

JYQD_V6.02 Brushless DC Motor Driver Board



(For Brushless Sensorless DC motor)

Model number	Operating temp.	Operating voltage	Max. Current	Continue Woring Current	·PWM speed control (1-20khz)	Analog voltage speed regulation	O.V / L.V protection	Speed pulse signal output	Breaking	Forced Cooling
JYQD-V6.02	-20 to 85℃	12V-24V	30A	20A	Duty cycle 0-100%	0-5V	√	√	√	×
JYQD-V6.02	-20 to 85℃	12V-24V	45A	25A	Duty cycle 0-100%	0-5V	√	√	√	√
JYQD-V6.02	-20 to 85℃	12V-24V	60A	30A	Duty cycle 0-100%	0-5V	√	√	√	√

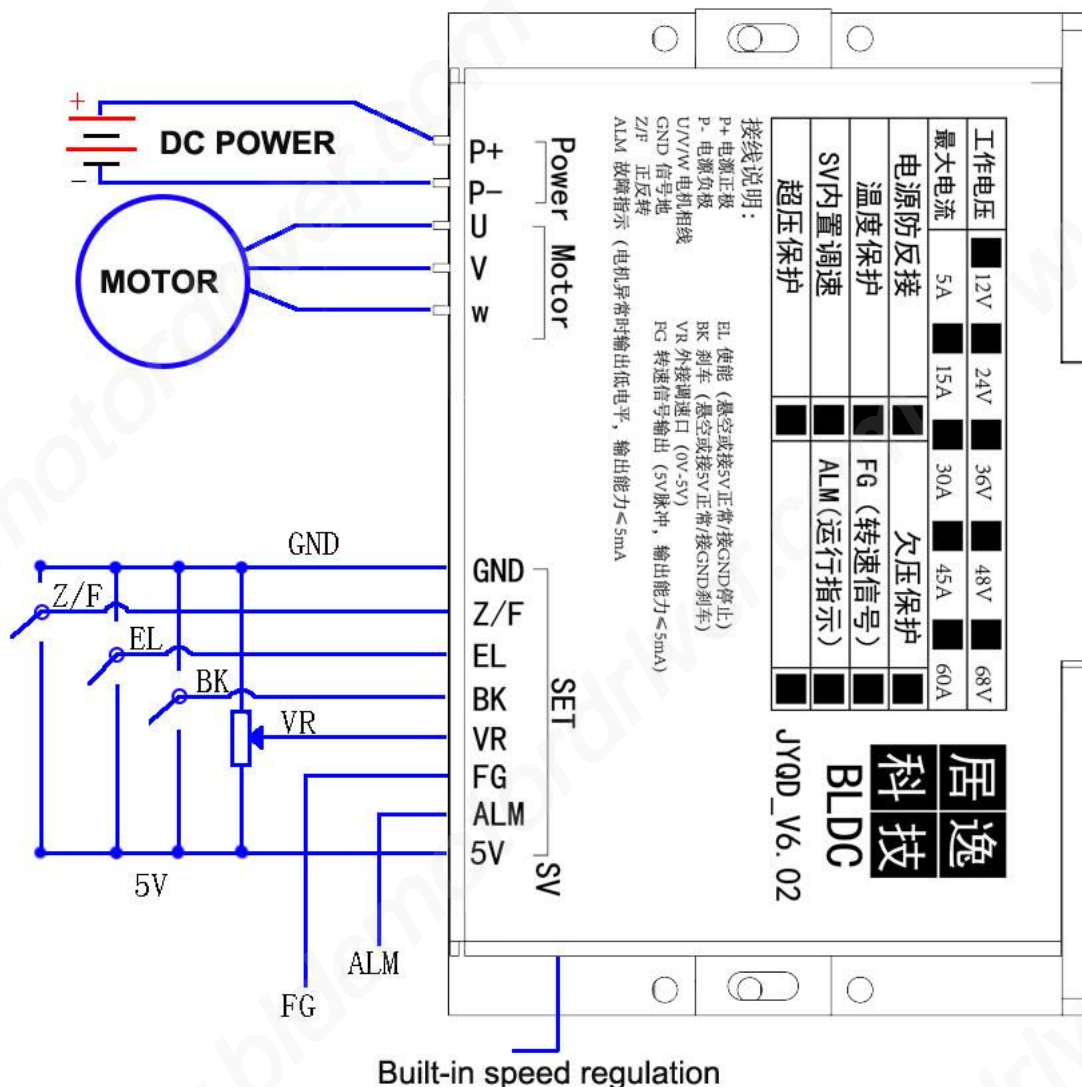
Application notes:

1. Confirm that the voltage and power parameters of the motor not exceed the range as specified.
2. Drive Hall-free three-phase brushless DC motors, but not all three-phase brushless DC motors can be used directly. If there is poor driving effect (such as startup jitter, reverse rotation, excessive motor high-speed current, unstable speed, and reduced efficiency, cannot start after loading) Customers can adjust the resistance and capacitance of the driving board according to the actual situation to achieve the best driving effect.
3. JYQD_6.02 can drive motors with a power of less than 500W. It does not require forced cooling but needs to ensure normal ventilation.
4. The 5V output port on the driver is prohibited from connecting to external electrical equipment. It is only suitable for connecting external potentiometers and switches to this board for speed regulation and reversal.
5. The FG port on the driver board is the motor speed pulse output signal, and the output current is less than 5mA.



Driver Board Diagram

Wiring Diagram



1.Control port (SET)

Z/F --- Rotating direction control ports. Connect "5V" or no connect is Forward direction, connect to GND is reverse direction.

EL --- Enable control port. Connect "5V" or no connect is running status, connect to GND is Stop.

BK --- Brake control port. Connect "5V" or no connect is running status, connect to GND is braking.

VR ----Speed control port. Analog voltage linear speed regulation 0.1v -5V, The input resistance is 20K Ohm ,connect with GND when input PWM speed regulation, PWM frequency: 1-20KHZ; Duty cycle 0-100%

FG --- Motor speed pulse output signal, output current less than 5mA. The pulse frequency is proportional to the motor speed (the pulse ratio is related to motor)

GND— Used for Drive board internal control.

ALM --- Running indication. the motor outputs high level (5V) normally when it is running, and outputs low level (0V) when the motor runs abnormally, and the current is less than 5Ma.

5V ----- Driver board internal output voltage. Only power potentiometer, switch speed regulation and reversal use (external electrical equipment is prohibited).

The SV hole on the side is a built-in speed control port, which accelerates clockwise and decelerates counterclockwise (the built-in speed control function automatically fails when there is an external speed control)

2. Power port

P+ --- DC+

P- --- DC-

U --- Motor phase line

V --- Motor phase line

W --- Motor phase line

3. Pay attention to the motor line is not too long, the drive board is dependent on the anti-electromotive force detection, the line is too long will appear signal interference

4. When working with continuous high current, please pay attention to heat dissipation.

Dimensional drawing

