



# STEPPER MOTOR CONTROLLER TRAINER

MODEL - SCMO1MC

This trainer has been designed with a view to provide practical and experimental knowledge of Stepper motor drive .



## SPECIFICATIONS

### Micro-Stepping Drive Features

1. Smooth and quiet operation at all speeds and extremely low motor heating
2. Industrial grade performance for 2-Phase Bipolar, 4-Phase and Uni-polar Stepper Motors
3. Input supply voltage from 12VDC to 50VDC
4. Selectable peak coil current from 0.5A to 5.0A
5. Inaudible 20kHz current chopping frequency
6. Selectable half-current during motor standstill to further reduce motor heating
7. Selectable micro-steps up to 8000 steps per rotation for a 1.8deg stepper motor
8. Higher motor torque and higher speeds achievable due to advanced loop control algorithm
9. 2.5V, 3.3V and 5V compatible PULSE and DIRECTION inputs with 2-wire opto-isolated interface
10. Short-circuit protection for the motor outputs, over-voltage and under-voltage protection
11. LED indication for power and error states

### Motor Features

1. Step Angle : 1.8 Degree
2. Configuration : 4 or 6 wire stepper motor
3. Holding Torque : 10.2kgcm bipolar, 7.2kgcm unipolar
4. Rated voltage : 3.3VDC
5. Phase current : 2Amp
6. Resistance/phase : 1.65E
7. Inductance/Phase : 2.2mH
8. Rotor inertia : 275 gcm<sup>2</sup>
9. Detent torque : 0.36kgcm
10. Length (L) : 51mm
11. Weight : 650 grams

## EXPERIMENTS

1. To study stepper motor drive operation & speed control mechanism.  
(external digital control required for practical)

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