



Dimensions in mm.

Electrical Data	Symbol	60ECF38-8B-XXX.01		Unit
		14	28	
1 Nominal Voltage	U_n	24	48	Volt
2 Optimization Direction	-	Symmetrical	Symmetrical	-
3 No-Load Speed	n_0	4'300	4'020	rpm
4 No-Load Current, Typical	I_0	493	221	mA
5 Continuous Mechanical Power, Max (@25°C)	P_{max}	100	100	W
6 Continuous Current, Max	$I_{e max}$	5.14	2.61	A
7 Continuous Torque, Max	$M_{e max}$	269 (38.09)	298 (42.2)	mNm (oz-in)
8 Back EMF Constant	k_E	5.5	11.8	V/1000 rpm
9 Torque Constant	k_M	57.3 (8.11)	113 (16)	mNm/A (oz-in/A)
10 Motor Regulation	R/k^2	0.089	0.08	10 ³ /Nms
11 Internal Resistance - Phase to Phase	R_i	0.293	1.023	ohms
12 Line to Line Resistance	R_L	0.293	1.023	ohms
13 Inductance - Phase to Phase	L	0.279	1.28	mH
14 Mechanical Time Constant	T_m	8.86	7.32	ms
15 Electrical Time Constant	T_e	0.952	1.25	ms

General Data				
16 Motor Speed, Max	$n_{e max}$		6'000	rpm
17 Ambient Operating Temperature Range	-		-40 to 100 (-40 to 212)	°C (°F)
18 Ambient Storage Temperature Range	-		-40 to 100 (-40 to 212)	°C (°F)
19 Ball Bearings Preload	-		12 (2.7)	N (lbs)
20 Axial Static Force w/o Shaft Support, Max	-		170 (38.2)	N (lbs)
21 Winding Temperature, Max	-		125 (257)	°C (°F)
22 Thermal Resistance (slotless)	R_{th}		6.3	°C/W
23 Thermal Time Constant	T_w		90	s
24 Weight	-		355 (12.52)	g (oz)
25 Rotor Inertia	J		835 (11824)	gcm ² (oz-in-sec ² 10 ⁻⁶)
26 Hall Sensor Electrical Phasing*	-		120	Electrical °

*Also available without Hall sensors

Wire	Description
Gray	Phase 1 (AWG 14)
Violet	Phase 2 (AWG 14)
Blue	Phase 3 (AWG 14)
Red	4.5 to 24 V DC (AWG 24)
Black	GND (AWG 24)
Brown	Hall Sensor 1 (AWG 24)
Yellow	Hall Sensor 2 (AWG 24)
Orange	Hall Sensor 3 (AWG 24)

