

Specifications LZ-075-HT-XXX

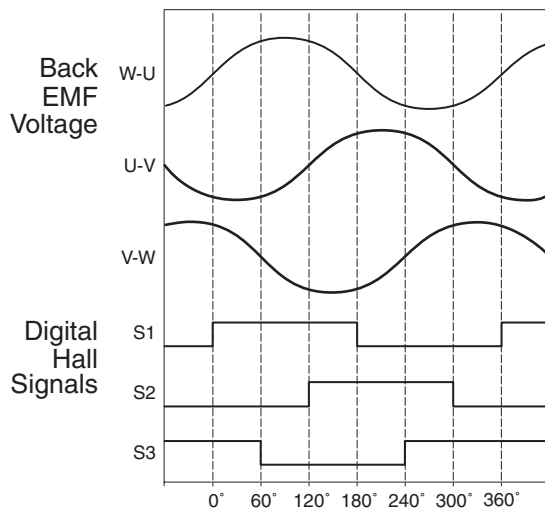


Performance Parameters	Symbol	Units	LZ-075-HT-120				LZ-075-HT-240				LZ-075-HT-360				LZ-075-HT-480			
Continuous Force ^{1,5,6,7}	F_{cTmax}	N (lbf)	181 (41)				362 (81)				544 (122)				725 (163)			
Peak Force ²	F_p	N (lbf)	906 (204)				1812 (407)				2718 (611)				3624 (815)			
Motor Constant ¹	K_M	$\frac{N}{\sqrt{W}}$ ($\frac{lbf}{\sqrt{W}}$)	18.3 (4.1)				25.8 (5.8)				31.7 (7.1)				36.5 (8.2)			
Thermal Resistance	R_{th}	°C/W	1.12				0.56				0.37				0.28			
Max Power Dissipation	P_{cTmax}	W	98				197				295				393			
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	$\frac{N}{A_{pk}}$ ($\frac{lbf}{A_{pk}}$)	66.3 (14.9)	N/A	38.3 (8.6)	N/A	66.3 (14.9)	132.6 (29.8)	38.3 (8.6)	76.5 (17.2)	66.3 (14.9)	198.9 (44.7)	38.3 (8.6)	114.8 (25.8)	66.3 (14.9)	132.6 (29.8)	N/A	76.5 (17.2)
Back EMF Constant p-p ^{3,4}	K_e	$\frac{V_p}{m/s}$ ($\frac{V_p}{in/s}$)	78.3 (2.0)	N/A	45.2 (1.1)	N/A	78.3 (2.0)	156.6 (4.0)	45.2 (1.1)	90.4 (2.3)	78.3 (2.0)	234.8 (6.0)	45.2 (1.1)	135.6 (3.4)	78.3 (2.0)	156.6 (4.0)	N/A	90.4 (2.3)
Peak Current ^{2,4}	I_p	A_{pk} (A_{rms})	13.7 (9.7)	N/A	23.7 (16.7)	N/A	27.3 (19.3)	13.7 (9.7)	47.3 (33.5)	23.7 (16.7)	41.0 (29.0)	13.7 (9.7)	71.0 (50.2)	23.7 (16.7)	54.7 (38.7)	27.3 (19.3)	N/A	47.3 (33.5)
Continuous Current ^{1,4,5,6}	I_{cTmax}	A_{pk} (A_{rms})	2.7 (1.9)	N/A	4.7 (3.3)	N/A	5.5 (3.9)	2.7 (1.9)	9.5 (6.7)	4.7 (3.3)	8.2 (5.8)	2.7 (1.9)	14.2 (10.0)	4.7 (3.3)	10.9 (7.7)	5.5 (3.9)	N/A	9.5 (6.7)
Resistance p-p ³ @20°C	R_{20}	ohm	12.25	N/A	4.08	N/A	6.12	24.50	2.04	8.17	4.08	36.75	1.36	12.25	3.06	12.25	N/A	4.08
Inductance p-p ³	L	mH	22.97	N/A	7.66	N/A	11.48	45.94	3.83	15.31	7.66	68.91	2.55	22.97	5.74	22.97	N/A	7.66
Mechanical Parameters																		
Magnetic Attraction	F_a	N (lbf)	0 (0)				0 (0)				0 (0)				0 (0)			
Coil Mass	M_c	kg (lb _m)	1.13 (2.49)				2.14 (4.72)				3.15 (6.95)				4.16 (9.18)			
Magnetic Channel Mass	M_n	kg/m (lb/in)	29.96 (1.68)				29.96 (1.68)				29.96 (1.68)				29.96 (1.68)			

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
075-120	D F	φ6.1 (.24)	0.75mm ² (18)
075-240	D E F G	φ6.1 (.24)	0.75mm ² (18)
075-360	D E F G	φ6.1 (.24)	0.75mm ² (18)
075-480	D E G	φ6.1 (.24)	0.75mm ² (18)