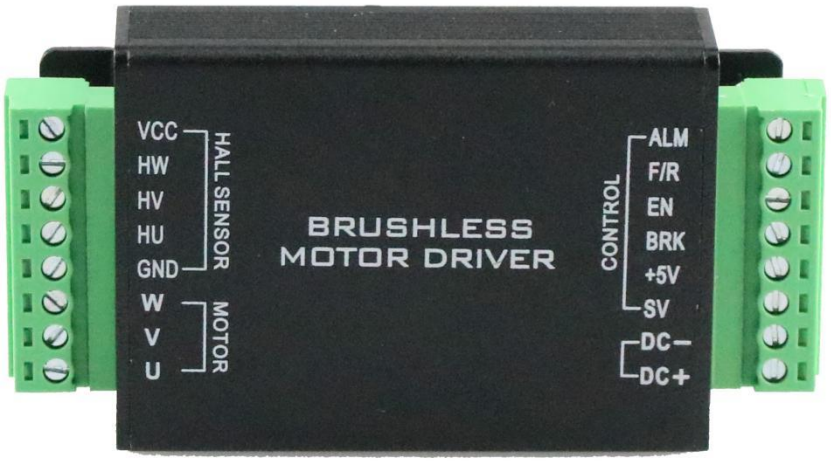
BLD-70 Brushless DC motor drives



Overview:

1. The speed range is wide, 0-20000RPM.
2. The driver itself has low consumption, high efficiency and low temperature rising, so it is small in size and easy to install.
3. Enable, direction, brake input signal.
4. A variety of perfect protection functions. Current limiting protection function to prevent motor stall damage.
5. Supports different applications and can customize the dynamic response of the driver.

Electrical parameters:

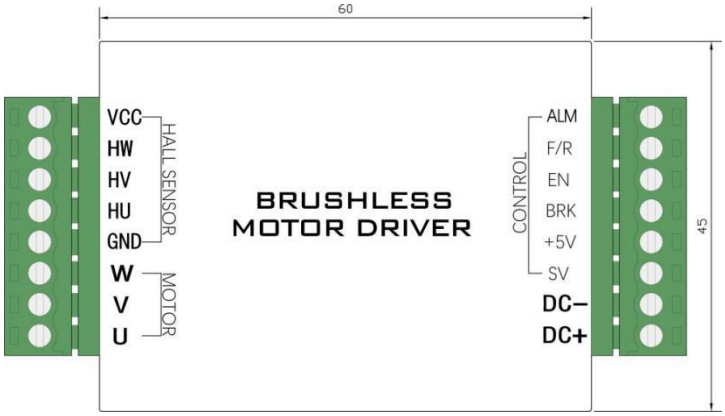
Parameter	Min	Rated	Max	Unit
DC input voltage	8	12	24	VDC
Driving current output		3		A
Low voltage protection		10		
Over voltage protection		30		

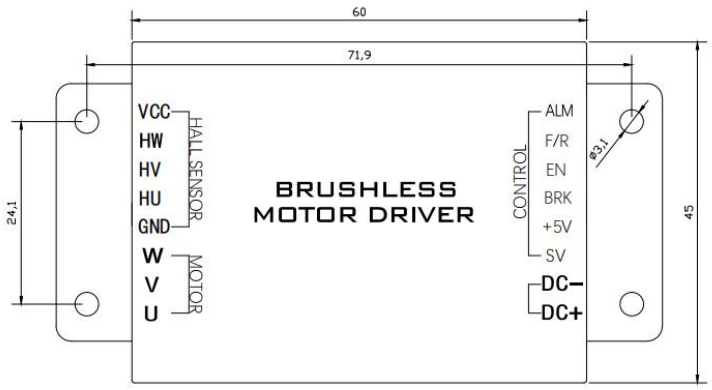
Speed	1500	3000	30000	rpm
Speed control mode	0-5VDC analog input, 0-100% PWM input (PWM frequency range: (1Kz-20KHz)			
Over current protection	Over current protection occurs when the current exceeds the set value of the working current and lasts for a set time			
Over voltage protection	Over voltage protection occurs when the voltage exceeds 30V			
Under voltage protection	Under voltage protection occurs when the voltage is lower than 8V			
Hall abnormal	Hall signal abnormal value			

Environment paramaters:

Cooling	Natural cooling or Forced cooling
Using Occasion	Avoid dust, oil and corrosive gas
Using temperature	10℃-+50℃
Environment Humidity	90%RH（No condensation）
Vibration	5.7m/S2max
Storage temperature	0℃-+50℃

Installation size: (mm)





Connection definitions:

Flag definitions	
DC + / DC-	DC power entry (DC8V-DC24V)
U, V, W	motor leads
Hu, Hv, Hw	Hall signal
VCC	Hall power +
SV	External speed control
F / R	directions: Leave or high forward and low reverse
EN	Enable signal: High level to stop, low level to run
BRK	fast brakes: High / Low stop / run
ALARM	Alarm signal output terminal (the ALM port will be pulled down after the alarm)

Function selection setting and operation:

Start and stop(EN):

When the drive is powered on, the motor runs by itself.
Connect the EN terminal and the DC- terminal to control the stop of the motor. (The control logic level can be reversed by setting the upper computer).
By connecting a switch between DC- and EN or using a PLC to control its on-off, the switch between start and stop of the motor can be realized.

Quick stop (BRK):

When the drive is powered on, the motor runs by itself.
Connecting the BRK terminal and the DC- terminal can control the motor to brake and stop quickly. (The control logic level can be reversed by setting the upper computer).
By connecting a switch between DC- and BRK or using PLC to control its on-off, the switch between motor start and brake can be realized.

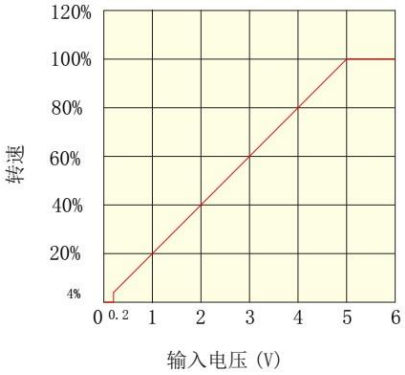
Direction control(DIR):

When the driver is powered on, the motor runs automatically according to the DIR setting.

Connect the DIR terminal and the DC- terminal to control the motor commutation. (The control logic level can be reversed by setting the upper computer).
The direction of the motor can be switched by connecting a switch between DC- and DIR or using a PLC to control its on-off.

Use external analog signal to adjust speed DC0-5V:

The relationship between analog signal voltage and motor speed (no load)



When the input voltage is about 0.2V, the motor speed is 4% of the maximum speed; when the input voltage is about 5V, the motor speed is the maximum. The maximum speed value depends on the motor specifications and the power supply voltage.

Alarm handing:

Red light indication	Status description	Solove method
Red light flashes 2 times	Over voltage alarm	Please check the bus voltage
Red light flashes 3 times	Power tube Over current alarm	Determine if the model is correct, choose bigger driver
Red light flashes 4 times	Over current alarm	Determine if the model is correct, choose bigger driver
Red light flashes 5 times	Under voltage alarm	Check the power supply voltage and check if the power supply meets the condition of 1.5 times the motor power.
Red light flashes 6 times	Hall alarm	Please check if the motor wiring is secure
Red light flashes 7 times	Blocking alarm	Please determine if the motor is overloaded
Red light flashes 8 times	Two or more alarms	Common conditions are only for Hall and stall alarm. When the motor cannot be adjusted, please check all above status.