CHANGZHOU HETAI MOTOR AND ELECTRICAL APPLIANCE CO.,LTD.

BLDC-5025A

DC Brushless Motor Driver User Manual

1.Introduction

BLDC-5025A brushless DC motor driver is independently developed by Changzhou Hetai Electric Appliance Co., Ltd. It is a high-performance brushless drive product for medium-power and low-voltage brushless DC motor. BLDC-5025A brushless DC motor driver is suitable for three-phase brushless DC motors with a power of 750W and below. This product is designed with advanced DSP control technology, which has the characteristics of large torque, low noise, low vibration, and fast start-stop. At the same time, it has PID current and speed closed-loop control, over-voltage, under-voltage, over-current, over-temperature and other protection functions. It realizes the perfect unity of manual speed adjustment and upper computer analog voltage speed adjustment, and upper computer pulse frequency speed adjustment. At the same time, it has the RS232 communication control function (optional), and can also independently design the upper controller for motor control according to the RS232 communication protocol provided by this product.

1.2 Feature

■Easy to use and quick to start

①Adjustable speed with potentiometer
②Connect the switch to realize forward and reverse rotation, start and stop, and brake

■Built-in current setting protection function

The P-sv current setting potentiometer can realize the motor overload protection by setting the maximum limit value of the operating current.
When the motor running current exceeds the set value, the protection function is activated, and the drive stops working to protect the motor

■Diversified speed control methods

①Built-in potentiometer speed control
②External potentiometer speed control
③External signal speed control
④Pulse speed regulation

■Open loop and closed loop speed control

■Speed signal output, alarm output

2.Electrical performance and environmental indicators

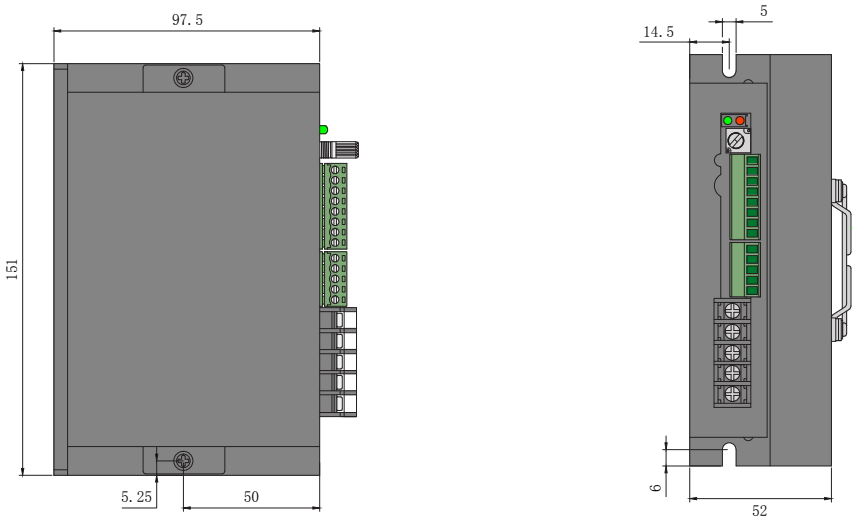
2.1 Electrical performance

Parameters	Min	Rated	Max
Input voltage DC(V)	18	48	50
Output current （A）		25	45
Motor speed （rpm）	0		20000
Hall signal voltage （V）	4. 5	5	5. 5
Hall driver current （mA）		20	
External speed regulating potentiometer		10	

2.2 E nvironmental indicators

factor	Envi ‹
Cooling method	Natural cooling or forced cooling
Use occasion	Avoid dust, oil and corrosive gas
Operating Temperature	10°C～+50°C
Environment humidity	80%RH No condensation
Vibration	5.7m/S2max
Storage temperature	-20°C～+125°C

3. Dimension （mm）



4. Driver interface and wiring diagram

4.1 Drive interface