



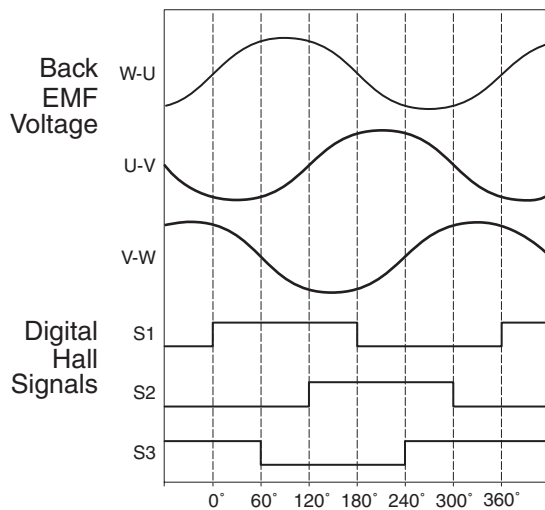
## Specifications LZ-075-T-XXX

Performance Parameters	Symbol	Units	LZ-075-T-120				LZ-075-T-240				LZ-075-T-360				LZ-075-T-480			
Continuous Force <sup>1,5,6,7</sup>	$F_{cTmax}$	N (lbf)	165 (37)				329 (74)				494 (111)				659 (148)			
Peak Force <sup>2</sup>	$F_p$	N (lbf)	824 (185)				1647 (370)				2471 (556)				3295 (741)			
Motor Constant <sup>1</sup>	$K_M$	$\frac{N\sqrt{-W}}{(lb_f\sqrt{-W})}$	16.6 (3.7)				23.5 (5.3)				28.8 (6.5)				33.2 (7.5)			
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 <sup>8</sup>	$V_{DC}$	Volts	325				325				325				325			
Electrical Cycle Length	$E_c$	mm	60				60				60				60			
Electrical Time Constant	$\tau_e$	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 <sup>1</sup>	$K_F$	$\frac{N/A_{pk}}{(lb_f/A_{pk})}$	60.3 (13.5)	N/A	34.8 (7.8)	N/A	60.3 (13.5)	120.5 (27.1)	34.8 (7.8)	69.6 (15.6)	60.3 (13.5)	180.8 (40.6)	34.8 (7.8)	104.4 (23.5)	60.3 (13.5)	120.5 (27.1)	N/A	69.6 (15.6)
Back EMF Constant p-p <sup>3,4</sup>	$K_e$	$\frac{V_p/m/s}{(V_p/in/s)}$	71.2 (1.8)	N/A	41.1 (1.0)	N/A	71.2 (1.8)	142.3 (3.6)	41.1 (1.0)	82.2 (2.1)	71.2 (1.8)	213.5 (5.4)	41.1 (1.0)	123.3 (3.1)	71.2 (1.8)	142.3 (3.6)	N/A	82.2 (2.1)
Peak Current <sup>2,4</sup>	$I_p$	$\frac{A_{pk}}{(A_{rms})}$	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 <sup>1,4,5,6</sup>	$I_{cTmax}$	$\frac{A_{pk}}{(A_{rms})}$	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 <sup>3</sup> @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 <sup>3</sup>	$L$	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
<b>Mechanical Parameters</b>																		
Magnetic Attraction	$F_a$	N (lbf)	0 (0)				0 (0)				0 (0)				0 (0)			
Coil Mass	$M_c$	kg (lb <sub>m</sub> )	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)	24.51 (1.37)				24.51 (1.37)				24.51 (1.37)				24.51 (1.37)			

**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 774cm<sup>2</sup> (120in<sup>2</sup>), 240 coil 1160cm<sup>2</sup> (180in<sup>2</sup>), 360 coil 1680cm<sup>2</sup> (260 in<sup>2</sup>), 480 coil 2060cm<sup>2</sup> (320 in<sup>2</sup>).
  - 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 <sup>2</sup> (18)
075-240	D E F G	φ6.1 (.24)	0.75mm <sup>2</sup> (18)
075-360	D E F G	φ6.1 (.24)	0.75mm <sup>2</sup> (18)
075-480	D E G	φ6.1 (.24)	0.75mm <sup>2</sup> (18)