



P110 064

Electrical Data	P110 064 068 12	P110 064 015 12	P110 064 2.5 12	
1 Resistance per Phase, typ	62.0	15.0	2.5	Ohms
2 Inductance per Phase, typ	46.0	12.0	2.2	mH
3 Nominal Phase Current (2 ph. On)	0.12	0.25	0.63	A
4 Nominal Phase Current (1 ph. On)	0.17	0.35	0.90	A
5 Back EMF amplitude	10.80	5.20	2.00	V/kstep/s
Coil independent parameters				
6 Holding Torque, nominal current	7 (0.99)	7 (0.99)	7 (0.99)	mNm (oz-in)
7 Holding Torque, 1.5x nominal current (1)	10 (1.42)	10 (1.42)	10 (1.42)	mNm (oz-in)
8 Detent Torque	1.65 (0.24)	1.65 (0.24)	1.65 (0.24)	mNm (oz-in)
9 Rotor Inertia	0.400	0.400	0.400	kgm ² x 10 ⁻⁷
10 Step Angle	15	15	15	Degree
11 Absolute accuracy 2 ph. On, Full step mode	+/- 5%	+/- 5%	+/- 5%	% Full Step
12 Steps Per Revolution	24	24	24	
13 Ambient Temperature Range (operating)	-20 to 50 (-4 to 122)	-20 to 50 (-4 to 122)	-20 to 50 (-4 to 122)	°C (°F)
14 Maximum Coil Temperature	130 (266)	130 (266)	130 (266)	°C (°F)
15 Thermal Resistance Coil-ambient (2)	45	45	45	°C/W
16 Natural Resonance Frequency (nominal current)	160	160	160	Hz
17 Electrical Time Constant	0.80	0.80	0.80	ms
18 Angular Acceleration (nominal current)	175'000	175'000	175'000	rad/s ²
19 Bearing Type	Ball	Ball	Ball	
20 Dielectric Withstanding Voltage	500 VRMS for 5 seconds (30@2N)			VAC
21 Radial Shaft Play	30@2N			µm
22 Axial Shaft Play	40@2N			µm
23 Maximum Radial Shaft Load	2.5 (9)			N (oz)
24 Maximum Axial Shaft Load (3)	2.5 (9)			N (oz)
25 Weight	23 (0.81)			g (oz)
26 Power Rate (nominal current)	1.2			kW/s

- (1) Measured with 1 phase ON. The max coil temperature must be respected
- (2) Motor unmounted
- (3) Shaft must be supported when press-fitting a pulley or

