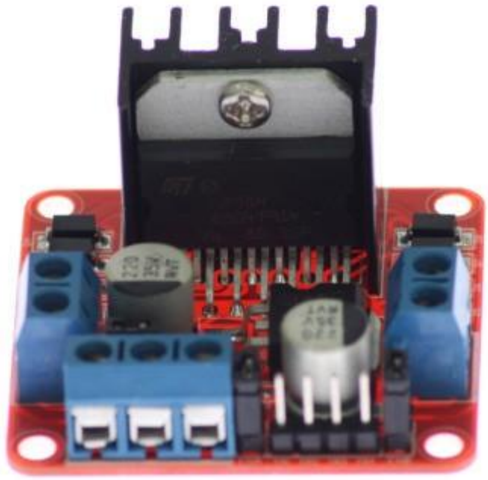
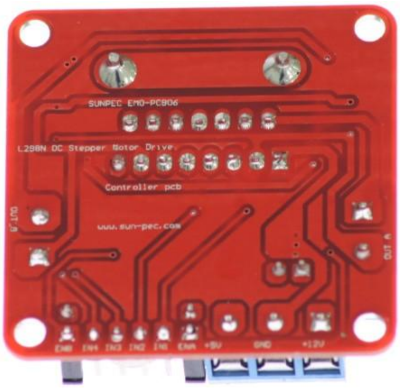
## LAMPIRAN 3

## DATA SHEET MOTOR DRIVER L928N

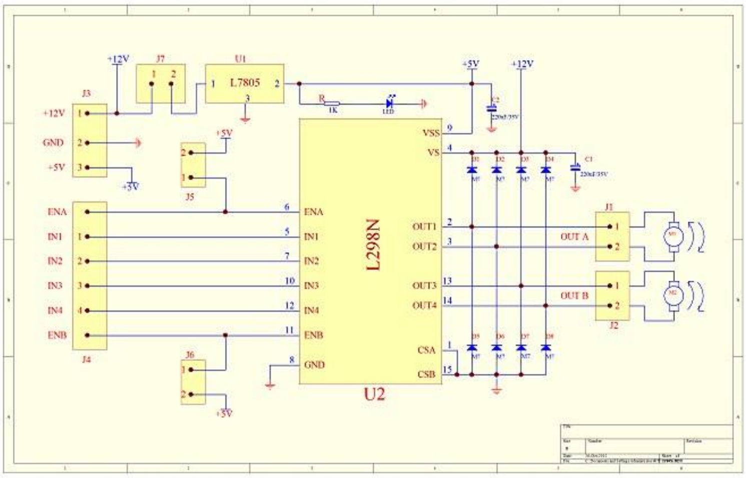
# Motor Driver L928N



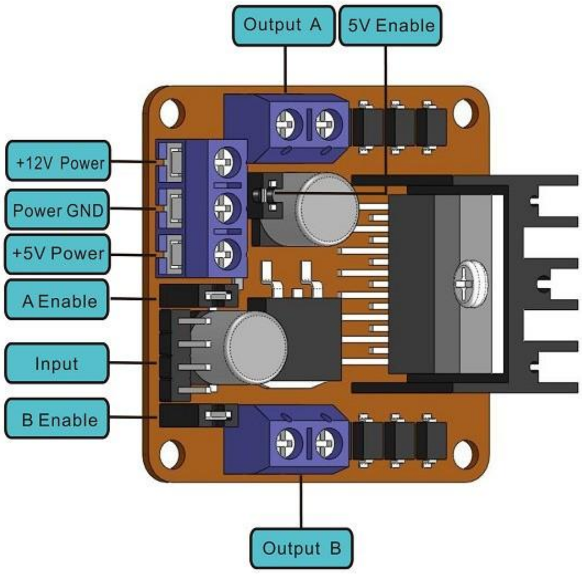


# Electrical Drawing

## Schematic



## Diagram



## Description

| | | | |
|---|---|---|---|
| Double H Bridge Motor Driver Module | Working mode | Drived by H bridge (double lines) | |
| Control chip | L298N （ST） | | |
| Logical voltage | 5V | Driving voltage | 5V—35V |
| Logical current | 0mA-36mA | Driving current | 2A (MAX single bridge) |
| Storage temperature | （-20℃）—（+135℃） | Maximum power | 25W |
| Weight | 30g | Periphery dimension | 43*43*27mm |

## Product features:

1. Using L298N made by ST company as the control chip,the module has such characteristics as strong driving ability,low calorific value and strong anti-interference ability.

2. This module can use built-in 78M05 for electric work via a driving power supply part. But to avoid the damage of the voltage stabilizing chip, please use an external
5V logic supply when using more than 12V driving voltage.

3. Using large capacity filter capacitor, this module can follow current to protect diodes, and improve there liability

This module is integrated with a built-in 5V power. When the drive voltage is 7V-35V,it can enable the onboard 5V logic power supply; after the power supply, don't input voltage in the interface+5V power supply, but you can lead the 5V for external use.
When ENA enable IN1 IN2 control OUT1 OUT2
When ENB enable IN3 IN4 control OUT3 OUT4

# Description

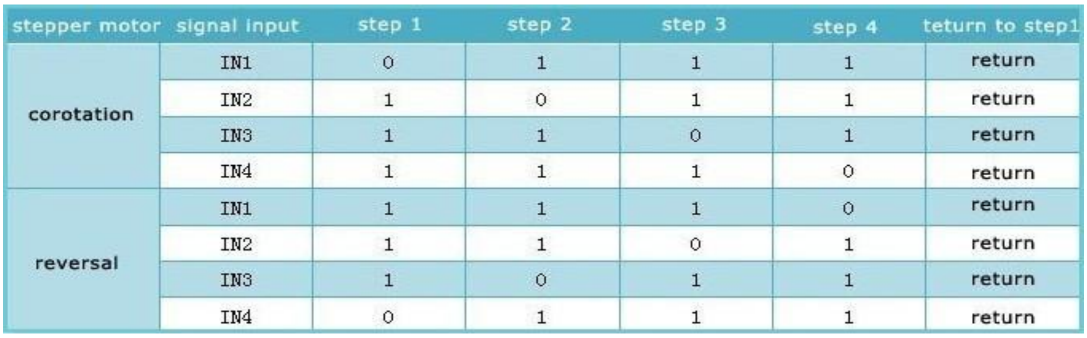
## Applied cases:

1 Driving stepper motor

The connection of driving a common 4 line 2 phase electric motor is shown in below figure

after enable ENA ENB

Input the following driving timing from IN1-IN4, then the speed and direction of the stepper motor can be controlled



| stepper motor | signal input | step 1 | step 2 | step 3 | step 4 | teturn to step1 |
|---|---|---|---|---|---|---|
| corotation | IN1 | 0 | 1 | 1 | 1 | return |
| | IN2 | 1 | 0 | 1 | 1 | return |
| | IN3 | 1 | 1 | 0 | 1 | return |
| | IN4 | 1 | 1 | 1 | 0 | return |
| reversal | IN1 | 1 | 1 | 1 | 0 | return |
| | IN2 | 1 | 1 | 0 | 1 | return |
| | IN3 | 1 | 0 | 1 | 1 | return |
| | IN4 | 0 | 1 | 1 | 1 | return |

2 Driving DC motor

Because the module is drived by double H bridge, it can drive two motors simultaneously.

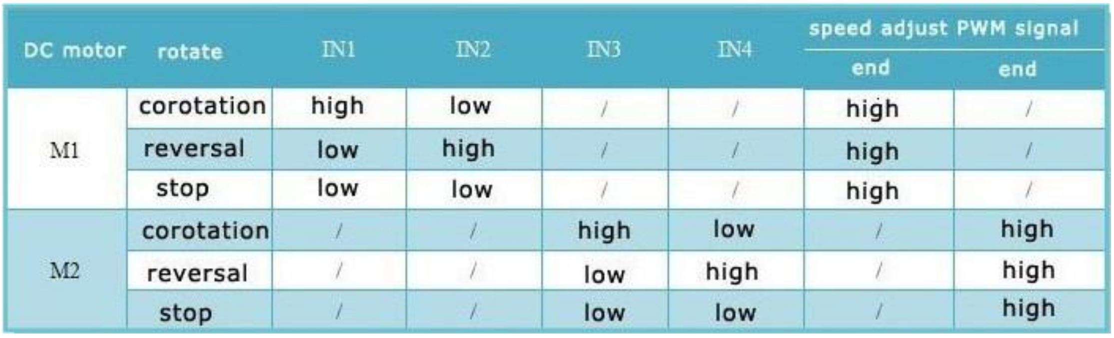
The connecting method is shown in below figure

after enable ENA ENB

You can imput the speed and direction of PWM signal drive motor 1 from IN1 IN2

You can imput the speed and direction of PWM signal drive motor 2 from IN1 IN2

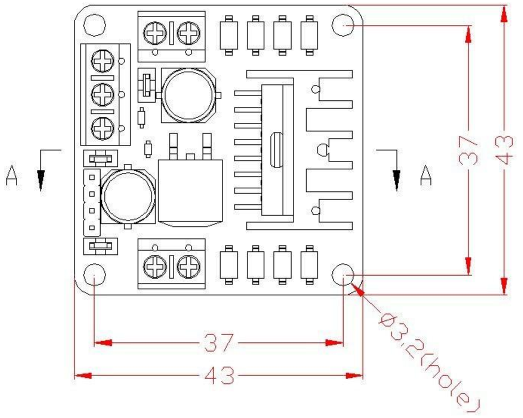
The signal is shown in the figure



| DC motor | rotate | IN1 | IN2 | IN3 | IN4 | speed adjust PWM signal | |
|---|---|---|---|---|---|---|---|
| | | | | | | end | end |
| M1 | corotation | high | low | / | / | high | / |
| | reversal | low | high | / | / | high | / |
| | stop | low | low | / | / | high | / |
| M2 | corotation | / | / | high | low | / | high |
| | reversal | / | / | low | high | / | high |
| | stop | / | / | low | low | / | high |

# Mechanical Drawing

## Top Size



## Side size