



Dimensions in mm

Electrical Data	Symbol	16ECS36-8B-xxx.01			Unit
		108	68	49	
1 Nominal Voltage	U_N	24	24	24	Volt
2 Optimization Direction	-	Symmetrical	Symmetrical	Symmetrical	-
3 No Load Speed	n_0	29,000	45,900	63,100	rpm
4 Typical No Load Current	I_0	50	80	110	mA
5 Max Continuous Mechanical Power (@25°C)	P_{max}	39.5	39.5	39.5	W
6 Max Continuous Current	$I_{e,max}$	0.9	1.6	2.3	A
7 Max Continuous Torque	$M_{e,max}$	7.1 (1)	7.9 (1.11)	8.2 (1.16)	mNm (oz-in)
8 Back EMF Constant	k_E	0.8	0.51	0.37	V/1000 rpm
9 Torque Constant	k_M	7.7	4.85	3.5	mNm/A
10 Motor Regulation	R/k^2	69.2	56.2	52	10 ³ /Nms
11 Motor Regulation	$k/R^{1/2}$	3.8 (0.54)	4.2 (0.59)	4.4 (0.61)	mNm/W ^{1/2} (oz-in/W ^{1/2})
12 Internal Resistance - phase to phase	R_i	4.05	1.32	0.65	ohms
13 Line to Line Resistance at Connectors	R_L	4.13	1.37	0.70	ohms
14 Inductance Phase to Phase	L	0.32	0.13	0.07	mH
15 Mechanical Time Constant	τ_m	3.8	3.1	2.9	ms
16 Electrical Time Constant	τ_e	0.08	0.09	0.1	ms

General Data				
17 Maximum Motor Speed	n_{max}		73,000	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 w/o Shaft Support (max)	-		34	N
22 Maximum Winding Temperature	-		125 (257)	°C (°F)
23 Thermal Resistance	R_{th}		3.5 / 17	°C/W
24 Thermal Time Constant	τ_w		580	s
25 Weight	-		41 (1.45)	g (oz)
26 Rotor Inertia	J		0.6	g-cm ²
27 Hall Sensor Electrical Phasing*	-		120	Electrical °

*Also available without Hall sensors

Wire	Description
Gray	Phase 1
Violet	Phase 2
Blue	Phase 3
Green	3 to 24V DC
Yellow	GND
Orange	Sensor 1
Red	Sensor 2
Brown	Sensor 3

with hall effect sensor

