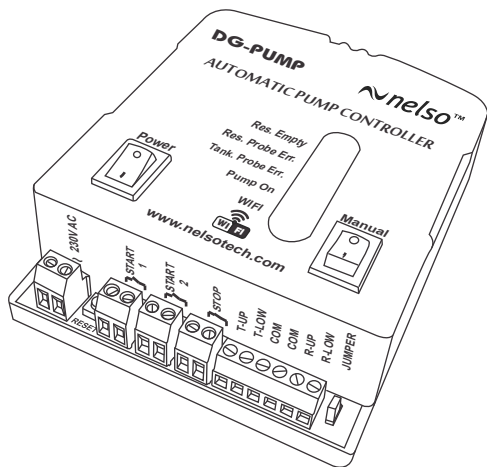


# DG-PUMP

WiFi Mobile Operated Smart Automatic Pump Controller

**Model: WPC110**



**nelso**<sup>®</sup>  
any electronic solution

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**WPC110** Installation Manual

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## General Description:

DG-Pump, Digital Smart WiFi enabled fully Automatic Water Pump Controller for your home and Industry. You can On/Off the pump from any part of the world with the help of Android App. from your mobile. In Auto Mode, it continuously monitors the liquid level of the overhead tank & reservoir and On/Off the pump automatically. This auto-switching feature **Saves Manpower, Electricity, Water and Money**. Users can also set 5 schedules with days of the week at which the pump will automatically be On and Off.

## Features:

This is WiFi/IoT enabled device. You can On/Off the pump from your mobile.

Set five schedules with days of the week at which the pump will automatically be On and Off.

Get Notifications of all events and day-wise pump runtime reports within the App.

Password protection to secure the device from unauthorized use.

The device can be used in Auto Mode, Manual Mode and a combination of both.

In Auto Mode, it will turn On/Off the pump depending on the level of water in the overhead tank & reservoir.

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## Technical Specification:

Supply Voltage: 230 VAC, 50 Hz.

Internal Voltage: 12V DC

Output: 3 potential-free relay contact

Contact Rating: 23 Amp. for START-1 and START-2 relay and 7 Amp. STOP relay

Power Consumption: 1.2 Watt

Monthly Consumption: Less than 1 Unit

Temperature: -20 to + 70 degree Celsius

Dimension: 135mm \* 112mm \* 40mm.

## Getting Started:

Connect the device with your Pump Control Panel, 230VAC and place the sensors as described later.

Press the Reset Switch for 10 seconds until the WIFI LED blinks 4 times to restore factory settings.

Turn off mobile data in your phone, Open Wi-Fi Settings and connect to SSID "Nelso-IoT".

You will be prompted to "Sign in to a Wi-Fi network". Click on it. Now select the SSID from the list, enter the password and save. Now turn on mobile data or switch the Wi-Fi connection of your phone to your home SSID. Download the App from Google Play Store and open it. Click "Add new device". Now enter serial no. manually or scan the QR Code from the label on the device.

Enter a name so you can recognize the device and click the Register button.

**WPC110** Installation Manual

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## Applications:

Domestic

Bungalows

Multi-storied apartments

Hospitals

Factories

Hotels and restaurants

Commercial centers

All places with a water tank

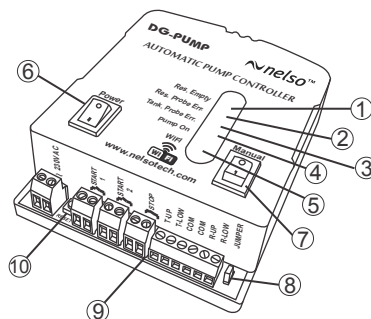


FIG-1

**WPC110** Installation Manual

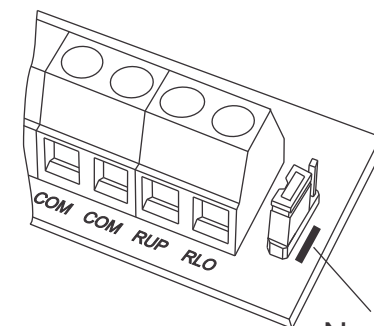
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## Points are shown in FIG-1:

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

## Jumper Configuration:

This device may run in two different modes:



Normal Mode

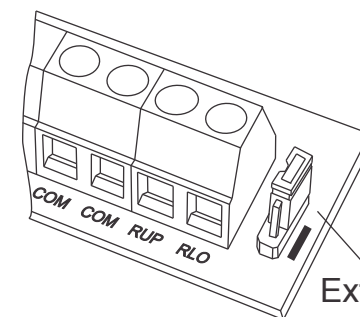
FIG-2

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**Normal Mode:** If the jumper is placed at the position shown in FIG-2, the device will run in normal mode. In this mode "START-1" and "START-2" relays become close until the pump is on i.e. "START-1" or "START-2" relay acts as a switch in series with the phase line. The "STOP" relay remains inactive in this mode.

**Extended Mode:** In this mode, the jumper should be placed as shown in FIG-3. "START-1" and "START-2" relays become close for two seconds to start the pump and after that it becomes open.



Extended Mode

FIG-3

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

#### Connector Strip:

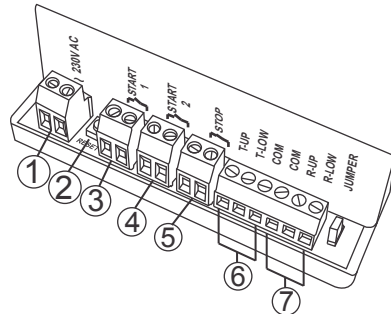


FIG-4

#### Points are shown in FIG-4:

- 1) 230V AC Input
- 2) Reset Switch
- 3) “START-1” Relay ‘NO’ contact
- 4) “START-2” Relay ‘NO’ contact
- 5) “STOP” Relay ‘NC’ contact
- 6) Tank sensor Up, Low and Common
- 7) Reservoir sensor Up, Low and Common

#### Sensor Connection:

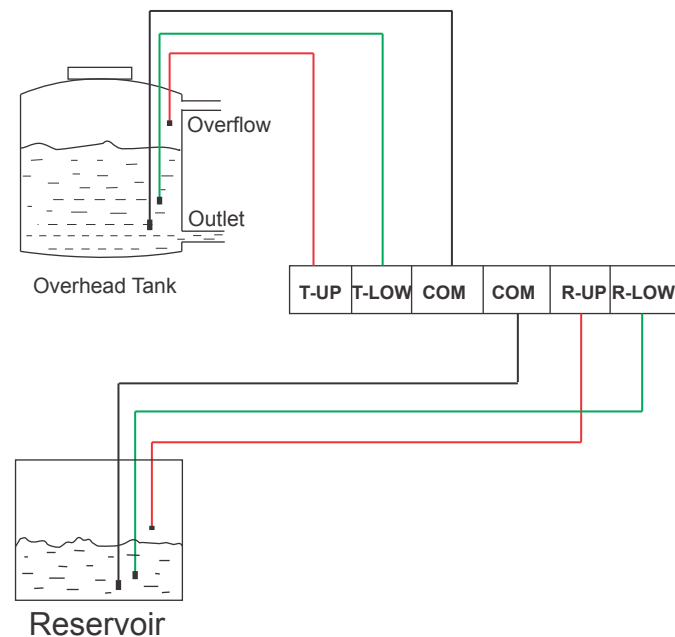
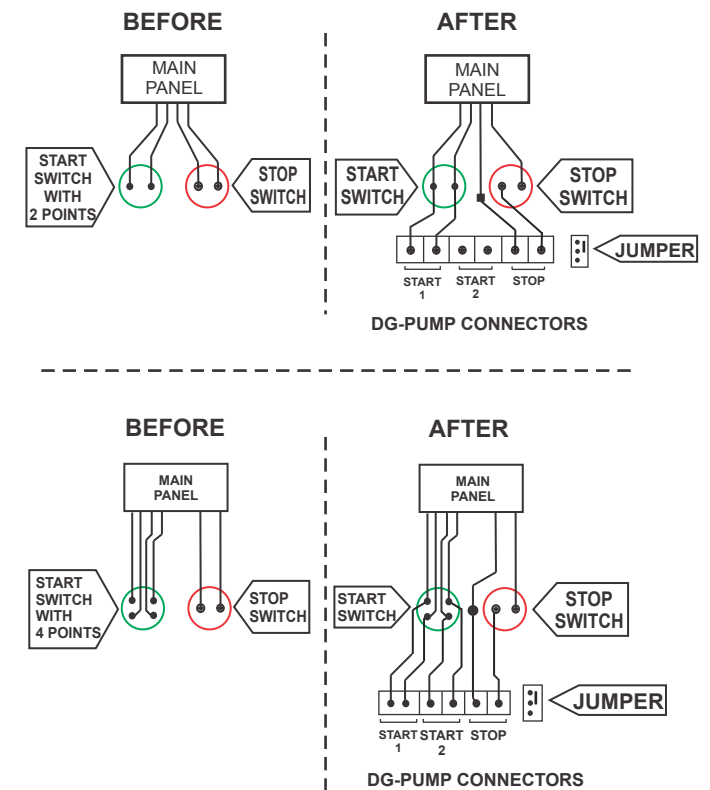


FIG-5

Control Panel with START and STOP switch.



**Pump Start Relay:** This is normally open(NO) contact. In normal mode, this acts as a switch for turning the pump On/Off and remains closed 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 the START Switch(Green) of the Pump Panel Board.

**Pump Stop 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 the STOP Switch(Red) of the Pump Panel Board. The contact of the Pump Off Relay opens for two seconds to stop the pump.

**WIFI LED:** It will glow continuously if the device is configured and connected to your home Wi-Fi Network which indicates the device is Online. If you press and hold the Reset Switch, after 3 seconds it will blink two times and after 10 seconds it will blink four times. The functionality of the Reset Switch is described later.

#### Normal Mode Operation:

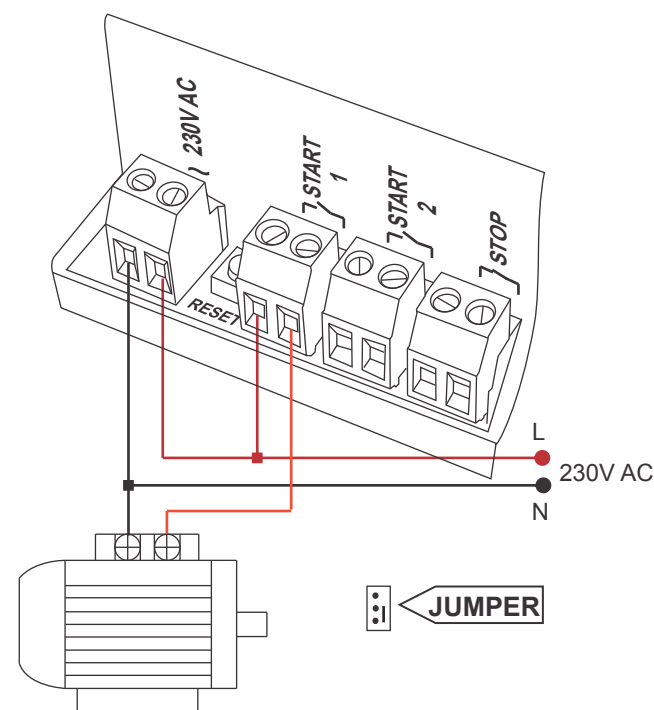


FIG-6

**Android App Download:** Download free android app from the link or by scanning QR Code given below.



<https://play.google.com/store/apps/details?id=com.nelso.iotpumpcontroller>

**Reset Switch:** This switch has two functions. If you press and hold it, after 3 seconds, the WIFI LED will blink two times. Now release the switch. The saved Wi-Fi credentials will be deleted so you can configure the device with a new SSID and Password. If you hold the reset switch for 10 seconds the WIFI LED will blink four times and Restore Factory Settings.

**Save WIFI Settings:** Power on the device. Now turn off mobile data and open Wi-Fi settings in your phone. Connect to SSID “Nelso-IoT”. You will be prompted to “Sign in to a Wi-Fi network”. Click on it. Now select the SSID from the list, enter the password and save. If not prompted automatically then open the browser, type 192.168.4.1 on the address bar and press enter.