



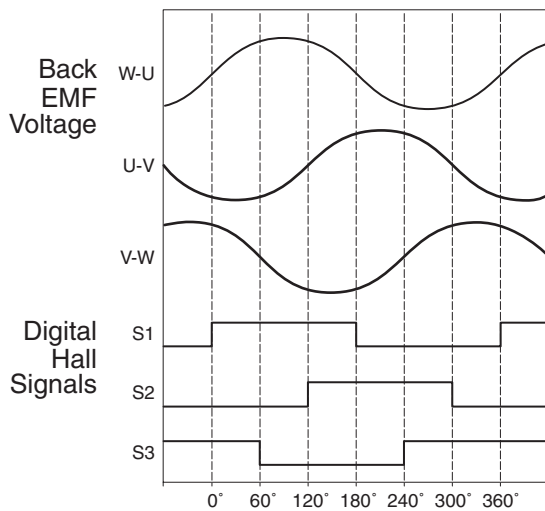
Specifications LZ-030-T-XXX

Performance Parameters	Symbol	Units	LZ-030-T-120				LZ-030-T-240				LZ-030-T-360				LZ-030-T-480			
Continuous Force ^{1,5,6,7}	F_{cTmax}	N (lbf)	80 (18)				160 (36)				239 (54)				319 (72)			
Peak Force ²	F_p	N (lbf)	399 (90)				798 (179)				1197 (269)				1595 (359)			
Motor Constant ¹	K_M	$\frac{N}{\sqrt{W}}$ ($\frac{lbf}{\sqrt{W}}$)	8.7 (2.0)				12.3 (2.8)				15.1 (3.4)				17.4 (3.9)			
Thermal Resistance	R_{th}	°C/W	1.31				0.65				0.44				0.33			
Max Power Dissipation	P_{cTmax}	W	84				168				252				336			
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	$\frac{N/A_{pk}}{(lbf/A_{pk})}$	24.1 (5.4)	N/A	13.9 (3.1)	N/A	24.1 (5.4)	48.2 (10.8)	13.9 (3.1)	27.8 (6.3)	24.1 (5.4)	72.3 (16.3)	N/A	41.8 (9.4)	24.1 (5.4)	48.2 (10.8)	N/A	27.8 (6.3)
Back EMF Constant p-p ^{3,4}	K_e	$\frac{V_p/m/s}{(V_p/in/s)}$	28.5 (0.7)	N/A	16.4 (0.4)	N/A	28.5 (0.7)	56.9 (1.4)	16.4 (0.4)	32.9 (0.8)	28.5 (0.7)	85.4 (2.2)	N/A	49.3 (1.3)	28.5 (0.7)	56.9 (1.4)	N/A	32.9 (0.8)
Peak Current ^{2,4}	I_p	A_{pk} (A_{rms})	16.5 (11.7)	N/A	28.7 (20.3)	N/A	33.1 (23.4)	16.5 (11.7)	57.3 (40.5)	28.7 (20.3)	49.6 (35.1)	16.5 (11.7)	N/A	28.7 (20.3)	66.2 (46.8)	33.1 (23.4)	N/A	57.3 (40.5)
Continuous Current ^{1,4,5,6}	I_{cTmax}	A_{pk} (A_{rms})	3.3 (2.3)	N/A	5.7 (4.1)	N/A	6.6 (4.7)	3.3 (2.3)	11.5 (8.1)	5.7 (4.1)	9.9 (7.0)	3.3 (2.3)	N/A	5.7 (4.1)	13.2 (9.4)	6.6 (4.7)	N/A	11.5 (8.1)
Resistance p-p ³ @20°C	R_{20}	ohm	7.15	N/A	2.38	N/A	3.57	14.29	1.19	4.76	2.38	21.44	N/A	7.15	1.79	7.15	N/A	2.38
Inductance p-p ³	L	mH	13.40	N/A	4.47	N/A	6.70	26.80	2.23	8.93	4.47	40.20	N/A	13.40	3.35	13.40	N/A	4.47
Mechanical Parameters																		
Magnetic Attraction	F_a	N (lbf)	0 (0)				0 (0)				0 (0)				0 (0)			
Coil Mass	M_c	kg (lbf _m)	0.74 (1.64)				1.37 (3.02)				2.00 (4.41)				2.63 (5.79)			
Magnetic Channel Mass	M_n	kg/m (lbf/in)	11.66 (0.65)				11.66 (0.65)				11.66 (0.65)				11.66 (0.65)			

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
030-120	D F	φ6.1 (.24)	0.75mm ² (18)
030-240	D E F G	φ6.1 (.24)	0.75mm ² (18)
030-360	D E G	φ6.1 (.24)	0.75mm ² (18)
030-480	D E G	φ6.1 (.24)	0.75mm ² (18)