



16ECP52 - 8B - **

Electrical Data	**	220	112	49	
1 Nominal Voltage	U_N	24	24	24	Volt
2 Optimization direction	-	Symetrical	Symetrical	Symetrical	-
3 No-Load Speed	n_0	6,144	12,100	27,800	rpm
4 Typical no-load current	I_0	19.0	41.0	134.0	mA
5 Max continuous mechanical power (@ 25°C)	P_{max}	30.0	30.0	30.0	W
6 Max continuous current	$I_{e max}$	0.4	0.7	1.7	A
7 Max continuous torque	$M_{e max}$	13.2 (1.87)	13.5 (1.92)	13.9 (1.97)	mNm (oz-in)
8 Back EMF Constant	K_E	3.77	1.93	0.84	V/1000 rpm
9 Torque Constant	k_M	36.0	18.4	8.0	mNm/A
10 Motor regulation	R/k^2	18.9	18.3	17.2	$10^3/Nms$
11 Motor regulation	$k/R^{1/2}$	7.3 (1.04)	7.4 (1.05)	7.7 (1.1)	mNm/W ^{1/2} (oz-in/W ^{1/2})
12 Internal resistance - phase to phase	R_I	24.50	6.20	1.10	ohms
13 Line to line resistance at connectors	R_L	24.60	6.30	1.17	ohms
14 Inductance phase to phase	L	2.32	0.60	0.12	mH
15 Mechanical Time Constant	t_m	1.9	1.8	1.7	ms
16 Electrical Time Constant	t_e	0.10	0.10	0.10	ms

General Data				
17 Maximum motor speed	n_{max}		40,000	rpm
18 Ambient working temperature range	-		-30 to + 100 (-22 to + 212)	°C (°F)
19 Ambient storage temperature range	-		-40 to + 100 (-40 to + 212)	°C (°F)
20 Ball bearings preload	-		5.3	N
21 Axial static force without shaft support (max)	-		34.0	N
22 Maximum winding temperature	-		125 (257)	°C (°F)
23 Thermal Resistance	R_{th1}/R_{th2}		3 / 18.5	°C/W
24 Thermal time constant	t_w		750	s
25 Weight	-		62 (2.19)	g (oz)
26 Rotor Inertia	J		1.000	g.cm ²
27 Hall sensor electrical phasing	-		120	Electrical °

16ECP52 - 8B - ** - 01 with hall effect sensors	
Wire	Description
Grey	Phase 1
Violet	Phase 2
Blue	Phase 3
Green	3.5 to 27V DC
Yellow	GND
Orange	Sensor 1
Red	Sensor 2
Brown	Sensor 3

