



YS71-60225-220 Brushless DC Motor Product Datasheet

YS71-60225-220 BLDC Overview

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



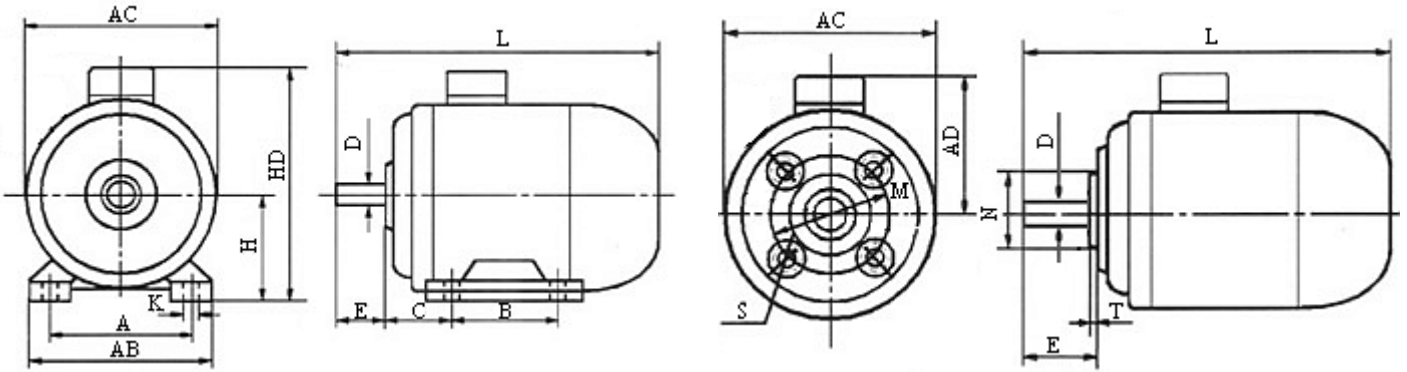
Parameters	YS71-60225-220 BLDC Absolute Maximum Ratings	Unit
Peak Current	20.8	A
Speed	6000	rpm
Winding and Rotor Temperature	-20 to +130	°C
Ambient Temperature	-20 to +85	°C

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

Parameters	YS71-60225-220 BLDC Intrinsic Characteristics (20°C)	Unit
Resistance (Including 0.5m Line)	1.7	Ohm
Speed-Torque Gradient	210	rpm/Nm
Torque Constant	0.52	Nm/A
Speed Constant	20	rpm/V
Back-EMF Constant	51	mV/rpm
Rotor Magnetic Poles	4	Poles
Ball Bearing No Load Continuous Life (At Nominal Voltage)	20000	Hours
Weight (Including 0.5m Line)	Approximate 5800	g

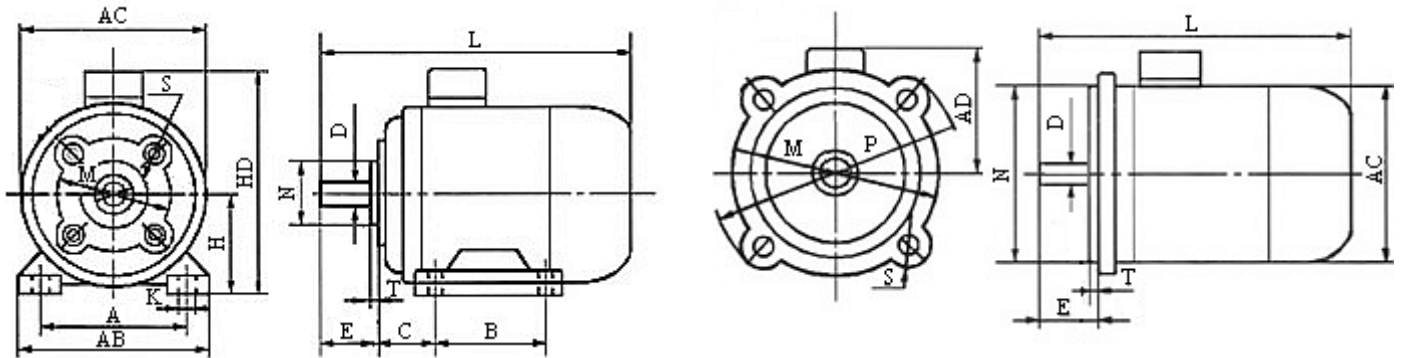


YS71-60225-220 BLDC Physical Size (Unit: mm)



IMB3

IMB14



IMB34

IMB5

IMB3	A	B	C	D	E	H	K	L	AB	AC	HD
	112	90	45	14	30	71	7.5	260	140	135	180

IMB14	D	E	L	M	N	S	T	AC	AD
	14	30	260	85	70	M6	3.5	135	110

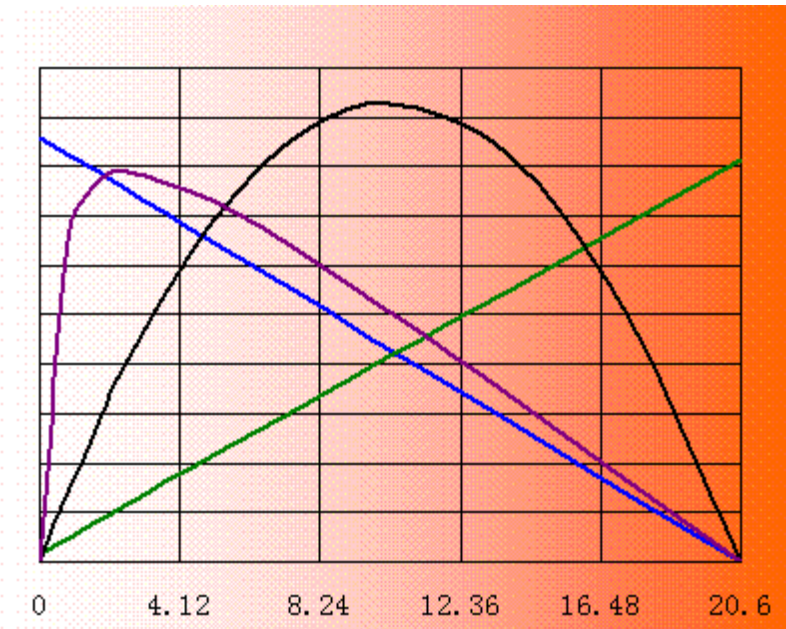
IMB34	A	B	C	D	E	H	K	L	M	N	S	T	AB	AC	HD
	112	90	45	14	30	71	7.5	260	85	70	M6	3.5	140	135	180

IMB5	D	E	L	M	N	P	S	T	AC	AD
	14	30	260	130	110	160	10	3.5	132	110

- Feet: Removable
- Outer Shaft: Standard Dia 14, Max Dia 15



Parameters	YS71-60225-220 BLDC Performance Characteristics (20°C)					Unit
Nominal Voltage	220					V
Maximum Output Power	2322					W
(See Curves Below)	No Load Point	Some Loaded Points Performance				
Output Torque	0	2	3	4	5	Nm
Output Speed	4300	3880	3670	3460	3250	rpm
Input Current	0.85	4.72	6.65	8.59	10.52	A
Output Power	0	813	1153	1449	1702	W
Efficiency	0	78	79	77	74	%
Internal Fan Air Blast Cooling	<u>If the shell temperature of the motor is higher than 85°C, more effective cooling equipments must be installed. Otherwise the motor may be damaged by hotness.</u>					



η (%) P(W) I(A) N(rpm)
 100 2500 50 5000

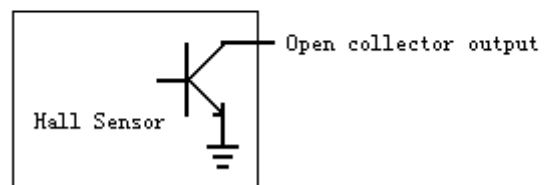
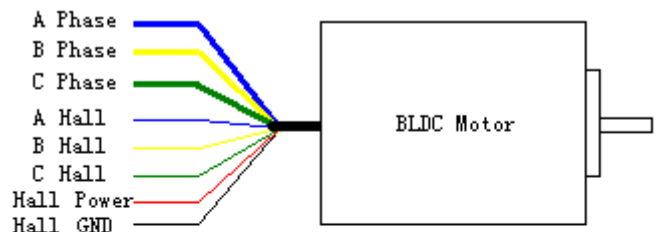
Speed vs. Torque : N -----
 Current vs. Torque : I -----
 Output Power vs. Torque : P -----
 Efficiency vs. Torque : η -----

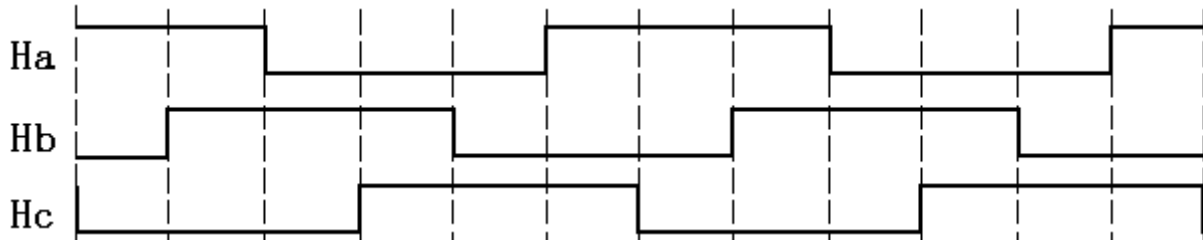
Short Term
 Operation Range:

Torque(Nm)

YS71-60225-220 BLDC Connection Diagram and Hall Output Waveforms

- Connection: Blue thick--A phase, Yellow thick--B phase, Green thick--C phase, Blue thin--A hall, Yellow thin--B hall, Green thin--C hall, Red thin--Hall power supply, Black thin--Hall GND
- Hall Supply Voltage: 4.5 to 16VDC Regulated Supply
- Hall Power Supply Current: Less than 30mA
- Hall Output: Open collector. Require external pull-up resistors for proper logical operation. Maximum output voltage is 16V
- Electrical Hall Sensor Phasing: 120°
- Line Length: 0.5m, (Please order if have special requirement)

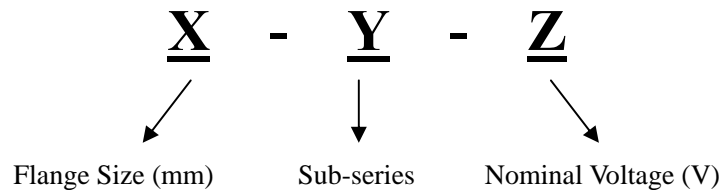




Hall Sensor Output Commutation Waveforms

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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