



82(NEMA34)-35240-110 Brushless DC Motor Product Datasheet

82-35240-110 BLDC Overview

- Three Phase, Six Step, Full Wave, Y-Circuit
- Sintered Nd-Fe-B Permanent Magnet Rotor
- Hall Sensor
- Step (Low Cogging)
- Slot

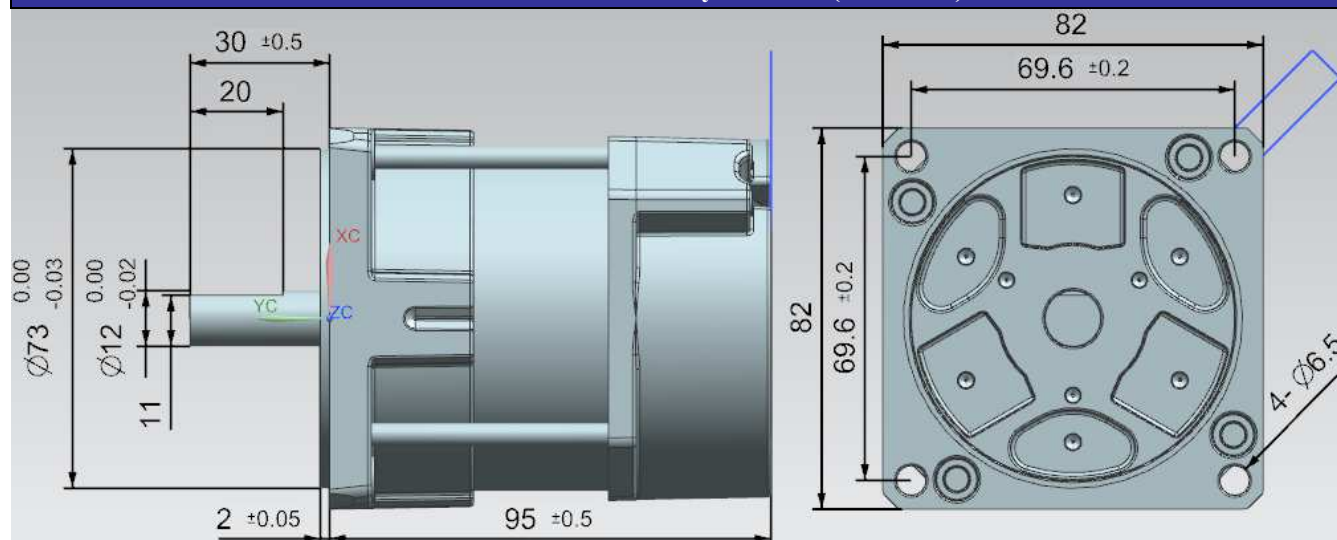


Parameters	82-35240-110 BLDC Absolute Maximum Ratings	Unit
Rotor/Bearing Broken Speed	20000	rpm
Winding and Rotor Temperature	130	°C
Front/Rear Lids Surface Temperature	0 to 70	°C
HIPOT (Winding to Shell)	2000VDC, 1s	

Notice: The Absolute Maximum Ratings are those values beyond which the safety of the device cannot be guaranteed

Parameters	82-35240-110 BLDC Intrinsic Characteristics (20°C)	Unit
Resistance (Including Line)	3.1	Ohm
Inductance (Including Line)	8.3	mH
Speed-Torque Gradient	2400	rpm/Nm
Torque Constant	0.22	Nm/A
Speed Constant	47	rpm/V
Back-EMF Constant	21	mV/rpm
Rotor Magnetic Poles	4	Poles
Weight (Including Line)	Approximate 1600	g

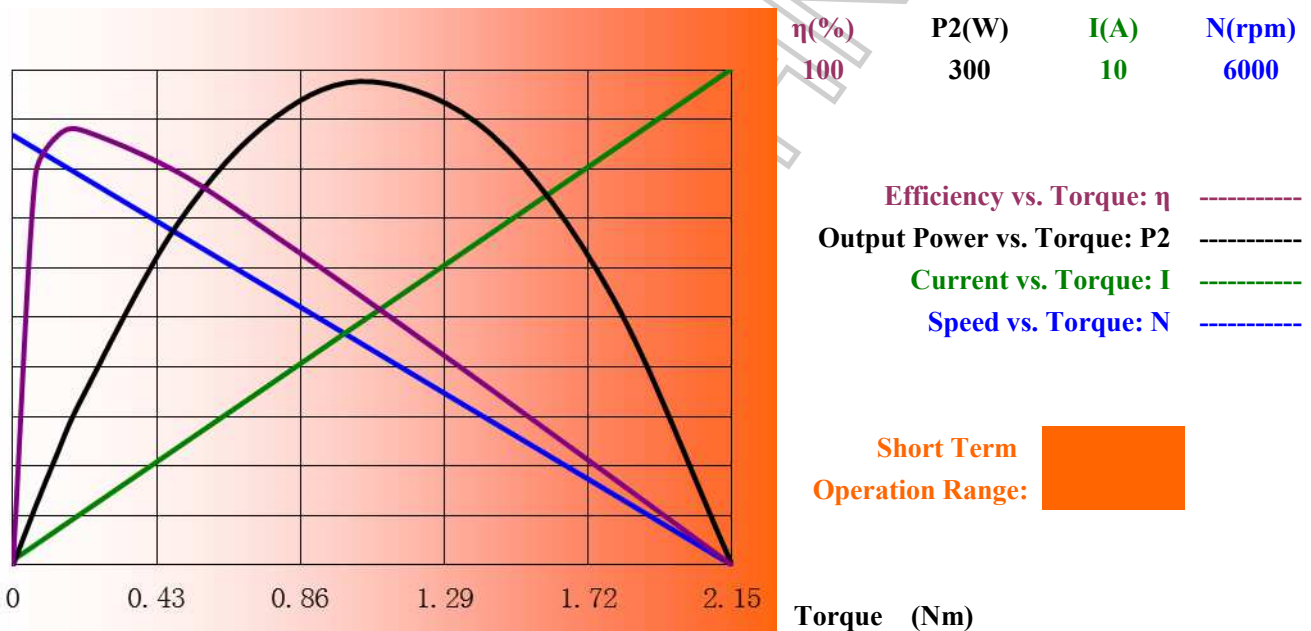
82-35240-110 BLDC Physical Size (Unit: mm)



Notice: Shaft could be custom made in batch order.

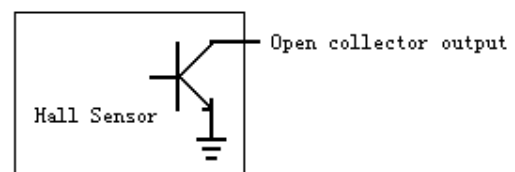
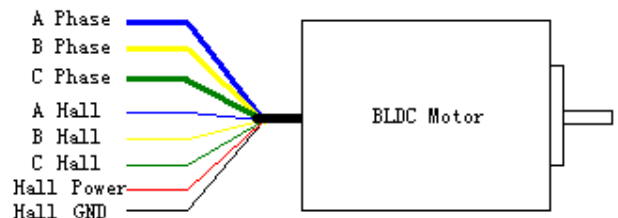


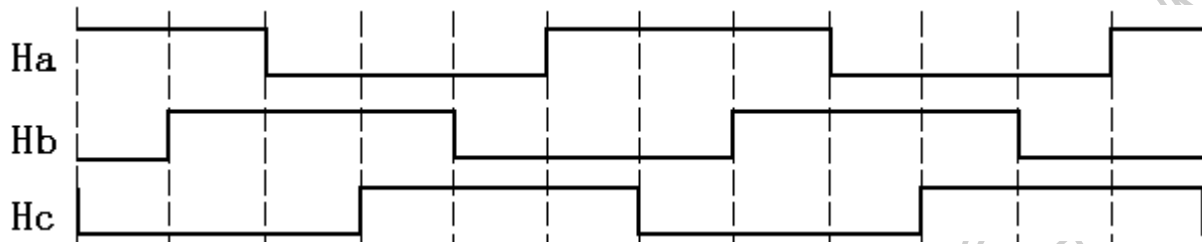
Parameters	82-35240-110 BLDC Performance Characteristics (20°C)					Unit
Nominal Voltage	110	VAC	Rectified and Filted	155	VDC	V
Maximum Output Power (P2)	290					W
(See Curves Below)	No Load Point	Some Loaded Points Performance				
Output Torque (T)	0	0.2	0.3	0.4	0.5	Nm
Output Speed (N)	5200	4720	4480	4240	4000	rpm
Input Current (I)	0.10	1.0	1.5	1.9	2.4	AAC
Output Power (P2)	0	99	141	178	209	W
Efficiency (η)	0	89	87	84	80	%
External Forced Ventilation Cooling	保持通风孔畅通！如果 PTC 频繁保护（阻值大于 1K 欧），外部必须安装更有效的冷却装置，否则电机因为过热而损坏。					



82-35240-110 BLDC Connection Diagram and Hall Output Waveforms

- Three Phases: AWG18, thick lines, Blue--A phase, Yellow--B phase, Green--C phase
- Halls: AWG24, thin lines, Blue--A hall, Yellow--B hall, Green--C hall, Red--Hall Positive, Black--Hall GND
- Hall Supply Voltage: 4.5 to 16VDC Regulated Supply
- Hall Power Supply Current: Less than 20mA
- Hall Output: Open collector. Require external pull-up resistors. Maximum output voltage is 16V
- Electrical Hall Sensor Phasing: 120°
- PTC: MZ6-105, Tk=105C, AWG24, Brown--Brown.
- Line Length: 0.5m

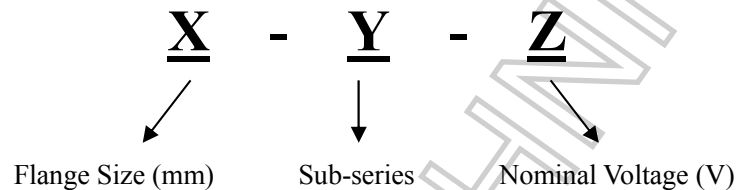




Hall Sensor Output Commutation Waveforms

Notice: The A, B, C three windings and Ha, Hb, Hc three hall sensors must be connected correctly, otherwise the controller and motor may be damaged.

Eletechnic BLDC Motor Product Code Regulation



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Page 3

