

Stepping motor controller module (Model : AM-CS2P) Manual

New Technology Company(N.T.C)

<http://www.NewTC.co.kr>

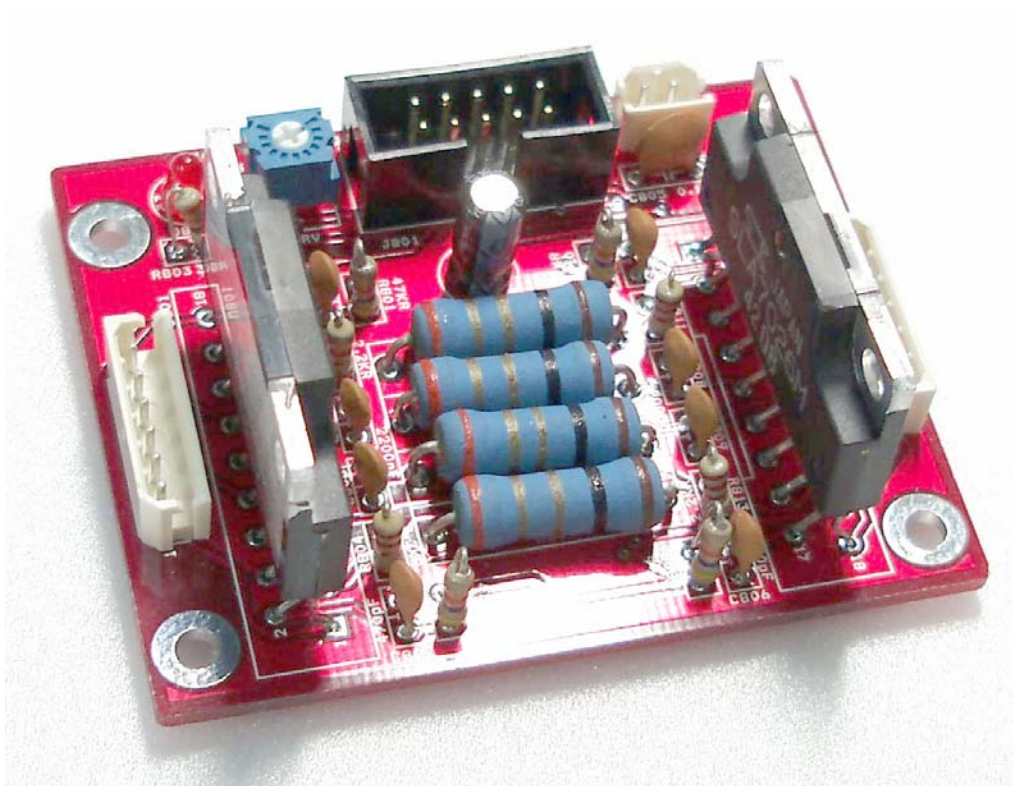
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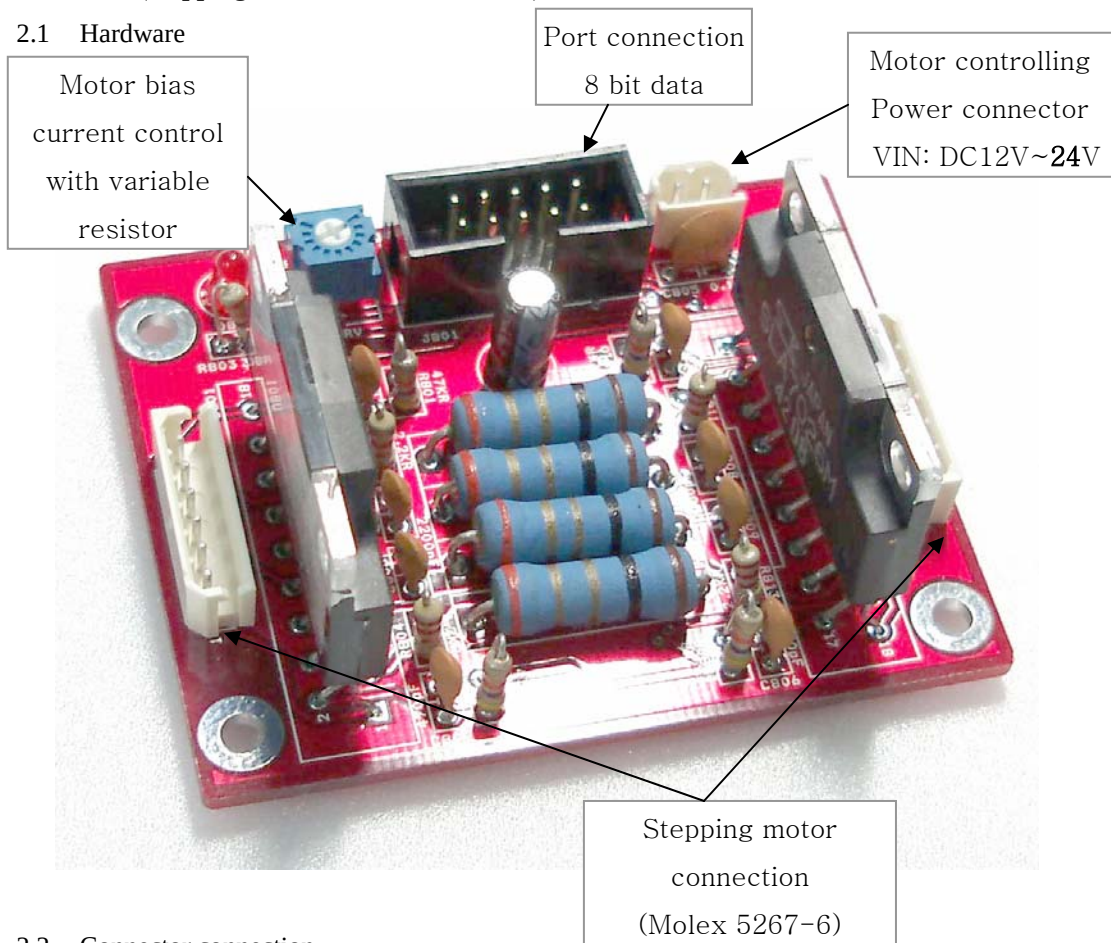
1 Introduction

- ◆ Stepping motor controller for Line tracer
- ◆ Possible to control two stepping motor
- ◆ Compatible interface with 10Pin box header and 12V power supply connector with molex 5045-2
- ◆ Motor bias current control with variable resistor
- ◆ Module size : 63.3 X 50.6 mm
- ◆ Can be used till 3A each..



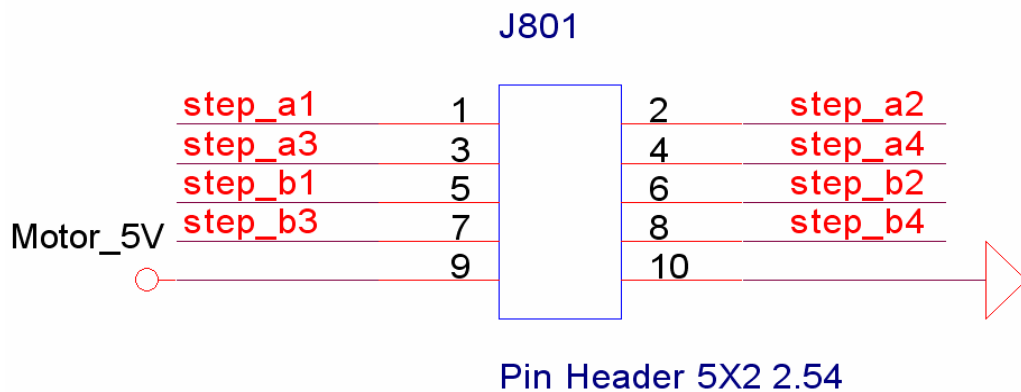
2 AM-CS2P (Stepping motor controller module) H/W

2.1 Hardware



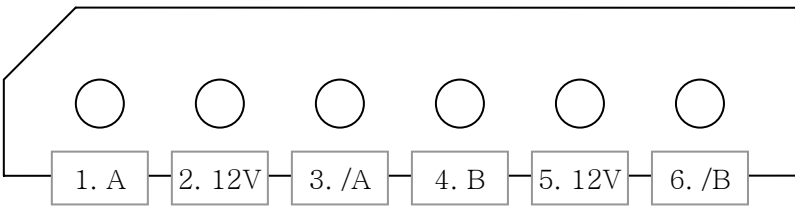
2.2 Connector connection

2.2.1 Port connection for J801, box 2x5 header connector



1 번	3 번	5 번	7 번	9 번
Left motor A	Left motor /A	Right motor A	Right motor /A	Power DC 5V
2 번	4 번	6 번	8 번	10 번
Left motor B	Left motor /B	Right motor B	Right motor /B	GND

2.2.2 Pin number for Stepping motor connector J802, J803

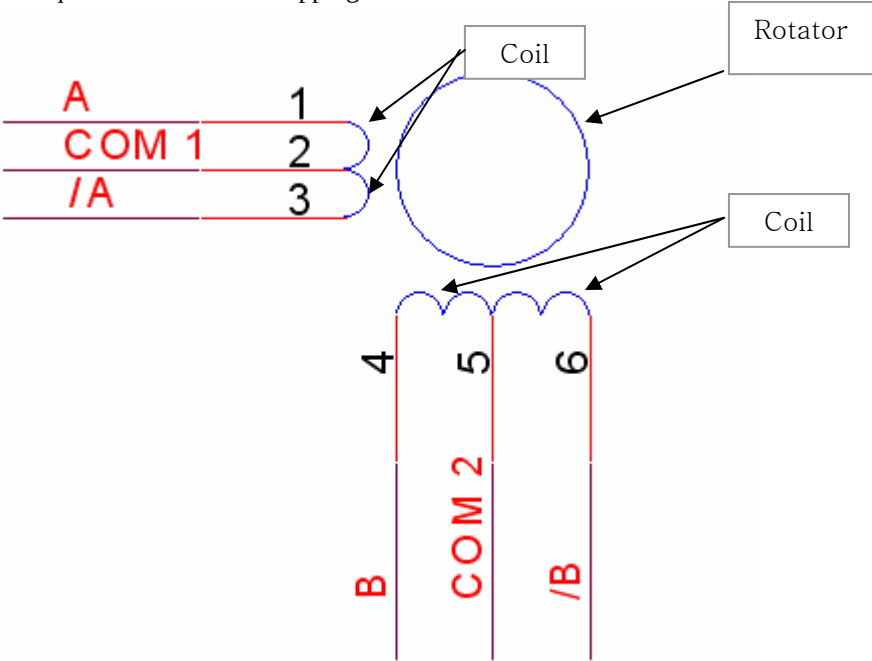


Wiring for motor connection

1	Stepping motor phase A
2	Common (over 12V)
3	Stepping motor phase /A
4	Stepping motor phase B
5	Common (over 12V)
6	Stepping motor phase /B

2.2.3 How to find phase for stepping motor

Equivalent circuit for stepping motor is below



Six pin connection with (Phase A, /A상, COM1) and (Phase B, /B상, COM2)

There is one coil between phase A and COM1, and there is the other coil between phase /A and COM1. Resistance between A and COM1 is almost 5 ohm, and Resistance between /A and COM1 is almost 5 ohm. You can identify that other 3 pin is not

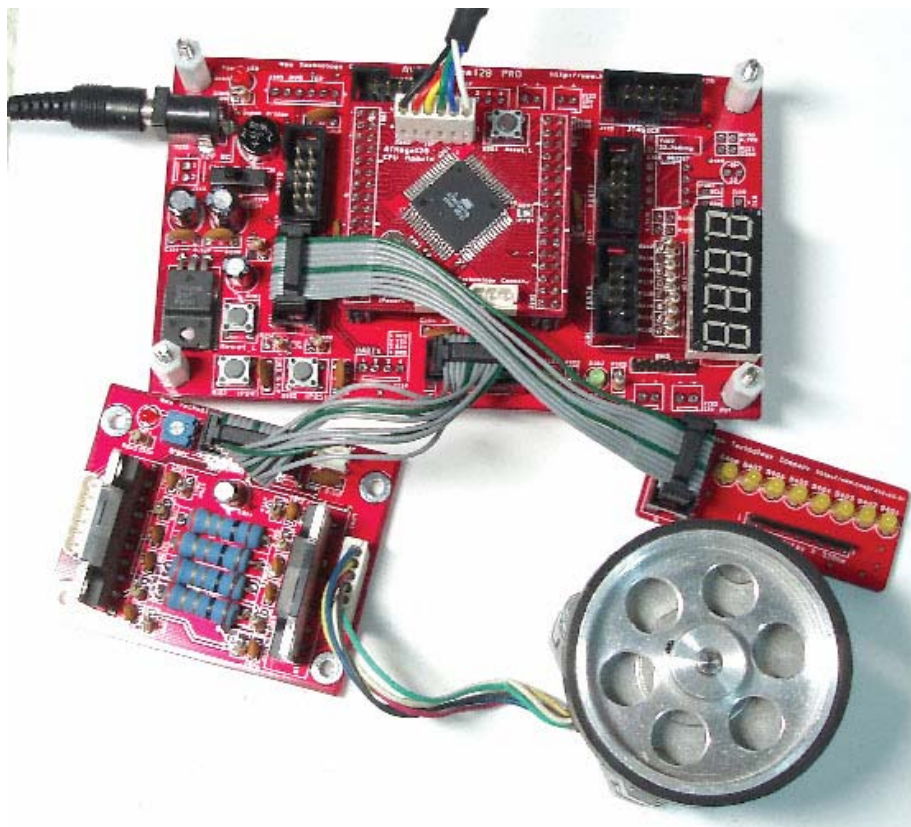
connected with this 3 pin.. Also, the resistance between phase A and $\bar{A}$ is 10 ohm because there are two coils.

If you cannot know the phase because of the absence of datasheet, you could find the phase with this method. At first, find COM1 from connected 3 pins, and select as phase A and $\bar{A}$, and find COM2, phase B, $\bar{B}$ with the same method from other 3 pins.

3 How to use AM-CS2P (stepping motor control module) (Software)

3.1 How to control stepping motor

To control stepping motor, you should understand basic structure and controlling method, and you should make the phase with hardware or software. Refer to “robot lecture” in “Linetracer lecture – 2. Motor controlling” in homepage (<http://www.newtc.co.kr>).



Controlling stepping motor using “KD-128PRO”