



Dimensions in mm.

Electrical Data	Symbol	22ECT35 10B-xxx.01			Unit
		32	52	80	
1 Nominal Voltage	$U_N$	12	24	24	Volt
2 Optimization Direction	-	Symmetrical	Symmetrical	Symmetrical	-
3 No-Load Speed	$n_0$	10,330	12,400	8,100	rpm
4 Typical No-Load Current	$I_0$	100	90	40	mA
5 Max Continuous Mechanical Power (@25°C)	$P_{max}$	34.0	34.0	34.0	W
6 Max Continuous Current	$I_{e,max}$	1.8	1.1	0.7	A
7 Max Continuous Torque	$M_{e,max}$	20 (2.84)	19.9 (2.82)	19.5 (2.77)	mNm (oz-in)
8 Back EMF Constant	$k_E$	1.14	1.86	2.86	V/1000 rpm
9 Torque Constant	$k_M$	10.9	17.8	27.3	mNm/A
10 Motor Regulation	$R/k^2$	11.8	11.8	12.3	$10^3/\text{Nms}$
11 Motor Regulation	$k/R^{1/2}$	9.2 (1.31)	9.2 (1.31)	9 (1.28)	$\text{mNm}/\text{W}^{1/2}$ (oz-in/ $\text{W}^{1/2}$ )
12 Internal Resistance - phase to phase	$R_i$	1.40	3.73	9.20	ohms
13 Line to Line Resistance at Connectors	$R_L$	1.43	3.76	9.23	ohms
14 Inductance Phase to Phase	$L$	0.12	0.32	0.75	mH
15 Mechanical Time Constant	$\tau_m$	4.2	4.2	4.4	ms
16 Electrical Time Constant	$\tau_e$	0.09	0.08	0.08	ms

General Data				
17 Maximum Motor Speed	$n_{max}$		20,000	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	-		6.8	N
21 Axial Static Force w/o Shaft Support (max)	-		45	N
22 Maximum Winding Temperature	-		125 (257)	°C (°F)
23 Thermal Resistance	$R_{th}$		2.3 / 13	°C/W
24 Thermal Time Constant	$\tau_w$		829	s
25 Weight	-		67 (2.37)	g (oz)
26 Rotor Inertia	$J$		3.6	g-cm <sup>2</sup>
27 Hall Sensor Electrical Phasing*	-		120	Electrical °

\*Available without hall sensor

Wire	Description
Gray	Phase 1
Violet	Phase 2
Blue	Phase 3
Green	3.5 to 24V DC
Yellow	GND
Orange	Sensor 1
Red	Sensor 2
Brown	Sensor 3
Black	NTC 10 kohm
White	NTC 10 kohm

with hall effect sensor

