



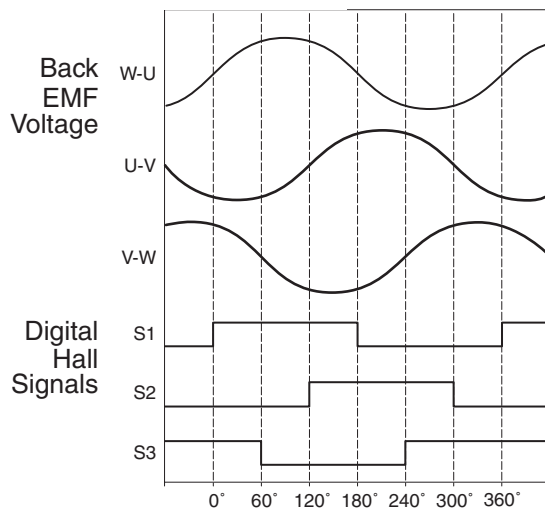
Specifications LZ-100-HT-XXX

Performance Parameters	Symbol	Units	LZ-100-HT-120				LZ-100-HT-240				LZ-100-HT-360				LZ-100-HT-480			
Continuous Force ^{1,5,6,7}	F_{cTmax}	$\frac{N}{(lb_f)}$	216 (49)				432 (97)				649 (146)				865 (194)			
Peak Force ²	F_p	$\frac{N}{(lb_f)}$	1081 (243)				2162 (486)				3243 (729)				4324 (972)			
Motor Constant ¹	K_M	$\frac{N/\sqrt{-W}}{(lb_f/\sqrt{-W})}$	22.0 (4.9)				31.1 (7.0)				38.0 (8.6)				43.9 (9.9)			
Thermal Resistance	R_{th}	$^{\circ}C/W$	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}	$^{\circ}C$	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	$\frac{N/A_{pk}}{(lb_f/A_{pk})}$	88.4 (19.9)	N/A	51.0 (11.5)	N/A	88.4 (19.9)	176.8 (39.7)	51.0 (11.5)	102.1 (22.9)	88.4 (19.9)	265.2 (59.6)	51.0 (11.5)	153.1 (34.4)	88.4 (19.9)	176.8 (39.7)	N/A	102.1 (22.9)
Back EMF Constant p-p ^{3,4}	K_e	$\frac{V_p/m/s}{(V_p/in/s)}$	104.4 (2.7)	N/A	60.3 (1.5)	N/A	104.4 (2.7)	208.7 (5.3)	60.3 (1.5)	120.5 (3.1)	104.4 (2.7)	313.1 (8.0)	60.3 (1.5)	180.8 (4.6)	104.4 (2.7)	208.7 (5.3)	N/A	120.5 (3.1)
Peak Current ^{2,4}	I_p	$\frac{A_{pk}}{(A_{rms})}$	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}	$\frac{A_{pk}}{(A_{rms})}$	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	$\frac{N}{(lb_f)}$	0 (0)				0 (0)				0 (0)				0 (0)			
Coil Mass	M_c	$\frac{kg}{(lb_m)}$	1.35 (2.97)				2.58 (5.69)				3.81 (8.41)				5.04 (11.12)			
Magnetic Channel Mass	M_n	$\frac{kg/m}{(lb/in)}$	37.05 (2.07)				37.05 (2.07)				37.05 (2.07)				37.05 (2.07)			

Notes: Motor performance specifications are with sinusoidal commutation.

- Continuous forces, motor constant and currents listed are with coils at maximum temperature 130°C, 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).
- Calculated at 4% duty cycle with a maximum on time of 1 second.
- All winding parameters listed are measured line-to-line (phase-to-phase).
- All currents and voltages are measured 0-peak of the sine wave unless noted rms.
- Continuous force and current based on coil moving with all phases sharing the same load in sinusoidal commutation.
- For stand still conditions multiply continuous force and continuous current by 0.9.
- Coil mountings on either of the two narrow sides reduces continuous force by 10%.
- 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)	0.75mm ² (18)
100-240	D E F G	φ6.1 (.24)	0.75mm ² (18)
100-360	D E F G	φ6.1 (.24)	0.75mm ² (18)
100-480	D E G	φ6.1 (.24)	0.75mm ² (18)