

# THREE-PHASE SYNCHRONOUS MOTOR/GENERATOR

## TM150-220S

### 1. Safety rules

To ensure safe operation of the motor and eliminate the danger of serious injury due to short-circuits (arcing), the following safety precautions must be observed. Damages resulting from failure to observe these safety precautions are exempt from any legal claims whatever.

- \* Prior to connection of the motor to the power supply, check that the available voltage correspond to the voltage setting of the motor.
- \* Do not use this instrument for high-energy industrial installation measurement.
- \* Check connection leads for faulty insulation or bare wires before connection to the motor. The connection leads must be double insulation.
- \* Use caution when working with voltages above 35V DC or 25V AC. These Voltages pose shock hazard.
- \* Do not place the motor on damp or wet surfaces.
- \* Do not subject the motor to direct sunlight or extreme temperatures, humidity or dampness.
- \* Do not exceed the maximum permissible input ratings.
- \* To avoid electric shock, do not operate this product in wet or damp conditions. Conduct using only in dry clothing and rubber shoes, i. e. on isolating mats.
- \* Comply with the warning labels and other info on the motor.
- \* Do not cover the ventilations slots of the cabinet to ensure that air is able to circulate freely inside.
- \* Do not insert any objects into the motor by the way of ventilation slots.
- \* Do not place water-filled containers on the motor (danger of short-circuit in case of knock over of the container).
- \* Do not operate the motor near strong magnetic fields.
- \* Do not subject the motor to shocks or strong vibrations.
- \* Keep hot soldering irons or guns away from the motor.
- \* Do not modify the motor in any way.
- \* Do not place the motor face-down on any table or work bench to prevent damaging the controls at the front.
- \* Do not operate the motor before the cabinet has been closed and screwed safely as terminal can carry voltage.
- \* Periodically wipe the cabinet with a damp cloth and mild detergent. Do not use abrasives or solvents.
- \* The motor is suitable for indoor use only
- \* Do not store the motor in a place of explosive, inflammable substances.
- \* Opening the motor and service – and repair work must only be performed by qualified service personnel
- \* The motor don't belong to children hands.

### a. Grounding

The motor's GND terminal must well connect to the power supply's GND terminal, otherwise the cage of the motor maybe electrification.

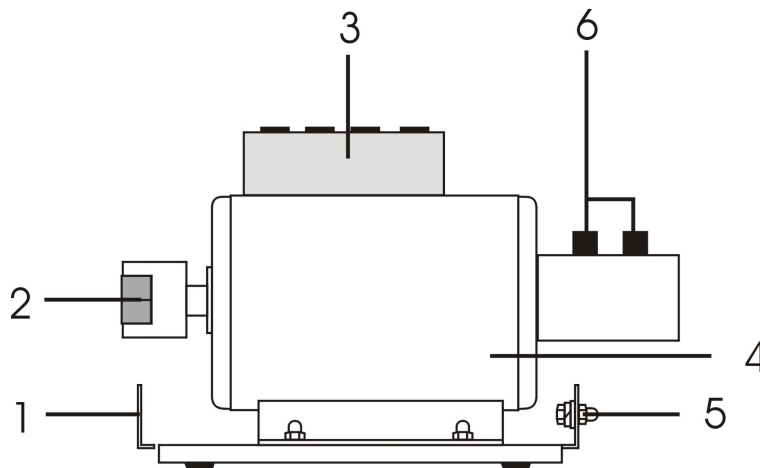
### b. Voltage check

Before turn on the power supply and running the motor, please must sure that the supplied voltage is match for the motor, otherwise, the motor will damage.

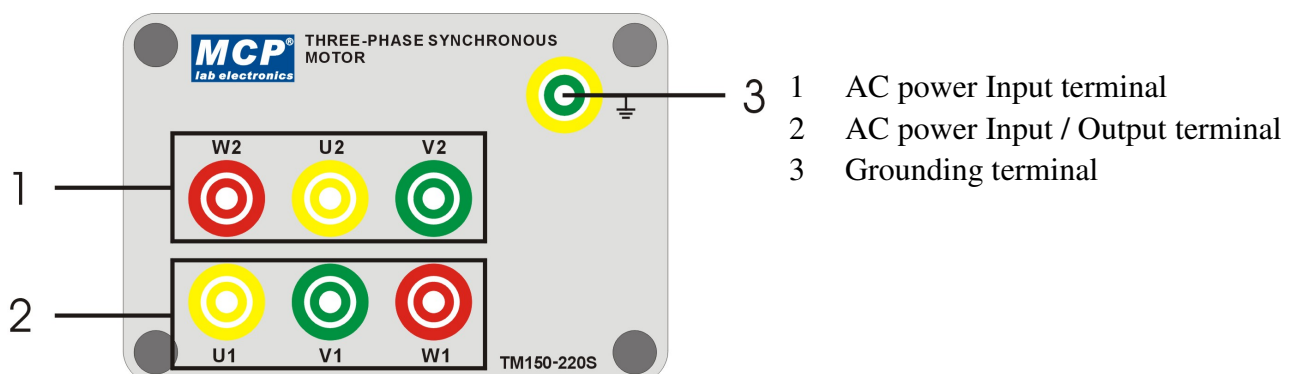
### c. Mechanical touch injure

- \* Don't operate in gloves.
- \* Don't let child close and touch the tool, or it may be cause accidents.
- \* Don't let water drop into the motor, otherwise it will cause fire or accidents.
- \* Assure the motor be set right, and have a correct position. Otherwise it will cause personal harm or motor damage.
- \* Check all the screws before running the motor.
- \* Please turn off the power before the service.

## 2. Descriptions

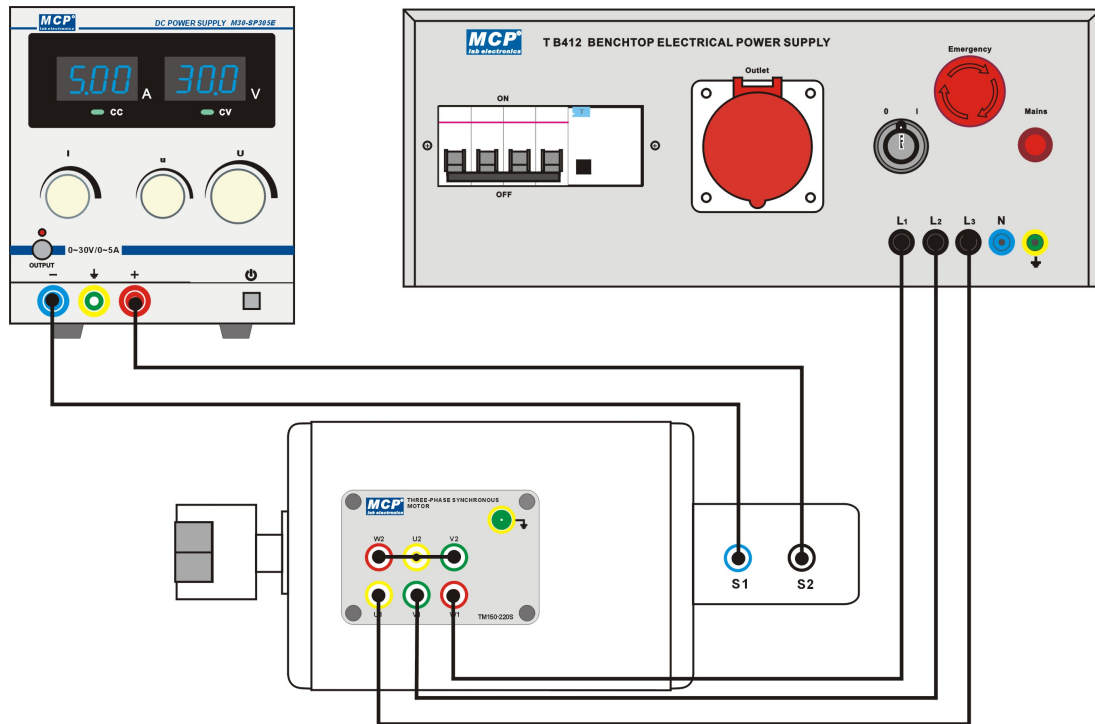


- (1) The base: the base of the motor and it can be a media to connect to other motors base by base.
- (2) CP14: it is a connector which is using for driving other motors.
- (3) Connection box: the terminals for input and the terminals for the thermal switch of the motor are on this box.
- (4) Motor: the motor
- (5) Connection screw: the connection screws for connecting to other motors
- (6) 24VDC power input terminal



### 3. Operations

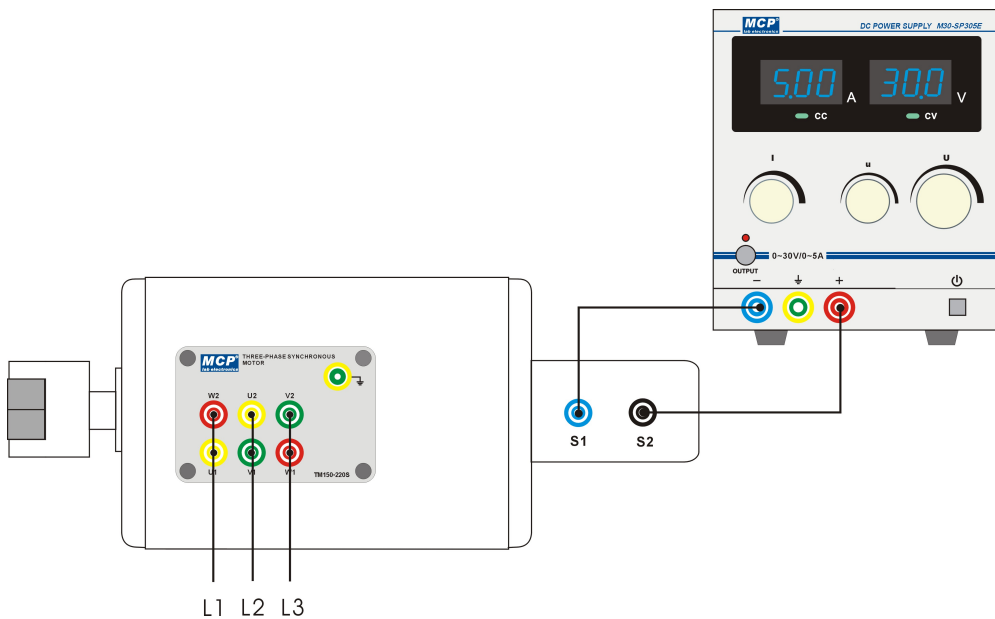
#### 3.1 Use as motor



The motor is connected as above. After the motor start to work, turn on the DC power supply M30-SP305E (24V / 2.6A), the motor can working at the Max. speed. (Power supply TB412 and M30-SP305E are not included)

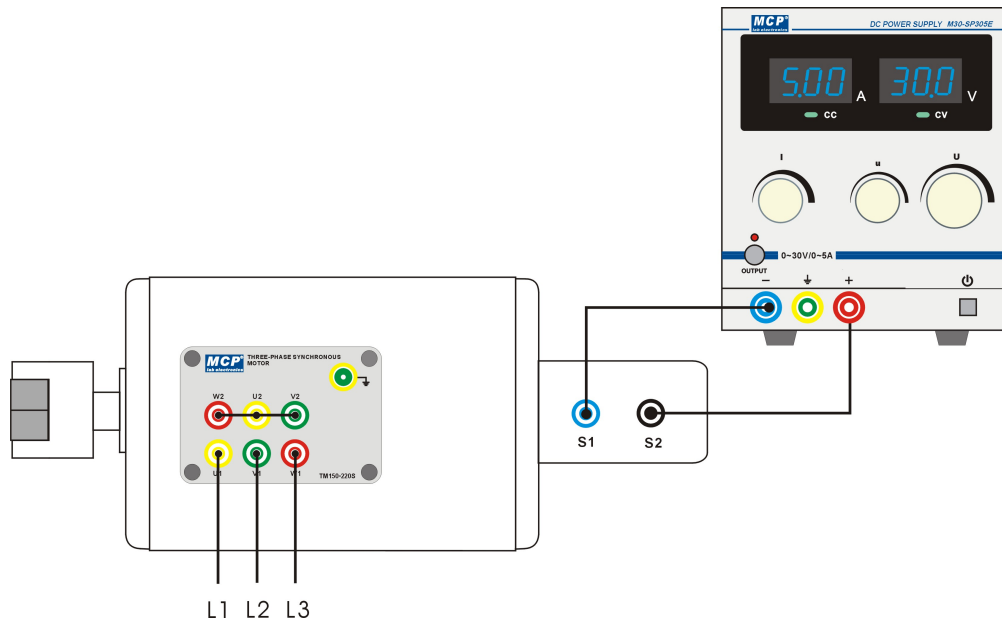
#### 3.1 Use as generator

##### 3.1.1 $\Delta$ Connection



Connect the generator to a motor and 24V DC power source to terminal S1 and S2. After the motor start to work, the generator will output the three phase power from terminal U1, V1 and W1 (DC power supply M30-SP305 is not included)

### 3.1.2 Y Connection



Connect the generator to a motor and 24V DC power source to terminal S1 and S2. After the motor start to work, the generator will output the three phase power from terminal U1, V1 and W1 (DC power supply M30-SP305 is not included)

## 4. Specifications

.Voltage: 220V/380V  
.Current: 0.3A  
.Frequency: 50Hz  
.Rotor voltage: 24VDC  
.Rotor current: 1.5ADC

.Output power: 150W  
.Rotate speed: 1500rpm  
.Shaft Height: 81mm  
.Dimension: 240x140x180mm  
.Weight: 8 kg