FEATURES

 1 - Average output current control;

 2 - Bipolar sinusoidal micro-step stepping driver;

 3 - Wide supply range from 12 to 48VDC;

 4 - Digital Inputs optically isolated;

 5 - Under-voltage protection;

 6 - Over-current detection circuit;

 7 - Five selectable micro-stepping possibilities (1/1, 1/2, 1/4, 1/8 and 1/16);

 8 - Eight selectable output phase current settings;

 9 - High starting speed;

10 - High-speed torque.

TECHNICAL DATA

Supply voltage 12 ~ 48VDC

Input current of 1 to 5A depending on the selected

Output current settings.

Stepper Motor output current of 0.2A ~ 5A

Operating Temperature -10 to 45 ℃;

Storage temperature -40 ℃ to 70 ℃

Weight 230 grams

CONTROL SIGNAL INTERFACE

1- Control signals description:

PUL + : step pulse signal positive input;

PUL - : step pulse signal negative input;

**DIR +** : stepping direction signal positive input;

DIR - : stepping direction signal negative input;

EN + : offline enable signal positive input;

EN - : offline enable signal negative input;

2- Control Signal Connections

The control signals can be low-level active or high-level active. For low-level active, the positive inputs must be connected to VCC (+5V) and for high-level active the negative inputs must be connected to reference GND (0V). For open-collector and PNP output interface the connections should be as follows:
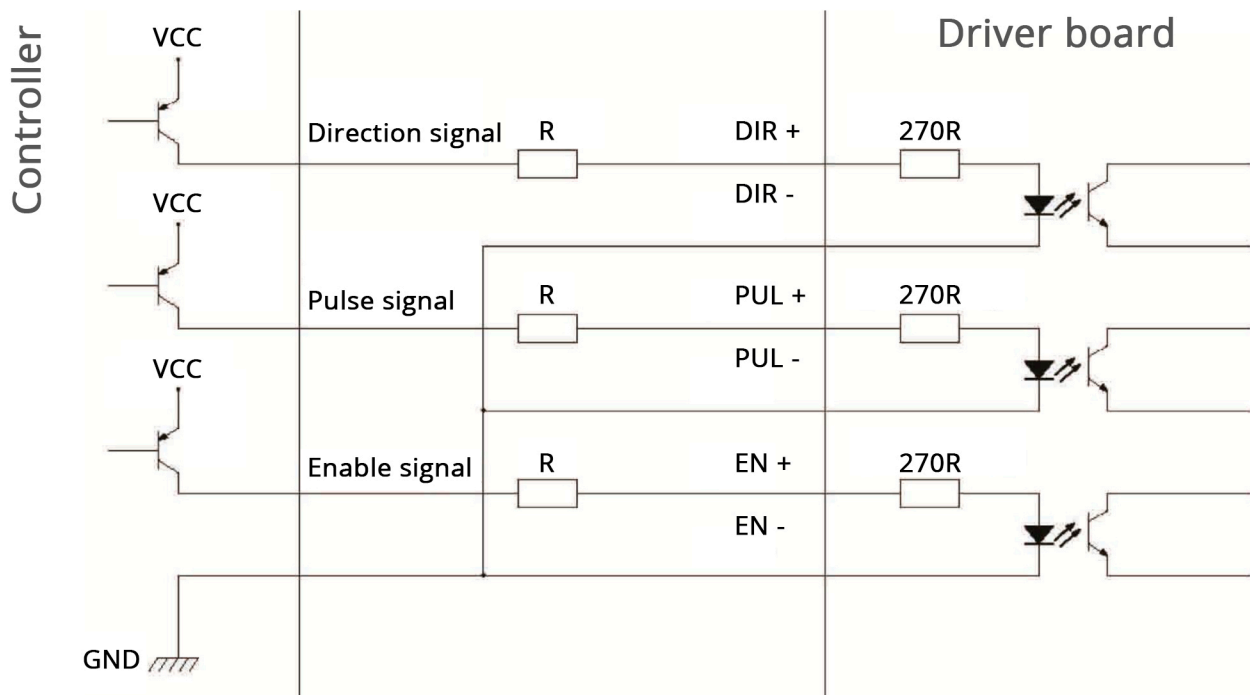
Note:

For VCC = 5V, R in not necessary;

For VCC = 12V, R should be 1K – 1/4W resistor;

For VCC = 24V, R should be 2K – 1/4W resistor;

R resistor must be connected to the controller output terminals.

FUNCTION SELECTION (DIP-switch on the drive panel)

Microstep resolutions and output current are programmable, the steps can be set from full-step (1/1) to (1/16) 3200 steps/rev and the latter can be set from 0.2A to 5A.

1- Microstep Resolution Selection

The microstep resolution is set by DIP-switches SW4, SW5 and SW6 as shown in the following table.

SUB	4	5	6
NC	ON	ON	ON
1	OFF	ON	ON
1/2	ON	OFF	ON
1/2	OFF	OFF	ON
1/4	ON	ON	OFF
1/8	OFF	ON	OFF
1/16	ON	OFF	OFF
NG	OFF	OFF	OFF

2- Output phase current settings

The dynamic current limitation for the motor coils is set by the DIP-switches SW1, SW2 and SW3 as shown in the following table.

Cur	1	2	3
0.2A	ON	ON	ON
0.6A	OFF	ON	ON
1.2A	ON	OFF	ON
1.8A	OFF	OFF	ON
2.5A	ON	ON	OFF
3.3A	OFF	ON	OFF
4.2A	ON	OFF	OFF
5A	OFF	OFF	OFF

Note:
- Select a setting closest to your motor's required current.
- Due to motor inductance, the actual current in the coil may be smaller than the dynamic current setting, particularly under high speed condition.
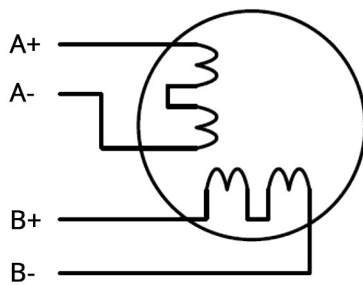
3- POWER INTERFACE

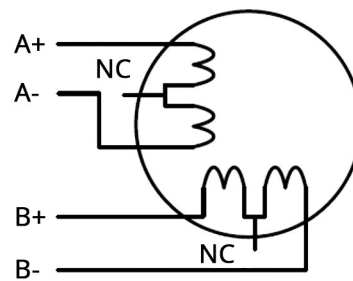**DC +, DC-**: Connection for power supply voltage (12 to 48VDC);
A+, A-, B+, B-: Connection for the two-phase hybrid stepping motor;

The stepper-motor driver WD-TB6600 supports any 2-phase or 4-phase hybrid stepping motors of 4, 6 and 8 wires. The following motor connections are possible:
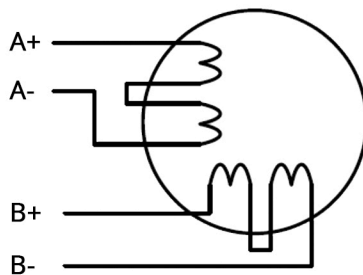
4-wire motor

6-wire motor

8-wire motor series

8-wire motor parallel