



Dimensions in mm.

Electrical Data	Symbol	32BF 3C-K.11	32BF 8B-10	Unit
1 Nominal Voltage	U_N	12		Volt
2 Optimization Direction	-	Symetrical		-
3 No-Load Speed	n_0	13,600		rpm
4 Typical No-Load Current	I_0	100.0		mA
5 Max Continuous Mechanical Power (@25°C)	P_{max}	40.0		W
6 Max Continuous Current	$I_{e,max}$	1.5		A
7 Max Continuous Torque	$M_{e,max}$	13 (1.85)		mNm (oz-in)
8 Back EMF Constant	k_E	0.87		V/1000 rpm
9 Torque Constant	k_M	8.3		mNm/A
10 Motor Regulation	R/k^2	57.5		10 ³ /Nms
11 Motor Regulation	$k/R^{1/2}$	4.2 (0.6)		mNm/W ^{1/2} (oz-in/W ^{1/2})
12 Internal Resistance - phase to phase	R_i	3.95		ohms
13 Line to Line Resistance at Connectors	R_L	3.95		ohms
14 Inductance Phase to Phase	L	0.12		mH
15 Mechanical Time Constant	τ_m	64.9		ms
16 Electrical Time Constant	τ_e	0.03		ms

General Data				
17 Maximum Motor Speed	n_{max}	30,000		rpm
18 Ambient Working Temperature Range	-	-30 to +80 (-22 to +176)		°C (°F)
19 Ambient Storage Temperature Range	-	-40 to +80 (-40 to +176)		°C (°F)
20 Ball Bearings Preload	-	2.7		N
21 Axial Static Force w/o Shaft Support (max)	-	27.0		N
22 Maximum Winding Temperature	-	125 (257)		°C (°F)
23 Thermal Resistance	R_{th}	13.0		°C/W
24 Thermal Time Constant	τ_w	550		s
25 Weight	-	27 (0.96)		g (oz)
26 Rotor Inertia	J	11.300		g-cm ²
27 Hall Sensor Electrical Phasing*	-	120		Electrical °

*Available without hall sensor

Wire	Description
1	Phase 1
2	Phase 2
3	Phase 3
4	3.5 to 24V DC
5	GND
6	Sensor 1
7	Sensor 2
8	Sensor 3

with hall effect sensor (8B)

Wire	Description
1	center point of Y winding
2	Phase 1
3	Phase 2
4	Phase 3

sensorless (3C)

