



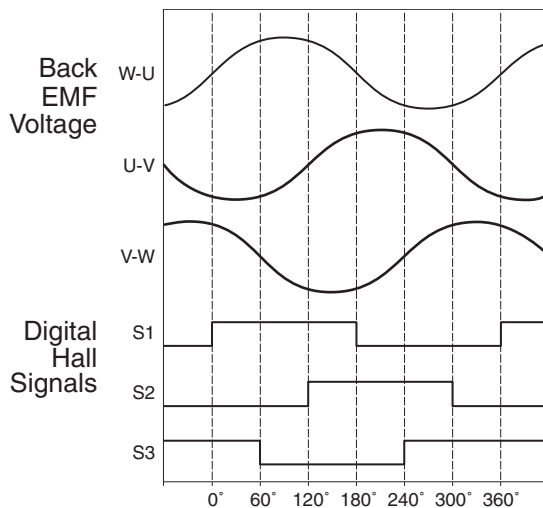
Specifications LZ-050-HT-XXX

Performance Parameters	Symbol	Units	LZ-050-HT-120				LZ-050-HT-240				LZ-050-HT-360				LZ-050-HT-480			
Continuous Force ^{1,5,6,7}	F_{cTmax}	N (lbf)	134 (30)				267 (60)				401 (90)				534 (120)			
Peak Force ²	F_p	N (lbf)	668 (150)				1335 (300)				2003 (450)				2671 (600)			
Motor Constant ¹	K_M	$\frac{N}{\sqrt{-W}}$ ($\frac{lbf}{\sqrt{-W}}$)	13.9 (3.1)				19.7 (4.4)				24.1 (5.4)				27.8 (6.2)			
Thermal Resistance	R_{th}	°C/W	1.19				0.60				0.40				0.30			
Max Power Dissipation	P_{cTmax}	W	92				185				277				369			
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	$\frac{N/A_{pk}}{(lbf/A_{pk})}$	44.2 (9.9)	N/A	25.5 (5.7)	N/A	44.2 (9.9)	88.4 (19.9)	25.5 (5.7)	51.0 (11.5)	44.2 (9.9)	132.6 (29.8)	25.5 (5.7)	76.5 (17.2)	44.2 (9.9)	88.4 (19.9)	N/A	51.0 (11.5)
Back EMF Constant p-p ^{3,4}	K_e	$\frac{V_p/m/s}{(V_p/in/s)}$	52.2 (1.3)	N/A	30.1 (0.8)	N/A	52.2 (1.3)	104.4 (2.7)	30.1 (0.8)	60.3 (1.5)	52.2 (1.3)	156.6 (4.0)	30.1 (0.8)	90.4 (2.3)	52.2 (1.3)	104.4 (2.7)	N/A	60.3 (1.5)
Peak Current ^{2,4}	I_p	$\frac{A_{pk}}{(A_{rms})}$	15.1 (10.7)	N/A	26.2 (18.5)	N/A	30.2 (21.4)	15.1 (10.7)	52.3 (37.0)	26.2 (18.5)	45.3 (10.7)	15.1 (10.7)	78.5 (55.5)	26.2 (18.5)	60.4 (42.7)	30.2 (21.4)	N/A	52.3 (37.0)
Continuous Current ^{1,4,5,6}	I_{cTmax}	$\frac{A_{pk}}{(A_{rms})}$	3.0 (2.1)	N/A	5.2 (3.7)	N/A	6.0 (4.3)	3.0 (2.1)	10.5 (7.4)	5.2 (3.7)	9.1 (6.4)	3.0 (2.1)	15.7 (11.1)	5.2 (3.7)	12.1 (8.5)	6.0 (4.3)	N/A	10.5 (7.4)
Resistance p-p ³ @20°C	R_{20}	ohm	9.42	N/A	3.14	N/A	4.71	18.83	1.57	6.28	3.14	28.25	1.05	9.42	2.35	9.42	N/A	3.14
Inductance p-p ³	L	mH	17.65	N/A	5.88	N/A	8.83	35.31	2.94	11.77	5.88	52.96	1.96	17.65	4.41	17.65	N/A	5.88
Mechanical Parameters																		
Magnetic Attraction	F_a	N (lbf)	0 (0)				0 (0)				0 (0)				0 (0)			
Coil Mass	M_c	kg (lb _m)	0.91 (2.01)				1.71 (3.77)				2.50 (5.52)				3.30 (7.28)			
Magnetic Channel Mass	M_n	kg/m (lb/in)	21.52 (1.21)				21.52 (1.21)				21.52 (1.21)				21.52 (1.21)			

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
050-120	D F	φ6.1 (.24)	0.75mm ² (18)
050-240	D E F G	φ6.1 (.24)	0.75mm ² (18)
050-360	D E F G	φ6.1 (.24)	0.75mm ² (18)
050-480	D E G	φ6.1 (.24)	0.75mm ² (18)