



# ***GOL PUMP SURFACE PUMP*** ***OPERATION MANUAL***

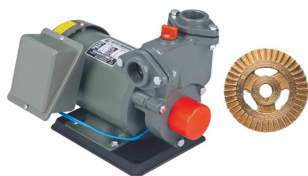
Series: GPM, GCV, GO



**GCP 312L - 332L**



**GPM - Multi Stage Pump**



**GO - Peripheral Pump**



**GCV - Pump**

## **FOREWORD**

We appreciate that your selection is **Gol Pumps Technology INC.** Before undertaking any operation, please read this manual carefully to ensure that the pump is installed correctly and is used safely. If you have any questions regarding damage or technicalities, please contact our authorized dealers, or you may ask the technicians who are specialized in electric machinery. To ensure the pump is in good condition, please use it correctly.

Please keep this manual in an easily accessible location.

**Before installing the pump, please read all the following instructions for correct installation guidance.**

### **⚠ WARNING**

1. Electrical installation should be complied with local electrical code.
2. The pump is not to be used by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge. It must be installed by a qualified electrician.
3. The pump must be connected to an approved electrical box as per the local electrical code.
4. The electrical box must have a motor-control switch.
5. Model 0511, and 0512 (0.5hp, single phase) pump has built-in thermal motor protector. If the pump is not provided with motor protection, the pump must be protected from overload and over current conditions per the local code during the installation.

To reduce risk of the hazards that can cause any serious injury or property damage, observe the following precautions



## WARNING

- **Make sure** the pump is not to be installed in locations classified as hazardous in accordance with the National Electrical Code, ANSI /NFPA 70.
- **Do not** expose the capacitor base to the rain or snow.
- **Do not** operate the pump or control unit if it has been damaged.
- **Notice:** This pump has been evaluated for use with water only.
- **Notice:** This pump is designed for transferring clean water and noncorrosive liquids only.



## CAUTION

- The pump cannot be used to transfer any liquids with corrosive, high density matters and lubricant oil. It will cause damage to the pumps and decrease overall performance when transferring faulty liquid as a result.



## CAUTION

- Electrical installation should be carried out in accordance with the local electrical regulations and standards. Make sure that the electricity supply has been switched off before electrical connection.

## ■ OPERATION AND MAINTENANCE INSTRUCTION

### (A) Before Operation

- (1) Electrical specifications are shown on the pump nameplate (voltage, hertz). Please verify the local power supply voltage and hertz are matched with the pump requirements.
- (2) Motor must be connected to a motor-protective circuit breaker which can be manually reset. Set the motor-protective circuit breaker according to the rated current of the motor. The precaution notice has been marked on nameplate of the pump.



## CAUTION

- (3) Please install a Ground Fault Circuit Interrupter (Leakage Circuit Breaker) in circuit to ensure the safety operation. Due to long-term use, the cable may be worn out to have defection of the surface, leading to electrical accidents. Therefore, the Ground Fault Circuit Interrupter(Leakage Circuit Breaker) is an important device.
- (4) For the first installation, be sure to prime the pump before starting. Never run the pump without the water inside the pump housing, which will damage the mechanical seal and may cause the motor to get burnt.
- (5) **Properly** locate the pump during the transportation, and ensure the pump is not cracked.
- (6) **Examine** if the pump is running normally when the power starts on. If the pump could not run smoothly, please check whether the impeller is squeezed because of rust.

- (7) **Make sure** the pump is rotating in a proper direction, refer to the rotation stickers or engraving, usually on our pump casing which indicate the direction it should run. Give your pump a quick bump of power and check that the shaft is rotating in the same direction as the label.

In general, our pumps run in a clockwise rotation (viewing from motor end to the pump impeller)

- (a) Single phase motor: It has a fixed rotating direction in spite of wire connection.  
(b) Three phase motor: if the pump is rotating in the wrong direction, the fix often consists of switching any two(2) of the three(3) wires respectively in the power supply terminal connection.

Note: If the motor turns reversely, abnormal sound and vibration could be noticed; and the water volume is obviously reduced. Thus, the motor's life be shortened eventually.

## **(B) During Operation**

No matter what kind of pump, it always accompanies with a normal sound while the pump works. Any abnormal sound, vibration, amperage, or less water output, is the signal of latter breakdown. If any unusual signals are noticed, please immediately switch off the power to stop the pump.

Refer to the next page for trouble-shooting.

## **(C) After Operation**

- (1) **Do not** touch the electric pump unless the power has been cut off for at least five minutes because of the residual voltage.  
(2) **Do not** leave the pump in water when the pump would not be used for a certain period of time, so as to prevent interior/exterior surface being rusted by water.  
(3) Wash the pump in clean water by running it for a few minutes; clean up material in strainer or on impeller. Store the pump in dry place after fully dried.

## **(D) Warranty**

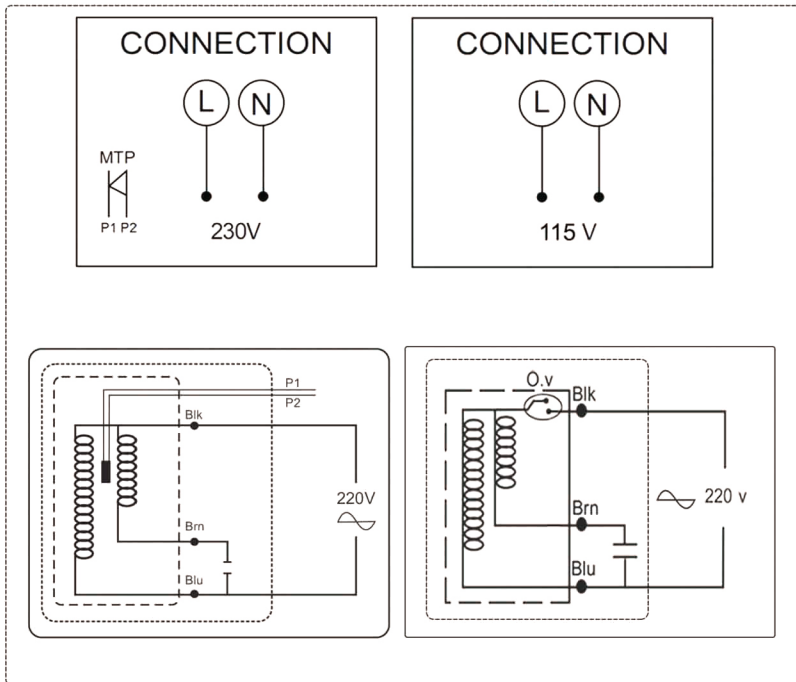
- (1) All of our distributors will reserve sufficient spare parts for servicing the customers.  
This will provide the users with quick, better replacement and maintenance.  
(2) Any failure caused by human-error, incorrect power source or natural disaster; is out of our liability of warranty

## DATA INFORMATION

| MODEL    | HP  | HZ | Phase | VOLTAGE   | VOLTAGE<br>V | Starting<br>Method | VOLTAGE<br>V | Starting<br>Method | Wiring Diagram<br>(in terminal box) | Motor Protector                    |
|----------|-----|----|-------|-----------|--------------|--------------------|--------------|--------------------|-------------------------------------|------------------------------------|
| GCV-232  | 2   | 60 | 3     | 230V/460V | 230          | 2Y                 | 460          | Y                  | TB-C-03                             | (MTP) Miniature Thermal Protector  |
| GCV-332  | 3   | 60 | 3     | 230V/460V | 230          | 2Y                 | 460          | Y                  | TB-C-03                             | (MTPJ) Miniature Thermal Protector |
| GCV-532  | 5   | 60 | 3     | 230V/460V | 230          | 2Y                 | 460          | Y                  | TB-C-03                             | (MTP) Miniature Thermal Protector  |
| GCV-732  | 7.5 | 60 | 3     | 230V/460V | 230          | 2Y                 | 460          | Y                  | TB-C-03                             | (MTP) Miniature Thermal Protector  |
| GCV-1032 | 10  | 60 | 3     | 230V/460V | 230          | 2Y                 | 460          | Y                  | TB-C-03                             | (MTPJ) Miniature Thermal Protector |
| GCV-1532 | 15  | 60 | 3     | 230V/460V | 230          | 2Y                 | 460          | Y                  | TB-C-03                             | (MTP) Miniature Thermal Protector  |
| GO-0511P | 0.5 | 60 | 1     | 115V      | ---          | ---                | ---          | ---                | TB-0-01                             | (Built-In) Thermal Protector       |
| GO-111   | 1   | 60 | 1     | 115V      | ---          | ---                | ---          | ---                | TB-D-01                             | (Built-In) Thermal Protector       |
| GCP-212L | 2   | 60 | 1     | 230V      | ---          | ---                | ---          | ---                | TB-C-01                             | (MTP) Miniature Thermal Protector  |
| GCP-312L | 3   | 60 | 1     | 230V      | ---          | ---                | ---          | ---                | TB-C-01                             | (MTP) Miniature Thermal Protector  |
| GCP-232L | 2   | 60 | 3     | 230V/460V | 230          | 2Y                 | 460          | Y                  | TB-C-03                             | (MTPJ) Miniature Thermal Protector |
| GCP-332L | 3   | 60 | 3     | 230V/460V | 230          | 2Y                 | 460          | Y                  | TB-C-03                             | (MTPJ) Miniature Thermal Protector |
| GPM-212L | 2   | 60 | 1     | 230V      | ---          | ---                | ---          | ---                | TB-C-01                             | (MTP) Miniature Thermal Protector  |
| GPM-312L | 3   | 60 | 1     | 230V      | ---          | ---                | ---          | ---                | TB-C-01                             | (MTP) Miniature Thermal Protector  |
| GPM-232L | 2   | 60 | 3     | 230V/460V | 230          | 2Y                 | 460          | Y                  | TB-C-03                             | (MTPJ) Miniature Thermal Protector |
| GPM-332L | 3   | 60 | 3     | 230V/460V | 230          | 2Y                 | 460          | Y                  | TB-C-03                             | (MTPJ) Miniature Thermal Protector |

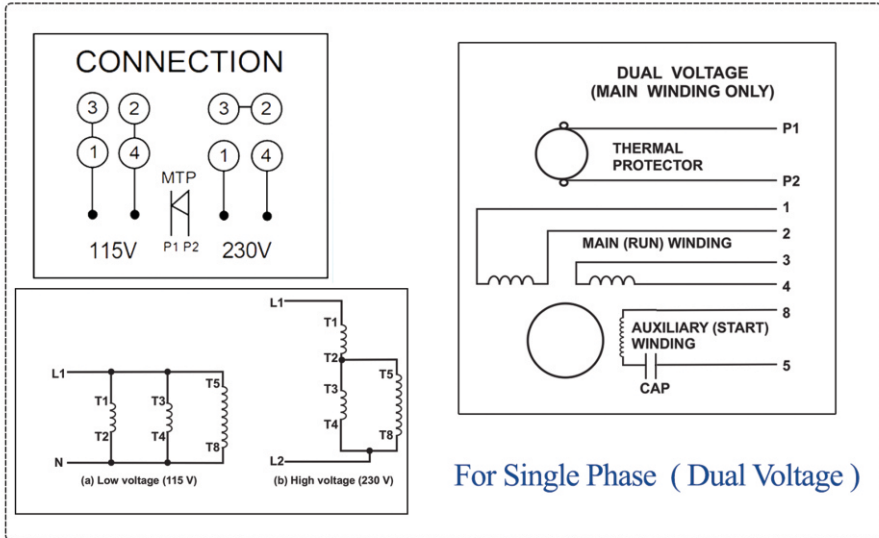
### TB-C-01

### TB-D-01

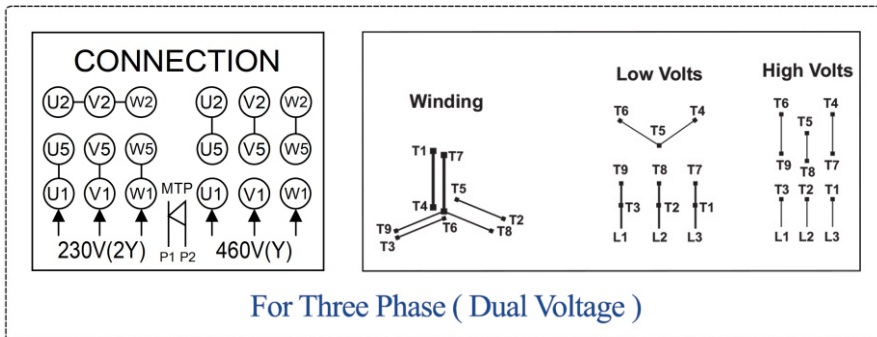




## TB - C - 02



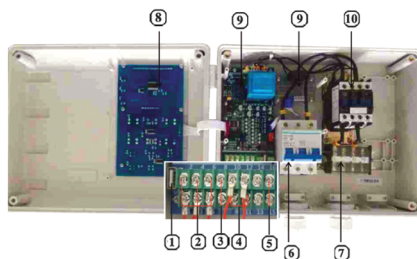
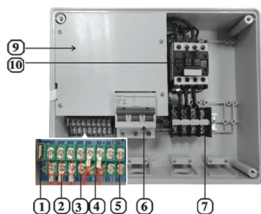
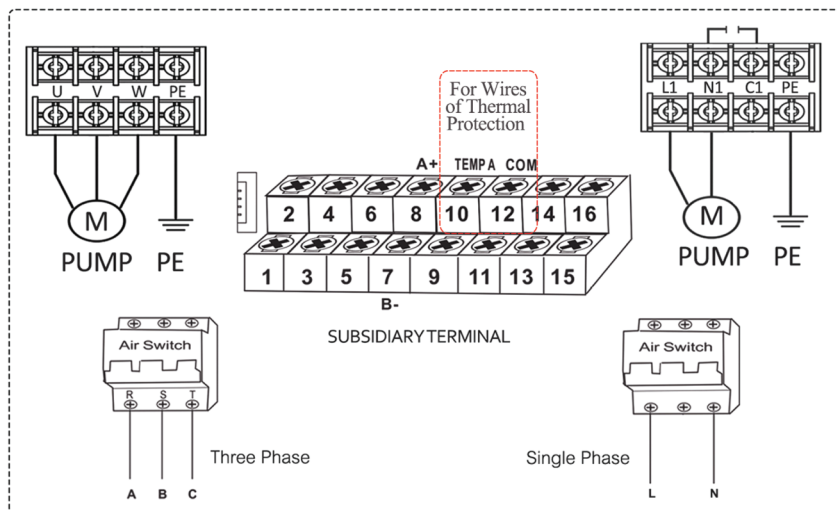
## TB - C - 03

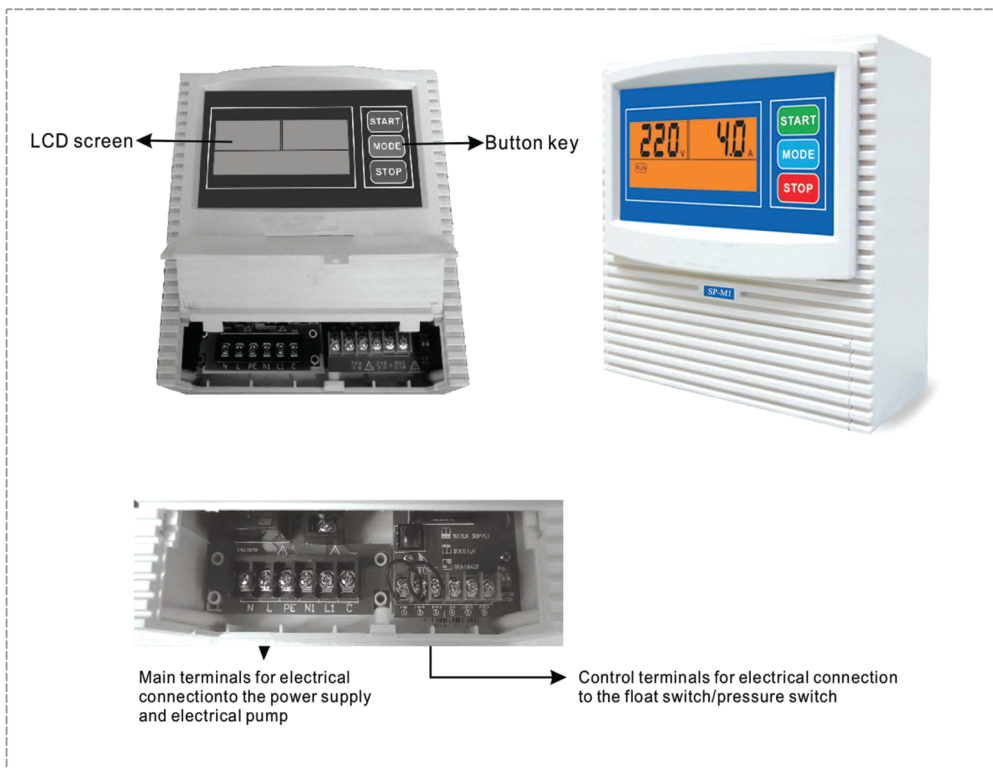


### Warning

All single phase and three phase pumps design for direct Connection to single voltage or dual voltage that have thermal protection wires, must be operated by a special control panel that has a terminal for installing thermal protection wires. (TB-C-01 & TB-C-02 & TB-C-03 wiring )

Thermal Protector can protect your pump up to 85% against all possible problems. Consider a sample of these control panels





**All single phase pump that used Built-in thermal protector , no need any special control panel, and it is better to operate with control panel or starter(TB -D- 01)**

- \* Consider a sample of these control panels**
- \* For more information and find the other control panels please visit Our web site [www.golpumps.com](http://www.golpumps.com)**

## ■ TROUBLE SHOOTING



### WARNING

Before inspecting the pump, make sure to disconnect the electrical power to prevent serious accidents.

| PROBLEM                                     | CAUSES                                                        | RECOMMENDED SOLUTIONS                                             |
|---------------------------------------------|---------------------------------------------------------------|-------------------------------------------------------------------|
| <b>Pump Fails to Start</b>                  | Open circuit or poor cable connection.                        | Check to properly connect the cable.                              |
|                                             | Voltage drop due to cable extension                           | Change cable to a larger size, or shorten the extension           |
|                                             | The impeller is locked                                        | Inspect and remove the foreign objects.                           |
|                                             | Phase interruption                                            | Inspect connections and the external magnetic switch.             |
| <b>Motor Protector Trips</b>                | Overburden due to heavy sand water                            | Use mesh guard or replace with a higher power pump.               |
|                                             | The Impeller is locked.                                       | Inspect and remove the foreign objects.                           |
|                                             | Phase Interruption                                            | Inspect connections and the external magnetic switch.             |
|                                             | A 50Hz pump is used at 60Hz.                                  | Check the nameplate and replace the pump.                         |
|                                             | Motor protector malfunction                                   | Replace a new one.                                                |
| <b>Low Pumping Volume</b>                   | Pump has been operating for a long time while exposed to air. | Stop the pump, and increase the water level.                      |
|                                             | The impeller is worn out.                                     | Replace a new impeller or a suction cover.                        |
|                                             | The strainer or impeller is clogged.                          | Remove the foreign objects.                                       |
|                                             | There is a leak in the piping                                 | Repair or replace a new pipe.                                     |
|                                             | A 60Hz pump is used at 50Hz.                                  | Check the nameplate and replace the pump.                         |
| <b>Pump Makes Noise or Vibration</b>        | The motor rotates in reverse                                  | Interchange two of the three wires.                               |
|                                             | Worn bearing or damaged Impeller.                             | Inspect and replace the parts.                                    |
| <b>Leakage in Motor Casing</b>              | The mechanical seal is worn out.                              | Replace a new mechanical seal.                                    |
|                                             | Oil seal or gasket is worn out                                | Replace a new one oil seal or gasket.                             |
| <b>Amperage Overload</b>                    | Abnormal voltage or voltage drop                              | Check the power to ensure the voltage matches with the nameplate. |
|                                             | The motor rotates in reverse.                                 | Interchange two of the three wires                                |
|                                             | Phase interruption                                            | Inspect connections and the external magnetic switch.             |
|                                             | A 50Hz pump is used at 60Hz.                                  | Check the nameplate and replace the pump.                         |
|                                             | The motor bearing is damaged.                                 | Disassemble the motor and replace a new bearing.                  |
|                                             | The pump or the impeller is clogged.                          | Remove the foreign matters.                                       |
| <b>Leakage Circuit Breaker is Activated</b> | Worn mechanical seal                                          | Replace new mechanical seal.                                      |
|                                             | The cable is damaged.                                         | Replace a new cable.                                              |
|                                             | The motor is burned.                                          | Replace a new motor.                                              |

**ATTN: If the pump is switched on by a digital control panel, announces the problem with the pump on its display , and it will be a full warranty for one year**

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