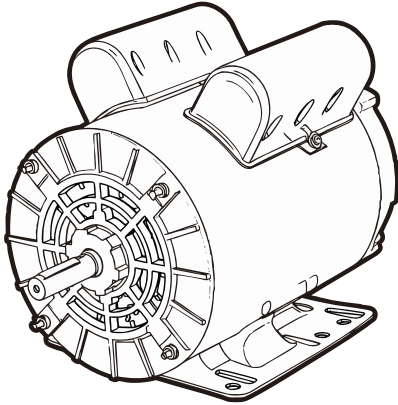




## Single Phase Induction Motor

Model: SY-2HP-56-SPL-A



Please read these operating instructions carefully  
before starting to work.

### NEED HELP? CONTACT US!

Have product questions? Need technical support?

After-sales service: [powerfol@outlook.com](mailto:powerfol@outlook.com)

Visit our website for more installation video guides: [powerfol.com](http://powerfol.com)

This is the original instruction. Please read it thoroughly before operation.

**POWERFOL** reserves the right to interpret the contents of this manual. The appearance of the product shall be subject to the product you received. Please forgive us that we won't inform you again if there are any technology or software updates on our product.

## SAFETY WARNINGS AND PRECAUTIONS

1. Voltage, frequency and the wiring must match the motor nameplate, power supply voltage should remain within  $\pm 5\%$  of the rated operating range.
2. Do not operate at altitudes above 1000 meters.
3. Maximum ambient air temperature:  $45^{\circ}\text{C}$ .
4. The motor must be properly grounded.
5. Before operation, measure the winding insulation resistance to ground using a 500V megohm. The reading should exceed  $0.2\text{ M}\Omega$ .
6. Before starting, manually rotate the shaft to ensure smooth and free movement without friction or obstruction. During operation, the motor should run smoothly and quietly. If you notice unusual noise, overheating, burning smell, smoke, or abnormally low speed, immediately disconnect the power and inspect the motor.
7. Keep the surrounding area clean, dry, and well-ventilated.
8. Do not reverse the motor at low speed. Avoid frequent starts. Capacitor-run motors should not operate under light load for extended periods.
9. Bearing grease should be changed every six months, to fill the bearing chamber is about 60% of the gap is appropriate
10. Ensure all motor fasteners are securely tightened.
11. Verify the rotation direction. If incorrect, adjust as follows:  
(A.the introduction of three-phase line can be any swap 2. B.any swap the main section of single-phase winding circumstances leading to side can help.)
12. During continuous operation at rated power, the temperature rise of each comp onent must not exceed the limits below: Winding Temperature:  $75^{\circ}\text{C}$  Core:  $75^{\circ}\text{C}$  Rolling:  $55^{\circ}\text{C}$ .
13. This motor series can be used in damp or dusty environments. However, regularly clean and inspect the motor to prevent fibers, dust, metal chips, or other debris from entering the interior.
14. **Motor routine maintenance:** Electrical outlet box part of the electrical contacts should be kept clean and good contacts, whether the motor air inlet plug, avoid affecting the service life of the motor. Perform maintenance every six months: clean dust and oil, check grease, and inspect for wear.

**15.The motor running check:** Monitor the load current to ensure it meets requirements. Check bearings for overheating or grease leakage. If any abnormality or unusual sound occurs, stop the motor immediately and investigate. Do not restart until the fault is resolved.

## TECHNICAL INFO

Model NO	SY-2HP-56-SPL-A
Horsepower	2HP
Frame Size	56
Rated Current	18.0/9.0A
Shaft Length	1.88"
Shaft Diameter	5/8" Keyed Shaft
Rated Speed	3450 RPM
Phase	One/ Single Phase
Voltage	115V 230V
Frequency	60 Hz
Rotation	CCW/CW
Enclosure	ODP
Insulation Class	F
Service Factor	1
Duty	Cont. S1
Class of Protection	IP23
DES-AMB	40 °C
Protection	Overload Protection with Manual Reset

## CONNECTION METHOD

- A.** Factory setting is the 115V voltage wiring method;  
**B.** T1-T7 are the motor lead wires;  
**C.** ①-⑥ represent the numbers on the terminal block;  
**D.** Line 1 and Line 2, represent the power cable;

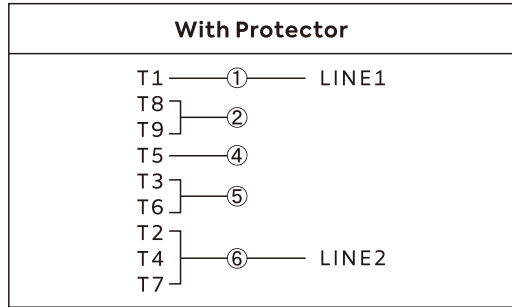
### How to Change Motor Rotation Direction (Dual- Voltage Terminal Board)

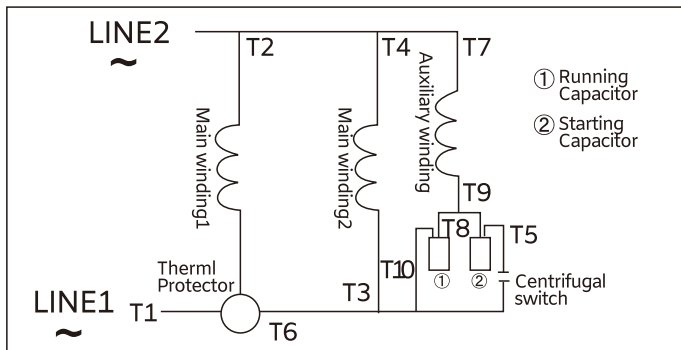
**Method:** Interchange the connections of the T7 and T9 leads.

**Procedure:**

- 1. DISCONNECT POWER!** Ensure the motor is completely isolated from the power supply.
- Interchange the connection points of the **T7** and **T9** leads.
- Ensure all connections are secure before re-energizing the motor. This operation reverses the rotation, switching between **Clockwise (CW)** and **Counter-Clockwise (CCW)**.

## Connection(115V)





- 1) T1 connected with ① then connect with a power cable;
- 2) T8 and T9 connected with ②; 3) Empty for ③;
- 4) T5 connected with ④; 5) T3 and T6 connected with ⑤;
- 6) T2, T4 and T7 connected with ⑥ then connect with a power cable.

## Connection(230V)

With Protector	
T1	① — LINE1
T8 T9	②
T6	③
T5	④
T2 T3	⑤
T4 T7	⑥ — LINE2

- 1) T1 connected with ① then connect with a power cable;
- 2) T8 and T9 connected with ②; 3) T6 connected with ③;
- 4) T5 connected with ④; 5) T2 and T3 connected with ⑤;
- 6) T4 and T7 connected with ⑥ then connect with a power cable.

## COMMON PROBLEMS AND REMEDIES

### Problem 1:

When you receive the motor, shaft does not turn freely by hand.

### Solution:

The concentricity of the motor may be damaged during transportation. You can gently tap the shaft, front cover, and rear cover with a wooden or rubber hammer to adjust the concentricity. Repeat until the shaft rotates freely.

### Problem 2:

The motor does not work when it is powered on.

### Solution:

- 1) Please check the power supply to make sure the output voltage is correct.
- 2) Please check the wiring carefully to make sure it's connected same as the wiring diagram.
- 3) Please press the red protector button until a clear "click" is heard. Then reconnect the power, start the motor.

### Problem 3:

After the motor is powered on, it runs slowly and cannot be started normally.

### Solution:

- 1) Please check the power supply to make sure the output voltage is correct.
- 2) Please check the wiring carefully to make sure it's connected same as the wiring diagram.
- 3) Check the capacitance of the motor to ensure that the capacitance is in good condition.

### Problem 4:

After running for a period of time, the motor overheats and stops working.

### Solution:

When motor overloaded running, disconnect power and allow the motor to cool for at least 30 minutes. Press the red protector button, then restart under normal load conditions.