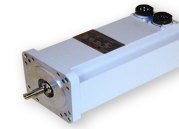
STORAGE AND OPERATING CONDITIONS	
Ambient Temperature	Operating: 0° to 40°C (32° to 104°F) Storage: -30° to 70°C (-25° to 158°F)
Relative Humidity	5% to 95% non-condensing

THERMOSTAT RATINGS	
Rated Voltage	0-250 Volts DC or 50/60 Hz AC*
Rated Current	2.5 Amps @ Power Factor of 1.0
	1.6 Amps @ Power Factor of 0.6
Maximum Switching Current	5 Amps
Contact Resistance	<0.10 Ohms maximum
Contacts	Normally closed
Insulation Dielectric	Mylar Nomex capable of withstanding 1500 VAC RMS 50/60 Hz for 1 minute
Opening Temperature (+/- 5°C)	140°C

*The thermostat is normally used as a switch for a 15VDC logic signal.



ELWOOD HIGH PERFORMANCE MOTORS
SF-SERIES MOTOR DATA



MOTOR MODEL		M431-N 230V	M432-N 230V	M433-F 230V	M433-J 230V	M433-M 230V	M431-N 460V	M432-N 460V	M433-F 460V	M433-J 460V	M433-M 460V
MECHANICAL DATA (1)											
Rated Torque, Cont (Stall)	Nm	1.31	2.54	3.53	3.53	3.53	1.31	2.54	3.53	3.53	3.53
	lb-in	11.59	22.42	31.26	31.26	31.26	11.59	22.42	31.26	31.26	31.26
Peak Torque (Stall)	Nm	3.93	7.62	10.59	10.59	10.59	3.93	7.62	10.59	10.59	10.59
	lb-in	34.77	67.26	93.78	93.78	93.78	34.77	67.26	93.78	93.78	93.78
Rated Current	Arms	2.95	5.23	4.28	5.36	7.86	1.47	2.14	2.15	2.68	3.93
Rated Power	kW	0.57	1.42	0.9	1.08	1.22	0.57	1.42	0.9	1.08	1.22
	hp	0.76	1.9	1.22	1.44	1.63	0.76	1.9	1.22	1.44	1.63
Rated Voltage	Vrms	230	230	230	230	230	460	460	460	460	460
Rotor Moment of Inertia	kg-m ²	0.00007	0.00015	0.00017	0.00017	0.00017	0.00007	0.00015	0.00017	0.00017	0.00017
	lb-in-s ²	0.0006	0.0013	0.0015	0.0015	0.0015	0.0006	0.0013	0.0015	0.0015	0.0015
Rotor Moment of Inertia Brake Motors	kg-m ²	0.000087	0.000167	0.000187	0.000187	0.000187	0.000087	0.000167	0.000187	0.000187	0.000187
	lb-in-s ²	0.00077	0.00147	0.00167	0.00167	0.00167	0.00077	0.00147	0.00167	0.00167	0.00167
Motor Shipping Weight	kg	3.9	4.55	5.53	5.53	5.53	3.9	4.55	5.53	5.53	5.53
	lb	8.6	10	12.2	12.2	12.2	8.6	10	12.2	12.2	12.2
Motor Shipping Weight Brake Motors	kg	6.73	5.75	6.73	6.73	6.73	5.10	5.75	6.73	6.73	6.73
	lb	14.80	12.26	14.80	14.80	14.80	11.20	12.26	14.80	14.80	14.80
Friction Torque	Nm	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
	lb-in	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52
Max. Operating Speed	rpm	6933	7500	3250	4602	6933	6933	7500	3250	4602	6933
WINDING DATA (1)											
Poles		6	6	6	6	6	6	6	6	6	6
Sine Wave KT Torque Constant (2)	Nm/A	0.45	0.48	0.82	0.66	0.45	0.9	0.96	1.64	1.32	0.9
	lb-in/A	3.94	4.3	7.29	5.83	3.98	7.88	8.6	14.58	11.66	7.96
KE Voltage Constant (3)	V/krpm	30	32	64	45.2	30	60	64	128	90.4	60
Winding Resistance Phase to Phase at 25±5°C	Ohms ±15%	5.3	1.97	4.4	2.5	1.07	10.6	3.94	8.8	5	2.14
Winding Inductance Phase to Phase	mH	7.6	4.3	9.9	4.2	1.8	15.2	8.6	19.8	8.4	3.6
Dielectric Rating		Power Leads (R,S,T) to Ground:1500 VACrms 50/60 Hz for 1 minute.									
(1) Specifications are at 25°C unless otherwise noted.						(3) Peak value of sinusoidal phase to phase Volts					
(2) Peak value of per phase sine wave Amperes											

STORAGE AND OPERATING CONDITIONS	
Ambient Temperature	Operating: 0° to 40°C (32° to 104°F) Storage: -30° to 70°C (-25° to 158°F)
Relative Humidity	5% to 95% non-condensing

THERMOSTAT RATINGS	
Rated Voltage	0-250 Volts DC or 50/60 Hz AC*
Rated Current	2.5 Amps @ Power Factor of 1.0 1.6 Amps @ Power Factor of 0.6
Maximum Switching Current	5 Amps
Contact Resistance	<0.10 Ohms maximum
Contacts	Normally closed
Insulation Dielectric	Mylar Nomex capable of withstanding 1500 VAC RMS 50/60 Hz for 1 minute
Opening Temperature (+/- 5°C)	140°C

*The thermostat is normally used as a switch for a 15VDC logic signal.



ELWOOD HIGH PERFORMANCE MOTORS
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MOTOR MODEL		M441-E 230V	M442-E 230V	M442-G 230V	M442-K 230V	M443-E 230V	M443-K 230V	M444-C 230V	M444-E 230V	M444-H 230V	M446-B 230V	M441-E 460V	M442-E 460V	M442-G 460V	M442-K 460V	M443-E 460V	M443-K 460V	M444-C 460V	MS44-E 460V	M444-H 460V	M446-B 460V
MECHANICAL DATA (1)																					
Rated Torque, Cont (Stall)	Nm	2.06	3.93	3.93	3.93	5.24	5.24	7.36	7.36	7.36	10.43	2.06	3.93	3.93	3.93	5.24	5.24	7.36	7.36	7.36	10.43
	lb-in	18.24	34.87	34.87	34.87	46.46	46.46	65.17	65.17	65.17	92.34	18.24	34.87	34.87	34.87	46.46	46.46	65.17	65.17	65.17	92.34
Peak Torque (Stall)	Nm	6.18	11.79	11.79	11.79	15.72	15.72	22.08	22.08	22.08	31.29	6.18	11.79	11.79	11.79	15.72	15.72	22.08	22.08	22.08	31.29
	lb-in	54.72	104.61	104.61	104.61	139.38	139.4	195.5	195.5	195.5	277	54.72	104.61	104.61	104.61	139.38	139.4	195.5	195.5	195.5	277
Rated Current	Arms	1.95	3.66	5	6.61	5.18	10.18	4.67	7.32	9.82	5.32	0.98	1.83	2.5	3.31	2.59	5.09	2.34	3.66	4.91	2.66
Rated Power	kW	0.48	0.92	1.27	1.4	1.12	1.68	0.92	1.42	1.96	0.96	0.48	0.92	1.27	1.4	1.12	1.68	0.92	1.42	6	0.96
	hp	0.65	1.24	1.71	1.87	1.5	2.25	1.24	1.9	2.62	1.28	0.65	1.24	1.71	1.87	1.5	2.25	1.24	1.9	2.62	1.28
Rated Voltage	Vrms	230	230	230	230	230	230	230	230	230	230	460	460	460	460	460	460	460	460	460	460
Rotor Moment of Inertia	kg-m ²	0.00027	0.00041	0.00041	0.00051	0.00051	0.00051	0.00063	0.00063	0.00063	0.00080	0.00027	0.00041	0.00041	0.00051	0.00051	0.00063	0.00063	0.00063	0.00063	0.00080
	lb-in-s ²	0.0024	0.0036	0.0036	0.0036	0.0045	0.0045	0.0056	0.0056	0.0056	0.0071	0.0024	0.0036	0.0036	0.0036	0.0045	0.0045	0.0056	0.0056	0.0056	0.0071
Rotor Moment of Inertia Brake Motors	kg-m ²	0.000287	0.000427	0.000427	0.000527	0.000527	0.000527	0.000647	0.000647	0.000647	0.000817	0.000287	0.000427	0.000427	0.000527	0.000527	0.000647	0.000647	0.000647	0.000647	0.000817
	lb-in-s ²	0.00257	0.00377	0.00377	0.00377	0.00467	0.00467	0.00577	0.00577	0.00577	0.00727	0.00257	0.00377	0.00377	0.00377	0.00467	0.00467	0.00577	0.00577	0.00577	0.00727
Motor Shipping Weight	kg	5.71	7.30	7.30	7.30	8.90	8.90	10.50	10.50	10.50	14.00	5.71	7.3	7.3	7.3	8.9	8.9	23	23	23	30
	lb	12.6	16.1	16.1	16.1	19.6	19.6	23.0	23.0	23.0	30.0	12.6	16.1	16.1	16.1	19.6	19.6	23	23	23	30
Motor Shipping Weight Brake Motors	kg	6.91	8.50	8.50	8.50	10.10	10.10	11.70	11.70	11.70	15.20	6.91	8.50	8.50	8.50	10.10	10.10	11.70	11.70	11.70	15.20
	lb	15.2	18.7	18.7	18.7	22.2	22.2	25.6	25.6	25.6	32.6	15.2	18.7	18.7	18.7	22.2	22.2	25.6	25.6	25.6	32.6
Friction Torque	Nm	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
	lb-in	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Max. Operating Speed	rpm	2953	2984	3980	5714	2942	5810	1990	3052	4200	1600	2953	2984	3980	5714	2942	5810	1990	3052	4200	1600
WINDING DATA (1)																					
Poles		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Sine Wave KT Torque Constant (2)	Nm/A	1.06	1.07	0.79	0.6	1.01	0.52	1.58	1.01	0.75	1.96	2.12	2.14	1.58	1.12	2.02	1.04	3.16	2.02	1.5	3.92
	lb-in/A	9.37	9.51	6.97	5.27	8.97	4.56	13.95	8.91	6.64	17.36	18.74	19.02	13.94	10.54	17.94	9.12	27.9	17.82	13.28	34.72
KE Voltage Constant (3)	V/krpm	70.4	69.7	52.3	36.4	70.7	35.8	104.5	68.2	49.5	129.5	140.8	139.4	104.6	72.8	141.4	71.6	209	136.4	99	259
Winding Resistance Phase to Phase at 25±5°C	Ohms ±15%	14.2	4.27	2.35	1.13	2.57	0.63	3.54	1.53	0.81	3.09	28.4	8.54	4.7	2.26	5.14	1.26	7.08	3.06	1.62	6.18
Winding Inductance Phase to Phase	mH	31.6	16	7.7	3.4	8.7	2	14.43	6.14	30	14.43	63.2	32	15.4	6.8	17.4	4	28.86	12.28	60	28.86
Thermal Resistance	°C/Watt																				
Dielectric Rating																					
Power Leads (R,S,T) to Ground: 1500 VACrms 50/60 Hz for 1 minute.																					
																		(3) Peak value of sinusoidal phase to phase Volts			
(1) Specifications are at 25°C unless otherwise noted. (2) Peak value of per phase sine wave Amperes																					

STORAGE AND OPERATING CONDITIONS	
Ambient Temperature	Operating: 0° to 40°C (32° to 104°F) Storage: -30° to 70°C (-25° to 158°F)
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THERMOSTAT RATINGS	
Rated Voltage	0-250 Volts DC or 50/60 Hz AC*
Rated Current	2.5 Amps @ Power Factor of 1.0 1.6 Amps @ Power Factor of 0.6
Maximum Switching Current	5 Amps
Contact Resistance	<0.10 Ohms maximum
Contacts	Normally closed
Insulation Dielectric	Mylar Nomex capable of withstanding 1500 VAC RMS 50/60 Hz for 1 minute
Opening Temperature (+/- 5°C)	140°C

*The thermostat is normally used as a switch for a 15VDC logic signal.



MOTOR MODEL		M461-D 230V	M461-G 230V	M462-D 230V	M462-E 230V	M462-G 230V	M463-D 230V	M463-F 230V	M463-K 230V	M464-C 230V	M464-E 230V	M464-G 230V	M465-C 230V	M465-D 230V	M465-G 230V	M461-D 460V	M461-G 460V	M462-D 460V	M462-E 460V	M462-G 460V	M463-D 460V	M463-F 460V	M463-K 460V	M464-C 460V	M464-E 460V	M464-G 460V	M465-C 460V	M465-D 460V	M465-G 460V	
MECHANICAL DATA (1)																														
Rated Torque, Cont (Stall)	Nm	5.45	5.45	11.6	11.6	16.55	16.55	20.79	20.79	20.79	20.79	23.61	23.61	23.61	5.45	11.6	11.6	11.6	11.6	16.55	16.55	20.79	20.79	20.79	23.61	23.61	23.61	23.61		
	lb-in	48.3	48.3	102.7	102.7	147	147	183.9	183.9	183.9	183.9	209	209	209	48.3	102.7	102.7	102.7	102.7	147	147	183.9	183.9	183.9	209	209	209	209		
Peak Torque (Stall)	Nm	16.35	16.35	34.8	34.8	49.65	49.65	62.37	62.37	62.37	62.37	70.83	70.83	70.83	16.35	34.8	34.8	34.8	34.8	49.65	49.65	62.37	62.37	62.37	70.83	70.83	70.83	70.83		
	lb-in	144.9	144.9	308.1	308.1	308.1	441	441	441	441	441	551.7	551.7	551.7	144.9	308.1	308.1	308.1	308.1	441	441	551.7	551.7	551.7	627	627	627	627		
Rated Current	Arms	4.4	7.23	8.74	10.74	14.2	11.21	17.48	27.6	12.95	19.42	26.49	14.53	18.15	27.46	2.2	3.62	4.37	5.37	7.11	5.61	8.74	13.8	6.5	9.71	13.24	7.27	9.07	13.73	
Rated Power	KW	0.78	1.66	1.63	2.03	2.58	2.41	2.56	3	2.33	2.83	3.42	2.62	2.97	6.07	0.78	1.66	1.63	2.03	2.58	2.41	2.56	3	3.13	3.8	3.42	2.62	2.97	4.53	
	hp	1.05	2.23	1.62	2.73	3.47	3.23	3.42	4.02	3.13	3.8	4.58	3.52	3.99	6.07	1.05	2.23	1.62	2.73	3.47	3.23	3.42	4.02	4.58	4.58	3.52	3.99	6.07	6.07	
Rated Voltage	Vrms	230	230	230	230	230	230	230	230	230	230	230	230	230	230	460	460	460	460	460	460	460	460	460	460	460	460	460	460	
Rotor Moment of Inertia	kg-m ²	0.00120	0.00120	0.00230	0.00230	0.00230	0.00282	0.00282	0.00361	0.00361	0.00361	0.00361	0.00440	0.00440	0.00120	0.00120	0.00230	0.00230	0.00230	0.00230	0.00282	0.00361	0.00361	0.00361	0.00361	0.00361	0.00361	0.00440	0.00440	
	lb-in-s ²	0.011	0.011	0.018	0.018	0.018	0.025	0.025	0.032	0.032	0.032	0.032	0.039	0.039	0.011	0.011	0.018	0.018	0.018	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.032	0.039	0.039
Rotor Moment of Inertia Brake Motors	kg-m ²	0.001217	0.001217	0.002317	0.002317	0.002317	0.002837	0.002837	0.003627	0.003627	0.003627	0.003627	0.004417	0.004417	0.001217	0.001217	0.002317	0.002317	0.002317	0.002317	0.002837	0.003627	0.003627	0.003627	0.003627	0.003627	0.003627	0.004417	0.004417	0.004417
	lb-in-s ²	0.01170	0.01170	0.018170	0.018170	0.018170	0.025170	0.025170	0.032170	0.032170	0.032170	0.032170	0.03917	0.03917	0.01170	0.01170	0.018170	0.018170	0.018170	0.025170	0.025170	0.025170	0.025170	0.025170	0.025170	0.025170	0.025170	0.032170	0.03917	0.03917
Motor Shipping Weight	kg	10.9	10.9	15.4	15.4	15.4	17.2	17.2	20.4	20.4	20.4	23.6	23.6	23.6	10.9	10.9	15.4	15.4	15.4	17.2	17.2	17.2	20.4	20.4	20.4	23.6	23.6	23.6	23.6	
	lb	24	24	34	34	34	38	38	45	45	45	52	52	52	24	24	34	34	34	38	38	38	45	45	45	52	52	52	52	
Motor Shipping Weight Brake Motors	kg	13.2	13.2	17.7	17.7	17.7	19.5	19.5	22.7	22.7	22.7	25.9	25.9	25.9	13.2	13.2	17.7	17.7	17.7	19.5	19.5	19.5	22.7	22.7	22.7	25.9	25.9	25.9	25.9	
	lb	29	29	39	39	39	42	42	42	50	50	57	57	57	29	29	39	39	39	42	42	42	50	50	50	57	57	57	57	
Friction Torque	Nm	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	
	lb-in	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
Max. Operating Speed	rpm	2645	3862	2512	3141	3992	2286	3590	5389	2012	3141	4023	2010	2513	3769	2645	3862	2512	3141	3992	2286	3590	5389	2012	3141	2500	1500	1800	2500	
WINDING DATA (1)																														
Poles		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
Sine Wave KT Torque Constant (2)	Nm/A	1.24	0.75	1.33	1.08	0.82	1.48	0.95	0.6	1.51	1.07	0.8	1.63	1.3	0.86	2.48	1.5	2.66	2.16	1.64	2.96	1.9	1.3	3.22	2.14	1.6	3.26	2.6	1.72	
	lb-in/A	10.96	6.67	11.75	9.57	7.23	13.06	8.38	5.31	14.21	9.47	7.1	14.39	11.51	7.61	21.92	13.34	23.5	19.14	14.46	26.12	16.76	10.62	28.42	18.94	14.2	28.78	23.02	15.22	
KE Voltage Constant (3)	V/krpm	78.64	52.5	82.8	66.22	52.1	91	57.94	38.6	103.4	66.22	51.7	103.47	82.77	55.18	157.28	105	165.6	132.44	104.2	182	115.88	77.2	206.8	132.44	103.4	206.94	165.54	110.36	
Winding Resistance Phase to Phase at 25±5°C	Ohms ±15%	4.71	1.87	1.61	1.05	0.6	1.21	0.46	0.18	0.92	0.39	0.23	0.76	0.45	0.2	9.42	3.74	3.22	2.1	1.2	2.42	0.92	0.36	1.84	0.78	0.46	1.52	0.9	0.4	
Winding Inductance Phase to Phase	mH	40	14.9	19.7	12.6	6.77	15.24	6.17	2.78	12.16	5.91	3.04	11.4	10.84	3.24	80	29.8	39.4	25.2	13.54	30.48	12.34	5.56	24.32	11.82	6.08	22.8	21.68	6.48	
Thermal Resistance	°C/Watt																													
Electrical Rating																														

(1) Specifications are at 25°C unless otherwise noted. (2) Peak value of per phase sine wave Amperes. (3) Peak value of sinusoidal phase to phase Vrms. Power Leads (R.S. 1) to Ground: 1500 VAC rms 50/60 Hz for 1 minute.

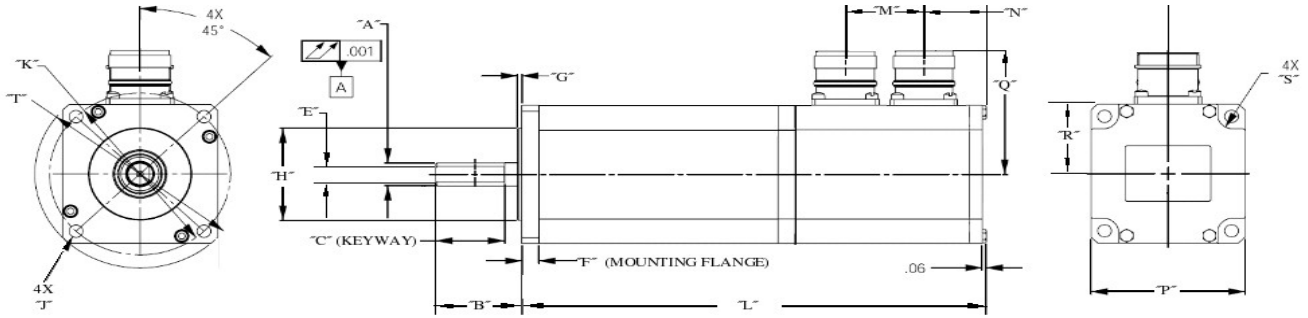
STORAGE AND OPERATING CONDITIONS	
Ambient Temperature	Operating: 0° to 40°C (32° to 104°F) Storage: -30° to 70°C (-25° to 158°F)
Relative Humidity	5% to 95% non-condensing

THERMOSTAT RATINGS	
Rated Voltage	0-250 Volts DC or 50/60 Hz AC*
Rated Current	2.5 Amps @ Power Factor of 1.0
Maximum Switching Current	1.6 Amps @ Power Factor of 0.6
Contact Resistance	5 Amps
Contacts	<0.10 Ohms maximum
Insulation Dielectric	Normally closed
Opening Temperature (+/- 5°C)	Mylar Nomex capable of withstanding 1500 VAC RMS 50/60 Hz for 1 minute
	140°C

*The thermostat is normally used as a switch for a 15VDC logic signal.

ELWOOD® HIGH PERFORMANCE
MOTORS
SERVOS - STEPPERS

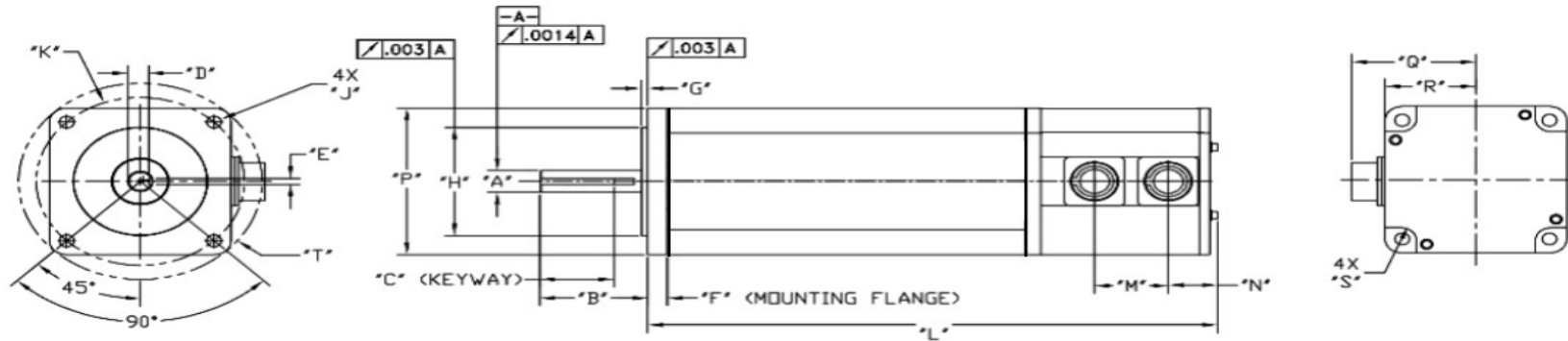
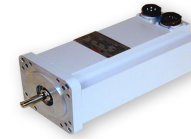
ELWOOD HIGH PERFORMANCE MOTORS
SF-SERIES 2" DIMENSIONAL DATA



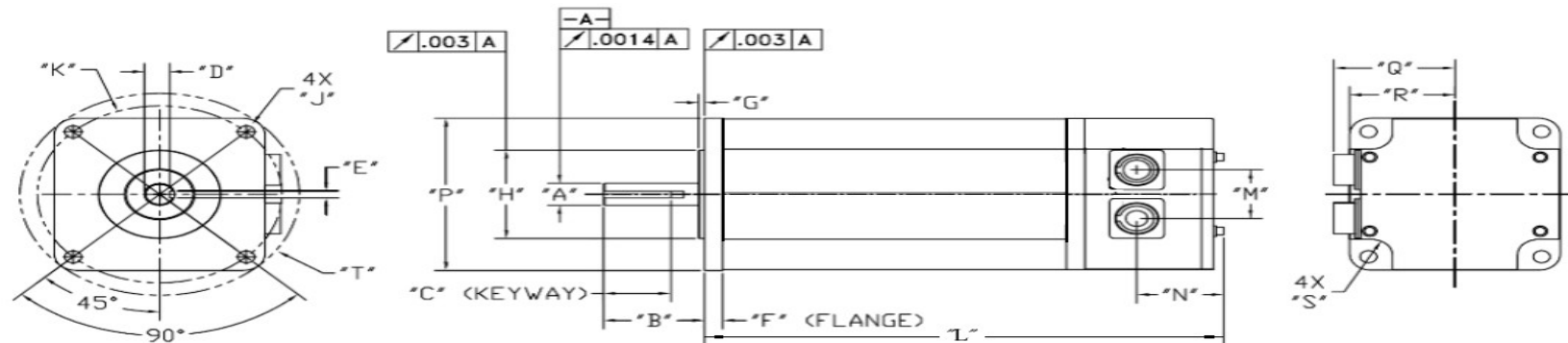
Motor Model	A	B	C	D	F	G	H	J	K	L	L Brake	M	N	P	Q	R	S	T
	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in
M421	9/0.375	20/1.25	N.A.	N.A.	6/0.25	1.5/0.06	40/1.5	4.8/0.201	63/2.625	93.5/3.68		23.8/.94	14.7/.58	57.2/2.25	N.A.	28.6/1.13	5.1/0.25	74/3.05
M422	9/0.375	20/1.25	N.A.	N.A.	6/0.25	1.5/0.06	40/1.5	4.8/0.201	63/2.625	118.1/4.65		23.8/.94	14.7/.58	57.2/2.25	N.A.	28.6/1.13	5.1/0.25	74/3.05
M433	9/0.375	20/1.25	N.A.	N.A.	6/0.25	1.5/0.06	40/1.5	4.8/0.201	63/2.625	142.8/5.62		23.8/.94	14.7/.58	57.2/2.25	N.A.	28.6/1.13	5.1/0.25	74/3.05



ELWOOD HIGH PERFORMANCE MOTORS
SF-SERIES 3" & 4" DIMENSIONAL DATA

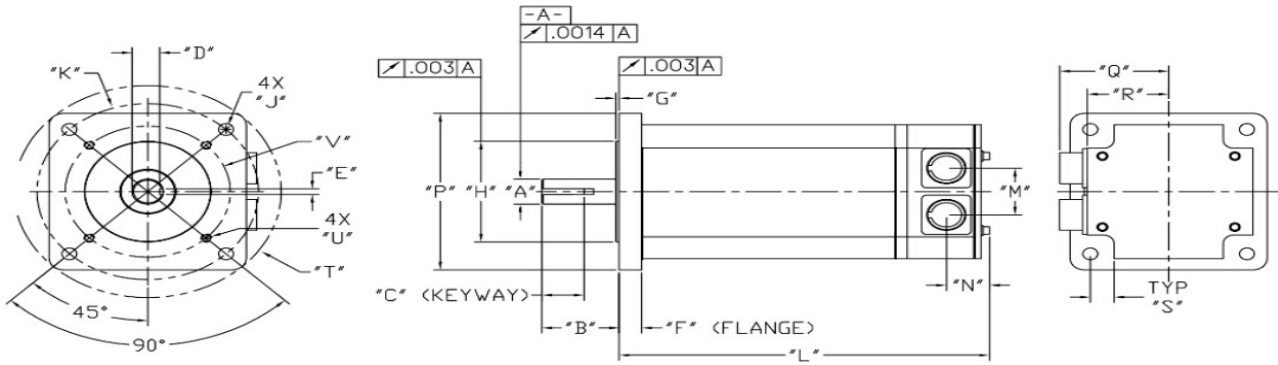


Motor Model	A	B	C	D	E	F	G	H	J	K	L	L Brake	M	N	P	Q	R	S	T
	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in
M431	14/.50	30/2.00	20/1.38	11/.42	5/.13	9/.37	3/.12	80/.250	7/.28	100/3.88	181/7.14	230/9.06	35/1.37	29/1.11	85/3.38	59/2.31	43/1.69	R7/R.28	115/4.53
M432	14/.50	30/2.00	20/1.38	11/.42	5/.13	9/.37	3/.12	80/.250	7/.28	100/3.88	219/8.64	268/10.56	35/1.37	29/1.11	85/3.38	59/2.31	43/1.69	R7/R.28	115/4.53
M433	14/.50	30/2.00	20/1.38	11/.42	5/.13	9/.37	3/.12	80/.250	7/.28	100/3.88	258/10.14	306/12.06	35/1.37	29/1.11	85/3.38	59/2.31	43/1.69	R7/R.28	115/4.53



Motor Model	A	B	C	D	E	F	G	H	J	K	L	L Brake	M	N	P	Q	R	S	T
	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in
M441	19/.63	40/2.06	30/1.38	16/.51	6/.19	9/.37	3/.12	95/2.5	9/.34	115/5.0	187/7.35	236/9.27	35/1.38	37/1.45	109/4.30	62/2.42	49/1.92	11/.44	145/5.71
M442	19/.63	40/2.06	30/1.38	16/.51	6/.19	9/.37	3/.12	95/2.5	9/.34	115/5.0	225/8.85	27/10.77	35/1.38	37/1.45	109/4.30	62/2.42	49/1.92	11/.44	145/5.71
M443	19/.63	40/2.06	30/1.38	16/.51	6/.19	9/.37	3/.12	95/2.5	9/.34	115/5.0	263/10.35	312/12.27	35/1.38	37/1.45	109/4.30	62/2.42	49/1.92	11/.44	145/5.71
M444	19/.63	40/2.06	30/1.38	16/.51	6/.19	9/.37	3/.12	95/2.5	9/.34	115/5.0	301/11.85	350/13.77	35/1.38	37/1.45	109/4.30	62/2.42	49/1.92	11/.44	145/5.71
M446	19/.63	40/2.06	30/1.38	16/.51	6/.19	9/.37	3/.12	95/2.5	9/.34	115/5.0	377/14.85	388/15.27	35/1.38	37/1.45	109/4.30	62/2.42	49/1.92	11/.44	145/5.71

PERFORMANCE MOTORS
DIMENSIONAL DATA



Motor Model	A	B	C	D	E	F	G	H	J	K	L	L Brake	M	N	P	Q	R	S	T	U	V	
	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	cm/in	dia in	
M461	24/63	50/2.06	40/1.50	20/51	8/19	20/80	4/13	130/4.50	12/53	165/7.88	256/10.07	313/12.35	53/2.09	41/1.63	152/7.00	99/3.88	73/2.88	R27/R1.06	200/9.49	3/8-16	56	5.875
M462	24/63	50/2.06	40/1.50	20/51	8/19	20/80	4/13	130/4.50	12/53	165/7.88	294/11.57	352/13.85	53/2.09	41/1.63	152/7.00	99/3.88	73/2.88	R27/R1.06	200/9.49	3/8-16	56	5.875
M463	24/63	50/2.06	40/1.50	20/51	8/19	20/80	4/13	130/4.50	12/53	165/7.88	332/13.07	399/15.35	53/2.09	41/1.63	152/7.00	99/3.88	73/2.88	R27/R1.06	200/9.49	3/8-16	56	5.875
M464	24/63	50/2.06	40/1.50	20/51	8/19	20/80	4/13	130/4.50	12/53	165/7.88	370/14.57	428/16.85	53/2.09	41/1.63	152/7.00	99/3.88	73/2.88	R27/R1.06	200/9.49	3/8-16	56	5.875
M465	24/63	50/2.06	40/1.50	20/51	8/19	20/80	4/13	130/4.50	12/53	165/7.88	408/16.07	466/18.35	53/2.09	41/1.63	152/7.00	99/3.88	73/2.88	R27/R1.06	200/9.49	3/8-16	56	5.875