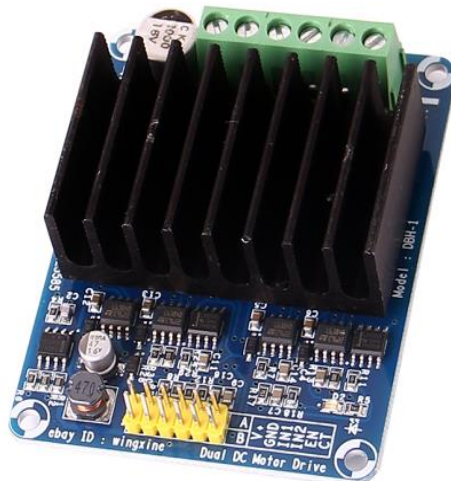


## **50A Dual-Channel H Bridge Motor Driver Module for Arduino Robot Chassis Servo**

**Model:DBH-01B**

### **User Manual**



#### **Description:**

This product is designed for the Arduino, Freescale smart car competition designed brushed DC motor full-bridge driver.

Coreless motor dedicated drive, with coreless motor is ideal. Coreless motors generally require 60kHz PWM frequency, this drive has been designed to 200kHz ultra-high switching speed. Infineon ordinary programs and other integrated circuits cannot be done, we drive carefully designed and tested by a variety of coreless motor. Measured motor includes MAXON, Faulhaber and so on. By the good performance. Motors and drives are not heat, and drive other programs may cause damage to the motor or drive. However, the maximum operating frequency BTS7960 chip is 25kHz, low frequency control is not suitable for low coreless motor.

#### **This high power drive can drive the devices below:**

- The hollow cup motor
- Common dc motor
- Semiconductor refrigeration module
- Electromagnetic valve
- The electromagnetic coil.

This drive module performs much better than MC33886 or L298 motor drive module. It performs very well in terms of motor start speed and power efficiency. Which can withstand high current overload.

This drive has a brake function, which can quickly stop the motor. And the operation is very easy. The drive module contains a full-bridge driver chip and MOSFET of low internal resistance. The full-bridge driver IC minimizes the switching loss of MOSFET and improves power efficiency. MOSFET driver chip has the hardware brake functions and power feedback function.

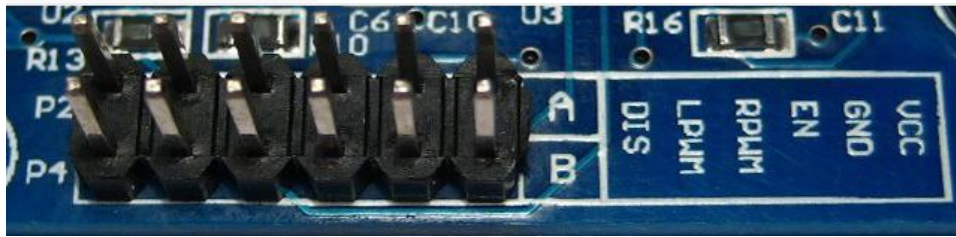
MOSFET is current impact-resistant type, with internal resistance of 0.003 Euro. MOSFET channel can be opened quickly to improve the motor's speed curvature, and also brake the motor quickly. This function can make the car start or stop quickly.

The drive module weigh 15 grams. Which can make your smart car lighter than your opponent. It can work under the PWM duty cycle of 0% - 98%, which a common drive module cannot.

### **Performance Parameters:**

- Rated Voltage: 3V-15V
- Rated Current: 50A
- Peak Current: 100A
- Dimensions: length 7.2cm, Width 5.7cm

### **Control Definition:**



Rotate forward: EN = 1, RPWM = PWM, LPWM = 1, DIS = vacant

Rotate reverse: EN = 1, RPWM = 1, LPWM = PWM, DIS = vacant

Parking and brake: EN = 1, RPWM = 1, LPWM = 1, DIS = vacant

Parking but not brake: EN = 0, RPWM = 1, LPWM = 1, DIS = vacant

Prohibit the use: EN = X, RPWM = X, LPWM = X, DIS = 1

"1", high level, that is, 5 V or 3.3 V.

"0" low level, namely 0 v or GND.

"PWM" said microcontroller input PWM wave.

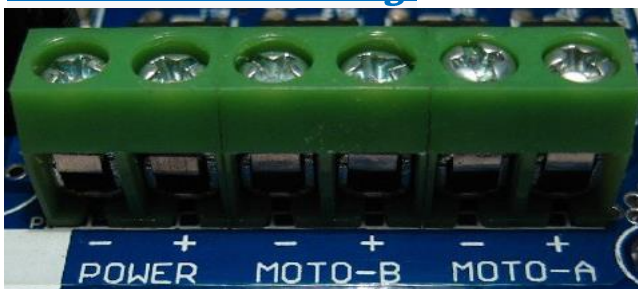
"X" to any state, that is, 5 V or 3.3 V or wiring or 0 V.

Logic level compatible with PWM level 3.3 V to 5 V. Suitable for all kinds of single chip microcomputer.

Types of control for low level effectively.

Note: the default is short circuit PCB R1 position and the VCC port is output state, voltage = POWER voltage. When R1 is connected, VCC used as input, the input voltage of 3-12 v, this power supply for the drive control circuit of power supply. The VCC and POWER supply respectively, the POWER can be used to over 15V POWER supply. GND connected with POWER-on the PCB.

### **Motor and Power Wiring:**



POWER connects with battery or DC power. Voltage polarity as shown above.

Two motors can be connected to MOTOA and MOTOB terminals.

### **Wiring at the back can stand high current:**

