Overview:

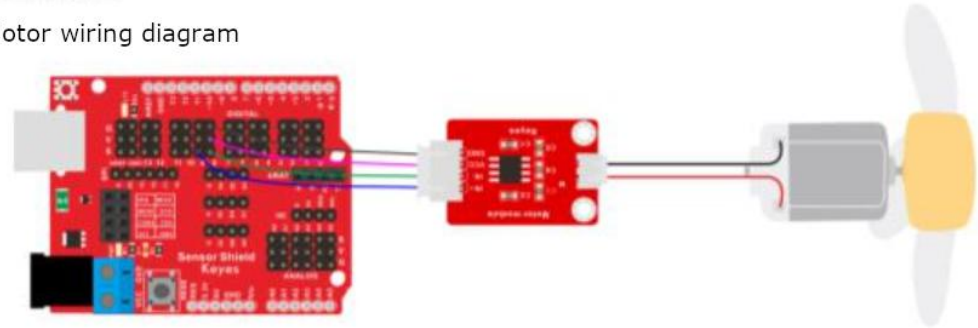
In life, we often need to drive a fan or a small water pump. In order to facilitate wiring, we specially designed a 130 motor-DC3-5V watering small water pump drive module. The module uses HR1124S motor control chip. HR1124S is a single-channel H-bridge driver chip used in DC motor solutions. The H-bridge driving part of HR1124S uses low on-resistance PMOS and NMOS power tubes. Low on-resistance ensures low power loss of the chip, making the chip safe to work for a longer time. In addition, HR1124S has low standby current and low quiescent operating current. These properties make HR1124S easy to use in toy solutions.
When using, only need to connect the two ends of the water pump or 130 motor to the 2pin interface of the module. At the same time, the 4pin interface of the module is used to connect the corresponding single-chip microcomputer to control the state of the motor or water pump. For wiring, we also distribute a 4pin cable, one end of the line is a white anti-reverse plug connector (matching with the anti-reverse white terminal on the module), and the other end is a 4pin DuPont female connector.
The module is compatible with various microcontroller control boards, such as arduino series microcontrollers. When in use, we can stack a sensor expansion board on the microcontroller. The module is connected with its own wire, and then connected to the sensor expansion board, which is simple and convenient. At the same time, the module comes with 2 positioning holes with a diameter of 3mm, which is convenient for you to fix the module to other equipment.

Specifications:

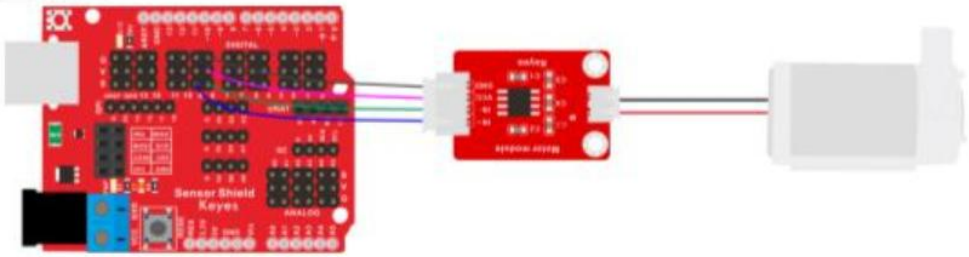
Wire length: 200mm
Working voltage: DC 1.8V-6.8V
Working current: low standby current 0.01uA, low quiescent working current 0.2mA, continuous output current 1.2A
Internal resistance: low RDS(ON) resistance (0.3Ω)
Operating temperature range: -10°C to +50°C
Interface: 2.54mm 4pin anti-reverse interface
Positioning hole size: 3mm in diameter
Size: 22.1*34.6*9.3mm
Weight: 3g

Wiring:

Motor wiring diagram



Water pump wiring diagram



Test code:

```
//motor：
void setup() {
//Set the motor pin as output
pinMode(8, OUTPUT);
pinMode(9, OUTPUT);
}
void loop() {
//Counterclockwise
digitalWrite(8, LOW);
digitalWrite(9, HIGH);
delay(2000);
//Stop
digitalWrite(8, LOW);
digitalWrite(9, LOW);
delay(1000);
//Clockwise
digitalWrite(8, HIGH);
digitalWrite(9, LOW);
delay(2000);
//Stop
digitalWrite(8, LOW);
digitalWrite(9, LOW);
delay(1000);
}
//Water pump：
```

```
void setup() {
//Set the water pump pin as output
pinMode(8, OUTPUT);
pinMode(9, OUTPUT);
}
void loop() {
//Turn on the water pump
digitalWrite(8, HIGH);
digitalWrite(9, LOW);
delay(3000);
//Turn off the water pump
digitalWrite(8, LOW);
digitalWrite(9, LOW);
delay(1000);
}
```

Code description

Code 1 description:

Set the pins as D8 and D9. When D8 output is low level and D9 output is high level, the motor rotates counterclockwise; when D8 output is high level and D9 output is low level, the motor rotates clockwise; When both pins are set to low level, the motor stops rotating.

Code 2 description:

When the output of D8 is high and the output of D9 is low, the pump works (the level output of the two pins can be reversed, this pump has no positive and negative poles); when both D8 and D9 output low, the pump stops Work.

6. Test results

Burn and test the 130 motor code, and connect the wires according to the wiring diagram; after power-on, the fan rotates counterclockwise for 2 seconds; stops for 1 second; rotates clockwise for 2 seconds; stops for 1 second; and the cycle alternates.

Burn and test the small water pump code, connect the wires according to the wiring diagram; put the small water pump into the water, after power on, the pump will pump for 3 seconds and stop for 1 second, and the cycle alternates.


Motor module
Keyes