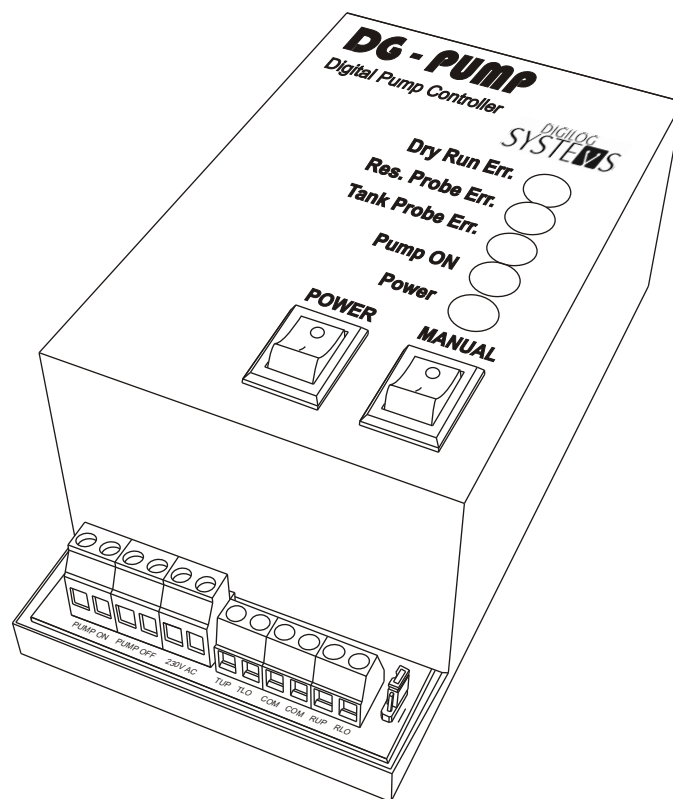


# DG-PUMP

## Digital Automatic pump Controller Installation Manual



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## **General Description:**

DG-Pump, Digital fully Automatic Water Pump Controller for your home and Industry. It continuously monitors the liquid level of the overhead tank and reservoir. The Automatic Pump Controller controls the water pumps and turns it ON and OFF with respect to the level in the water tank. This auto-switching feature **Saves Manpower, Electricity, Water and Money**. Hence no need to operate your pump manually. Our system switches the pump when the level of water in the tank goes below LOW level and OFF when the water touches the HIGH level. Thus no wastage of water and can save electricity bill and water charges.

## **Features:**

Switches ON the pump when the water in the overhead tank goes below the pre-decided minimum level.

Switches OFF the pump when the water level in the overhead tank reaches the maximum level therefore prevents overflow.

Switches OFF the pump when the water level reaches the minimum level in the reservoir therefore prevents dry running.

Shall again switch ON the pump when there is sufficient water in the reservoir.

Therefor no need to switch ON or switch OFF the pump manually.

No more Overflow or Dry run thus saving water electricity & manpower.

## **Technical Specification:**

Supply Voltage: 230 VAC, 50 Hz.

Internal Voltage: 12V DC

Output: 2 potential free relay contact

Contact Rating: 23 Amp. for Pump On relay and 7 Amp. Pump Off relay

Power Consumption: 1.2 Watt

Monthly Consumption: Less than 1 Unit

Temperature: -20 to + 70 degree Celsius

Dimension: 172mm \* 85mm \* 62mm.

## **Applications:**

Domestic

Bungalows

Multi-storied apartments

Hospitals

Factories

Hotels and restaurants

Commercial centers

All places with water tank

**Description:**

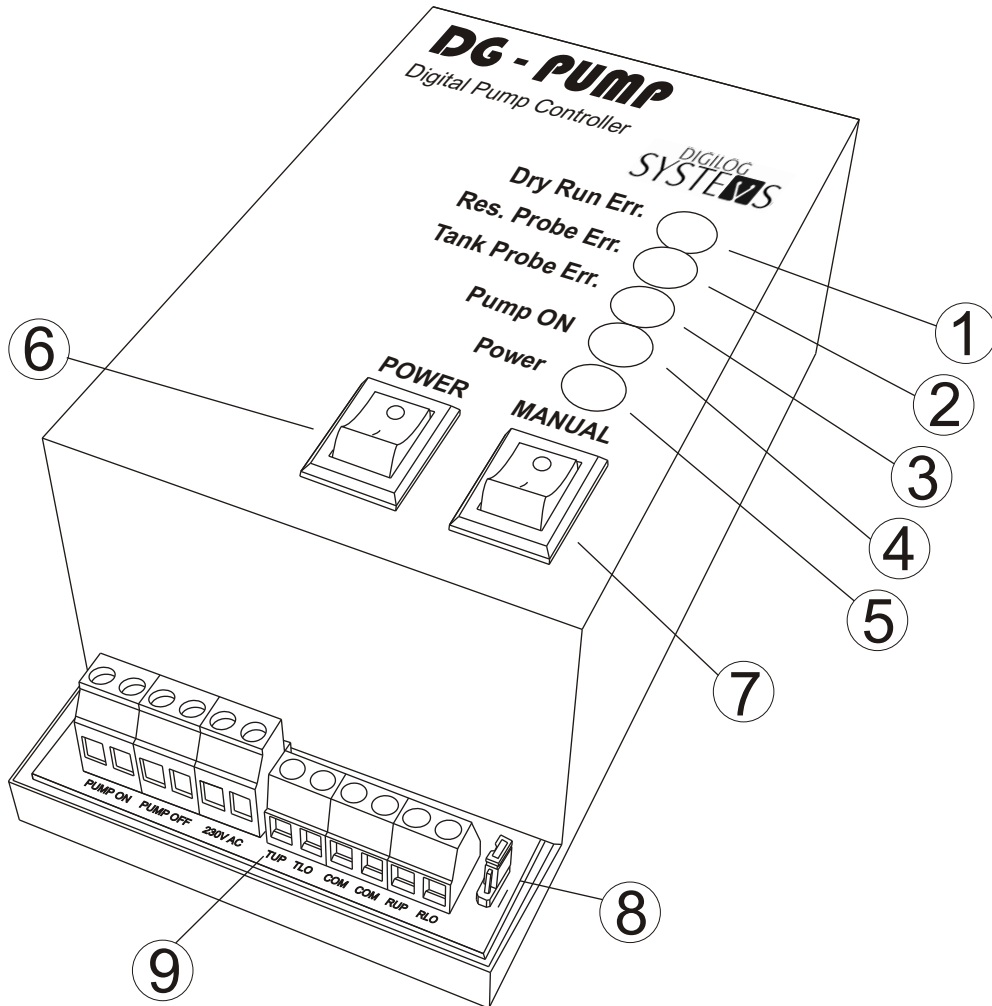


FIG-1

**Points shown in FIG-1:**

- 1) Dry Run Error Indication LED
- 2) Reservoir Probe Error Indication LED
- 3) Tank Probe Error Indication LED
- 4) Pump Running Indication LED
- 5) Power On Indication LED
- 6) Power On/Off Switch
- 7) Manual On/Off Switch
- 8) Jumper
- 9) Connector Strip

## **Jumper Configuration:**

This device may run in two different modes:

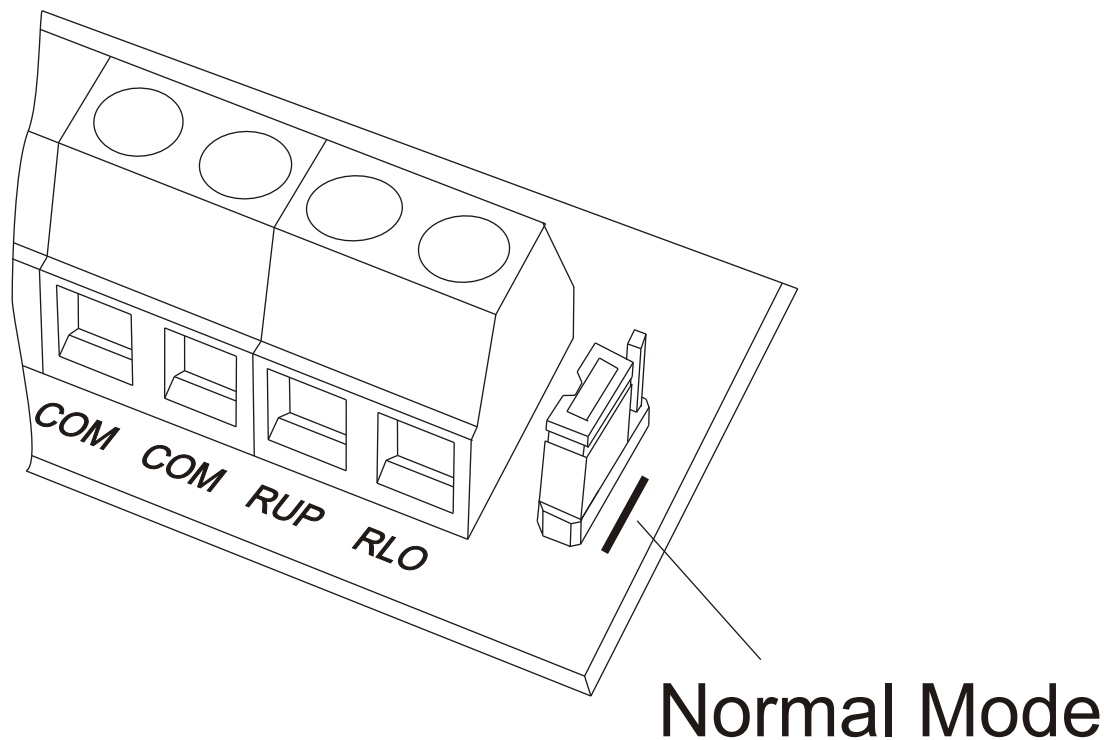


FIG-2

## **Normal Mode:**

If the jumper is placed at the position as shown in FIG-2, the device will run in normal mode. In this mode “PUMP ON” relay becomes on/close until the the pump is on i.e “PUMP ON” relay acts as a switch in series with the phase line. “PUMP OFF” relay remains inactive in this mode.

## **Extended Mode:**

In this mode the jumper should be placed as shown in FIG-3. “PUMP ON” relay turns on/close for two seconds to start the pump and after that it becomes open.

“PUMP-OFF” relay becomes open for two seconds to stop the pump and again it becomes close. Extended mode is used where two separate switches(Green and Red) are there to On/Off the pump in the panel box.

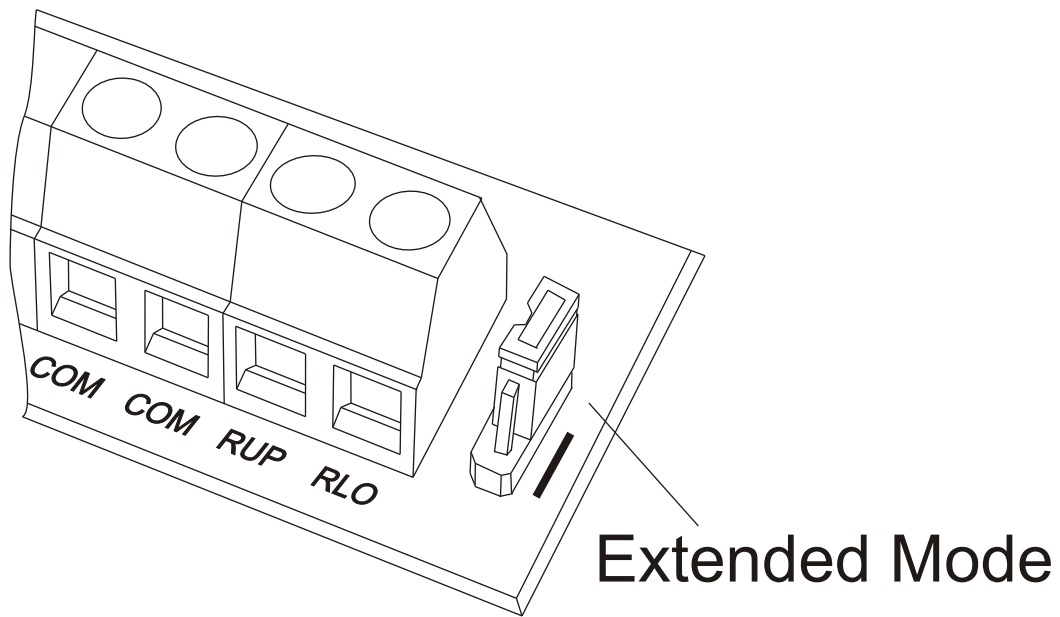


FIG-3

**Connector Strip:**

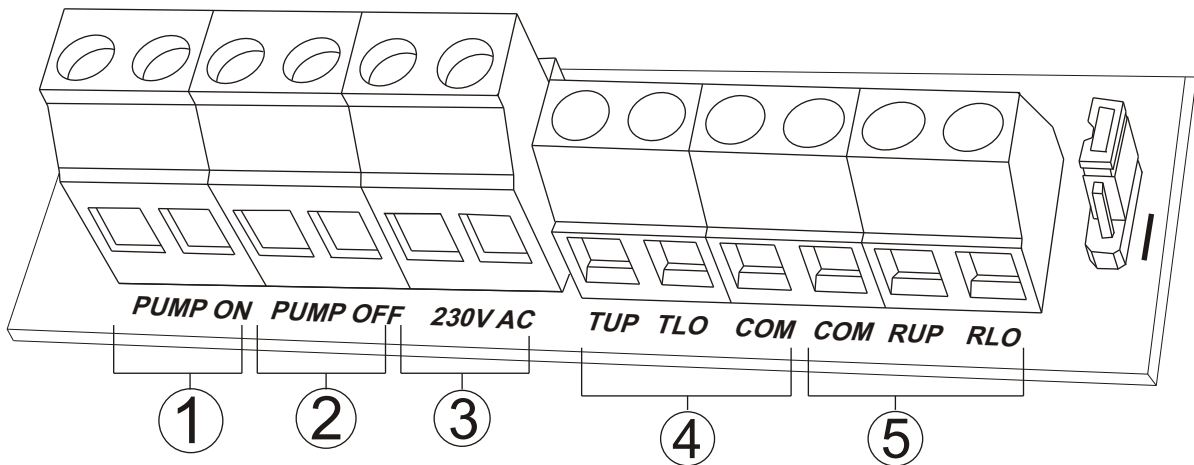


FIG-4

**Points shown in FIG-4:**

- 1) "PUMP ON" Relay 'NO' contact
- 2) "PUMP OFF" Relay 'NC' contact
- 3) 230V AC input terminal
- 4) Tank sensor Up, Low and Common
- 5) Reservoir sensor Up, Low and Common

**PUMP ON Relay:**

This is normally open(NO) contact. In normal mode this acts as a switch for turning the pump On/Off and remains close until the pump is on as shown in FIG-6. In extended mode it closes three times for two seconds each to latch the contactor and start the pump and then becomes open. In this mode it connects in parallel with START Switch(Green) of the Pump Panel Board.

**PUMP OFF Relay:**

This is normally close(NC) contact. In normal mode this relay has no function and remains unused. In extended mode it connects in series with STOP Switch(Red) of the Pump Panel Board. The contact of Pump Off Relay opens for two seconds to stop the pump.

**Sensor Connection:**

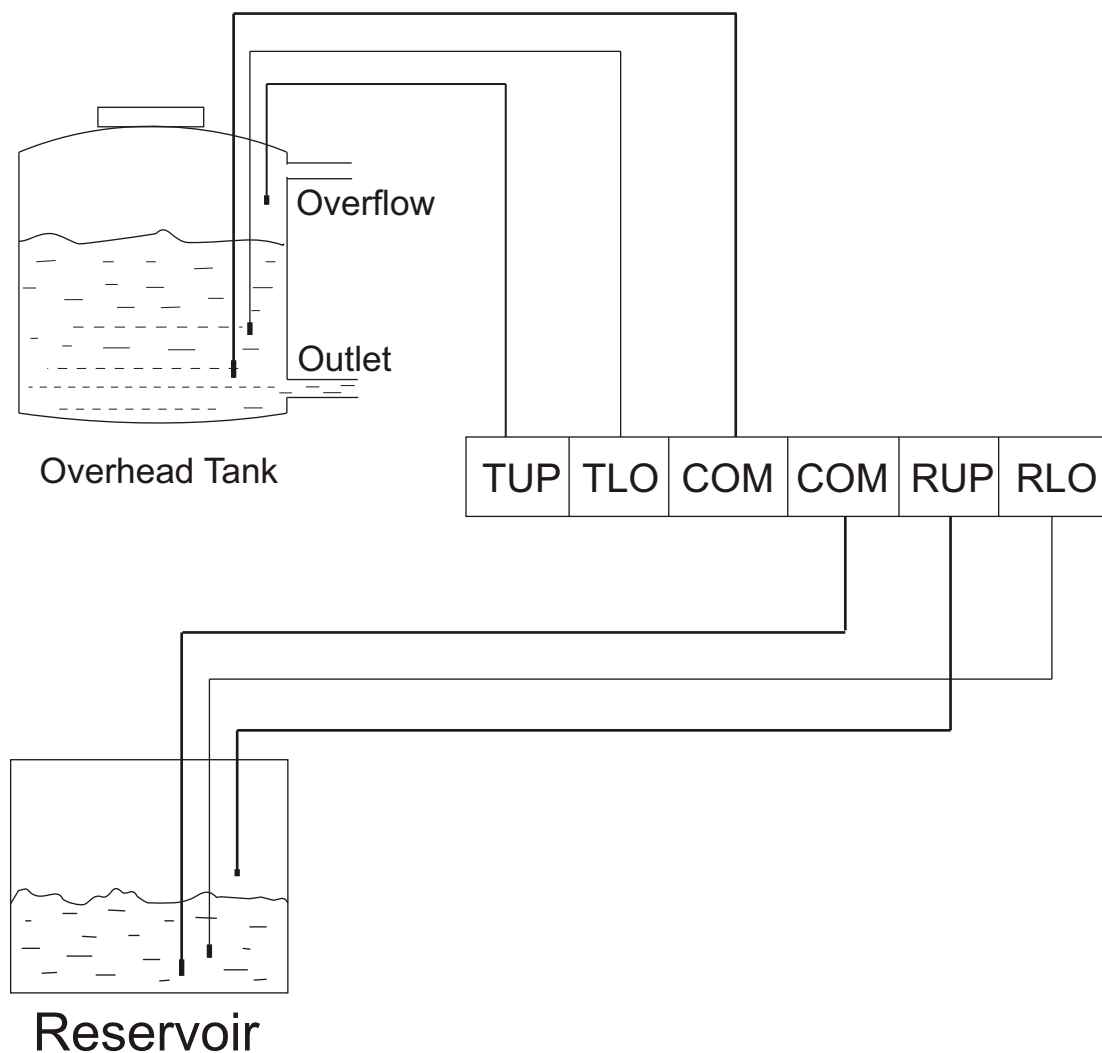


FIG-5

**Normal Mode Operation:**

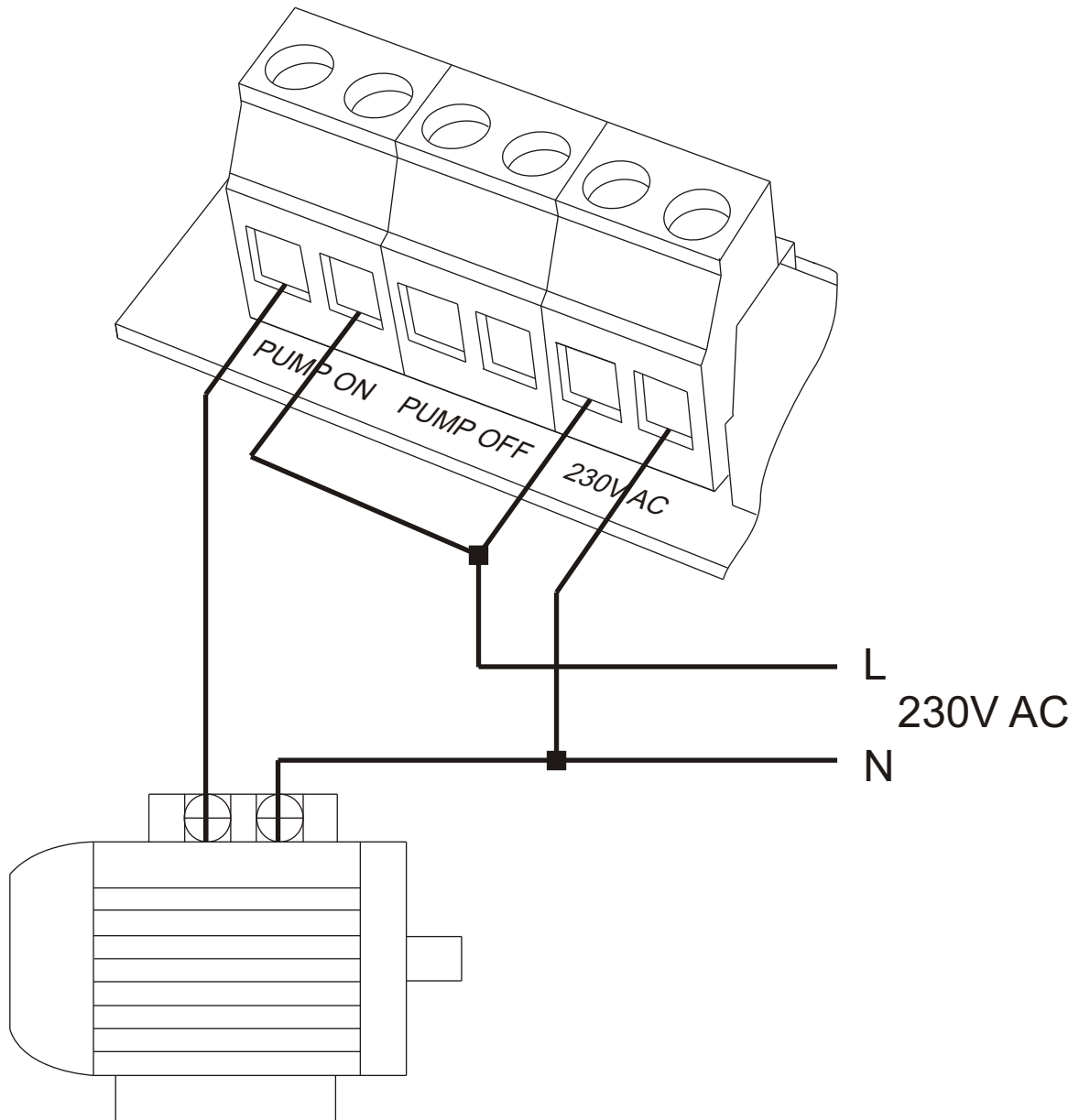


FIG-6