



P430

Electrical Data	P430 258 013 01 (series)	P430 258 013 01 (parallel)	P430 258 005 01 (series)	P430 258 005 01 (parallel)	
1 Resistance per Phase, typ	26.0	6.5	10.0	2.5	Ohms
2 Inductance per Phase, typ	40.0	10.0	14.0	3.5	mH
3 Nominal Phase Current (2 ph. On)	0.34	0.68	0.56	1.12	A
4 Nominal Phase Current (1 ph. On)	0.50	1.00	0.80	1.60	A
5 Back EMF amplitude	7.50	3.80	4.70	2.30	V/kstep/s
<b>Coil independent parameters</b>					
6 Holding Torque, nominal current	60 (8.5)	60 (8.5)	60 (8.5)	60 (8.5)	mNm (oz-in)
7 Holding Torque, 1.5x nominal current (1)	90 (12.7)	90 (12.7)	90 (12.7)	90 (12.7)	mNm (oz-in)
8 Detent Torque	3.5 (0.5)	3.5 (0.5)	3.5 (0.5)	3.5 (0.5)	mNm (oz-in)
9 Rotor Inertia	3.000	3.000	3.000	3.000	kgm <sup>2</sup> x 10 <sup>-7</sup>
10 Step Angle	4	3.6	3.6	3.6	Degree
11 Absolute accuracy 2 ph. On, Full step mode	+/- 5%	+/- 5%	+/- 5%	+/- 5%	% Full Step
12 Steps Per Revolution	100	100	100	100	
13 Ambient Temperature Range (operating)	-20 to 50 (-4 to 122)	-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)	130 (266)	°C (°F)
15 Thermal Resistance Coil-ambient (2)	11	11	11	11	°C/W
16 Natural Resonance Frequency (nominal current)	360	360	360	360	Hz
17 Electrical Time Constant	1.50	1.50	1.50	1.50	ms
18 Angular Acceleration (nominal current)	200,000	200,000	200,000	200,000	rad/s <sup>2</sup>
19 Bearing Type	Ball	Ball	Ball	Ball	
20 Dielectric Withstanding Voltage	500 VRMS for 5 seconds (15@5N)				VAC
21 Radial Shaft Play					15@5N µm
22 Axial Shaft Play					10@5N µm
23 Maximum Radial Shaft Load					20 (72) N (oz)
24 Maximum Axial Shaft Load (3)					30 (108) N (oz)
25 Weight					100 (3.5) g (oz)
26 Power Rate (nominal current)					12.0 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

