



Φ 20-2219-12 Brushless DC Motor for Hand Piece Product Datasheet

Φ 20-2219-12 BLDC Overview

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

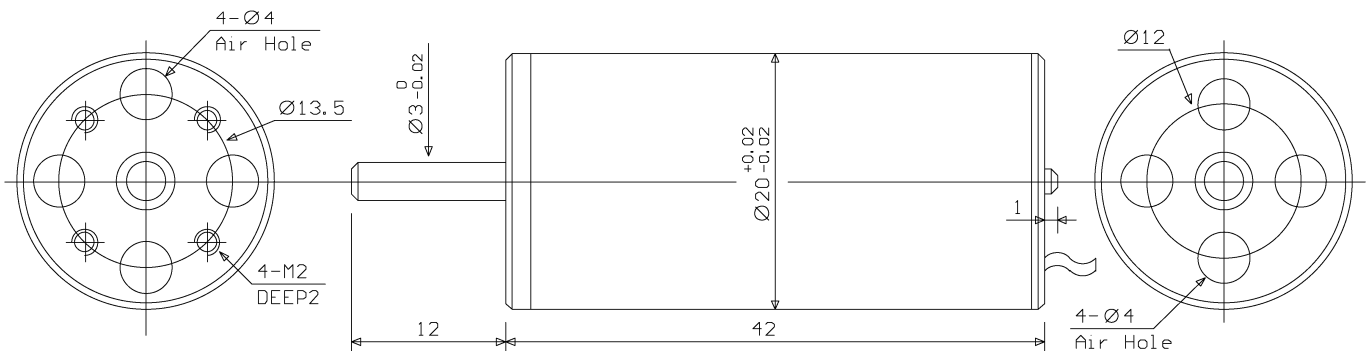


Parameters	Φ 20-2219-12 BLDC Absolute Maximum Ratings	Unit
Continuous Current	13.0	A
Speed	60000	rpm
Winding and Rotor Temperature	-20 to +150	°C
Ambient Temperature	-20 to +85	°C
Storage Temperature	-20 to +150	°C

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

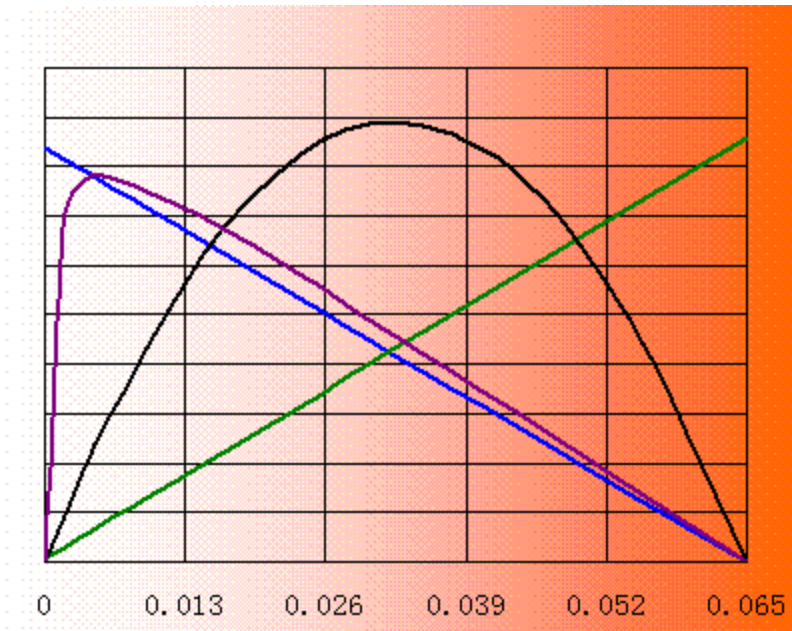
Parameters	Φ 20-2219-12 BLDC Intrinsic Characteristics (20°C)	Unit
Resistance (Including 0.1m Line)	0.59	Ohm
Speed-Torque Gradient	645000	rpm/Nm
Torque Constant	0.0025	Nm/A
Speed Constant	3490	rpm/V
Back-EMF Constant	0.28	mV/rpm
Rotor Magnetic Poles	2	Poles
Ball Bearing No Load Continuous Life (At Nominal Voltage)	10000	<u>(Please order if have special requirement)</u> Hours
Weight (Including 0.1m Line)	Approximate 47	g

Φ 20-2219-12 BLDC Physical Size (Unit: mm)





Parameters	Φ20-2219-12 BLDC Performance Characteristics (20°C)					Unit
Nominal Voltage	12					V
Maximum Output Power	71					W
(See Curves Below)	No Load Point	Some Loaded Points Performance				
Output Torque	0	0.005	0.008	0.011	0.015	Nm
Output Speed	41900	38680	36740	34810	32230	rpm
Input Current	0.20	2.16	3.34	4.52	6.09	A
Output Power	0	20	31	40	51	W
Efficiency	0	78	77	74	69	%
No Load Temperature Rising	30					°C



η (%) P(W) I(A) N(rpm)
 100 80 30 50000

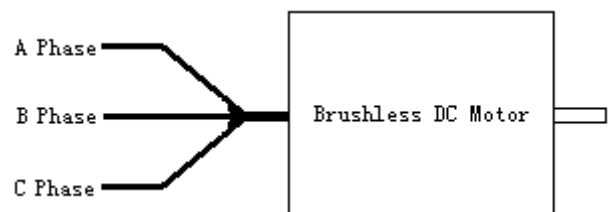
Speed vs. Torque : N -----
 Current vs. Torque : I -----
 Output Power vs. Torque : P -----
 Efficiency vs. Torque : η -----

Short Term
 Operation Range:

Torque(Nm)

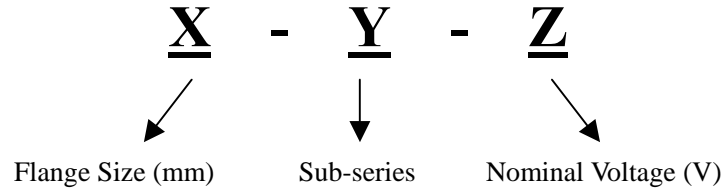
Φ20-2219-12 BLDC Connection Diagram

- The running direction depends on the connection sequence of A, B, C three phase lines. Exchanging any two lines of the three will cause the motor to run in the opposite direction.
- Line Length: 0.1m, (Please order if have special requirement)





Eletechnic BLDC Motor Product Code Regulation



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