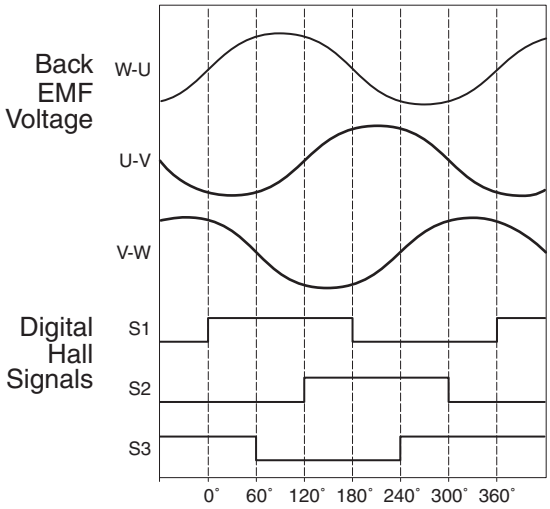
Specifications LZ-100-T-XXX

Performance Parameters	Symbol	Units	LZ-100-T-120				LZ-100-T-240				LZ-100-T-360				LZ-100-T-480			
Continuous Force [1,5,6,7]	F_{cTmax}	N (lb_f)	197 (44)				393 (88)				590 (133)				786 (177)			
Peak Force [2]	F_p	N (lb_f)	983 (221)				1965 (442)				2948 (663)				3931 (884)			
Motor Constant [1]	K_M	$N/\sqrt{W}$ ($lb_f/\sqrt{W}$)	20.0 (4.5)				28.2 (6.3)				34.6 (7.8)				39.9 (9.0)			
Thermal Resistance	R_{th}	°C/W	1.13				0.57				0.38				0.28			
Max Power Dissipation	P_{cTmax}	W	97				194				291				388			
Maximum Applied Bus Voltage [8]	V_{DC}	Volts	325				325				325				325			
Electrical Cycle Length	E_c	mm	60				60				60				60			
Electrical Time Constant	τ_e	msec	1.9				1.9				1.9				1.9			
Maximum Coil Temperature	T_{max}	°C	130				130				130				130			
Winding Type			D	E	F	G	D	E	F	G	D	E	F	G	D	E	F	G
Force Constant [1]	K_F	N/A_{pk} (lb_f/A_{pk})	80.4 (18.1)	N/A	46.4 (10.4)	N/A	80.4 (18.1)	160.7 (36.1)	46.4 (10.4)	92.8 (20.9)	80.4 (18.1)	241.1 (54.2)	46.4 (10.4)	139.2 (31.3)	80.4 (18.1)	160.7 (36.1)	N/A	92.8 (20.9)
Back EMF Constant p-p [3,4]	K_e	V_p/m/s (V_p/in/s)	94.9 (2.4)	N/A	54.8 (1.4)	N/A	94.9 (2.4)	189.8 (4.8)	54.8 (1.4)	109.6 (2.8)	94.9 (2.4)	284.6 (7.2)	54.8 (1.4)	164.3 (4.2)	94.9 (2.4)	189.8 (4.8)	N/A	109.6 (2.8)
Peak Current [2,4]	I_p	A_{pk} (A_{rms})	12.2 (8.6)	N/A	21.2 (15.0)	N/A	24.5 (17.3)	12.2 (8.6)	42.4 (30.0)	21.2 (15.0)	36.7 (25.9)	12.2 (8.6)	63.5 (44.9)	21.2 (15.0)	48.9 (34.6)	24.5 (17.3)	N/A	42.4 (30.0)
Continuous Current [1,4,5,6]	I_{cTmax}	A_{pk} (A_{rms})	2.4 (1.7)	N/A	4.2 (3.0)	N/A	4.9 (3.5)	2.4 (1.7)	8.5 (6.0)	4.2 (3.0)	7.3 (5.2)	2.4 (1.7)	12.7 (9.0)	4.2 (3.0)	9.8 (6.9)	4.9 (3.5)	N/A	8.5 (6.0)
Resistance p-p [3] @20°C	R_{20}	ohm	15.08	N/A	5.03	N/A	7.54	30.17	2.51	10.06	5.03	45.25	1.68	15.08	3.77	15.08	N/A	5.03
Inductance p-p [3]	L	mH	28.28	N/A	9.43	N/A	14.14	56.57	4.71	18.86	9.43	84.85	3.14	28.28	7.07	28.28	N/A	9.43
Mechanical Parameters																		
Magnetic Attraction	F_a	N (lb_f)	0 (0)				0 (0)				0 (0)				0 (0)			
Coil Mass	M_c	kg (lb_m)	1.35 (2.97)				2.58 (5.69)				3.81 (8.41)				5.04 (11.12)			
Magnetic Channel Mass	M_n	kg/m (lb/in)	30.27 (1.69)				30.27 (1.69)				30.27 (1.69)				30.27 (1.69)			

Notes: Motor performance specifications are with sinusoidal commutation.

1. Continuous forces, motor constant and currents listed are with coils at maximum temperature 130ºC, mounted to a heat sink that is equivalent to an aluminum slide 25.4mm (1.0") thick with the following areas: 120 coil 774cm² (120in²), 240 coil 1160cm² (180in²), 360 coil 1680cm² (260 in²), 480 coil 2060cm² (320 in²).
2. Calculated at 4% duty cycle with a maximum on time of 1 second.
3. All winding parameters listed are measured line-to-line (phase-to-phase).
4. All currents and voltages are measured 0-peak of the sine wave unless noted rms.
5. Continuous force and current based on coil moving with all phases sharing the same load in sinusoidal commutation.
6. For stand still conditions multiply continuous force and continuous current by 0.9.
7. Coil mountings on either of the two narrow sides reduces continuous force by 10%.
8. Maximum cable length 10 meters. Please consult factory concerning applications requiring longer cables
   All specifications are ±10%. Phase-to-phase inductance is ±30%.

Motor Phasing Diagram



Note: Phasing direction is coil moving towards motor power cable

Dimensions mm [in]

Size	Winding Code	Power Cable Dia.	Gauge
100-120	D F	ϕ6.1 (.24)	0.75mm² (18)
100-240	D E F G	ϕ6.1 (.24)	0.75mm² (18)
100-360	D E F G	ϕ6.1 (.24)	0.75mm² (18)
100-480	D E G	ϕ6.1 (.24)	0.75mm² (18)