RMG AUTOMATION
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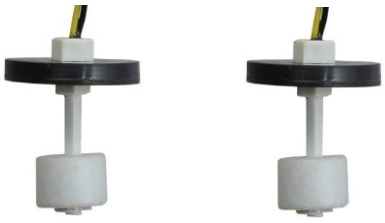
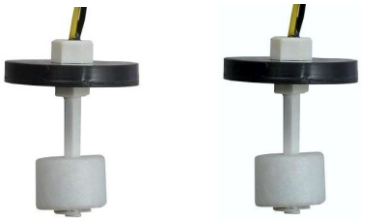
Smart Water Tank Level Monitoring & Control System

Model : SMWLC





User Manual

Version 2.0-10/22

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1. INTRODUCTION

IoT (Internet of Things) technology is currently being used in abundance across industries. IoT is the future, with many societal benefits. It is a full-fledged solution, comprising customizable and flexible features for ease of use. The rapid acceptance of technology in the water industry is a bold step toward progress, which makes a great impact on overall productivity. We feel proud to say that we are one among the handful of leading manufacturers launching the, "IOT based Smart Water Level Controller and Indicator."

Here you go!!! This product needs internet/Wi-Fi to work with. As such, this device can be controlled from any nook and corner of the world. You just need to have internet in the vicinity of the product. There is a special mention that our RMG smart water level controller can be controlled by "n" number of users and in one mobile app, each user can monitor & control "n" number of devices at one point. Live Motor Pump Status, water level with user friendly programmable settings are available.

We are unique among other brands in assured quality, affordable pricing and customized solutions where we update the Firmware Over-The-Air – "FOTA" providing ease and comfort to the users.

2. DESCRIPTION

- **Power ON/OFF switch:** This switch is provided at the bottom side to switch ON/OFF the controller unit.
- **Power ON LED:** It indicates the power supply to the unit.
- **SIGNAL LED:** It refers to the connection between the cloud server and the device. Glows permanently when a connection is available. If there is no connection, the LED.
- **Motor ON LED:** It indicates the motor ON condition.
- **Manual/Auto Operation:**

Auto mode: In AUTO mode, motor will automatically switch ON when the water level in the tank is low and automatically switch OFF when the tank becomes full.

Manual Mode: Helps to switch ON the motor manually. In this mode, the motor will be constantly running.

. **Semi-Automatic**(Manual ON and Auto OFF) function is achieved by pressing start button in Auto mode.

3. TOOLS REQUIRED

- 3 pair or 6 core communication cable.
- Drilling Machine
- Simple hammer
- Wooden gattas
- Screws for mounting units on wall
- Line tester
- Wire stripper,
- 1.5Sq.mm Wire for power connections
- Insulation tape

3. WiFi CONFIGURATION

- Connect AC supply 230V to red and black wire of the controller. Power on the device.
- **Power ON** LED is turned ON.
- **Signal LED** on the controller blinks
- In your PC or Phone, Check the available WiFi networks. WiFi list shows RMG Smart WLC's name **RMG_XXXXXXXXXXXX**. If it is not displayed refresh your WiFi connected devices list.
- Click on **RMG_XXXXXXXXXXXX** and it redirects to the browser to configure wifi.(figure 1).
- If it is not re-directed, type 192.168.4.1 in the address bar of browser. You get the configure wifi page.(figure 2).
- Click on **Configure WiFi**. This will lead you to figure.3
- Here, you will see the list of wifi networks available. Click **Refresh** button, if it is not displayed. Select your SSID and type the respective password.
- Click **Save** to store the credentials in the device. Once the credentials are saved, you get the page as shown in figure 4.
- The **Signal LED** glows constantly in a few seconds. It indicates that the Smart Device is connected to the RMG cloud server.
- Thus WiFi configuration process is now completed succesfully.

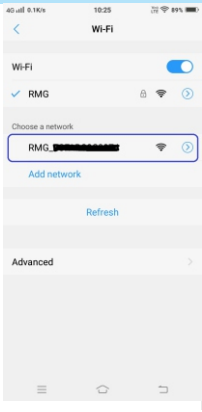

Figure 1

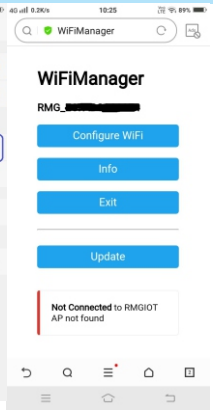

Figure 2

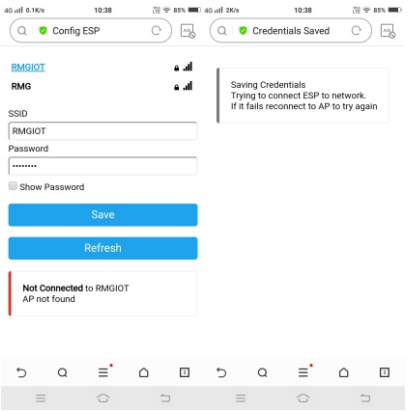

Figure 3

Figure 4

4. APPLICATION CONFIGURATION

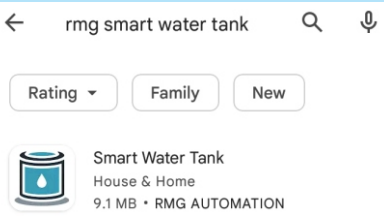

Figure 5

- Go to play store in your Android phone.
- Search for "**RMG Smart Water Tank**" application.(figure 5)
- Install the **Smart Water Tank** application.(figure 6) and open it.
- You will see the login screen as in figure 7. Enter the details asked, Your Name, Your Gmail ID and Your Mobile Number. Then Click Login.

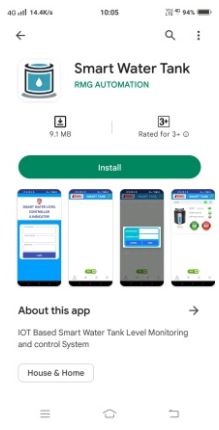

Figure 6

Figure 7

- A screen appears asking for OTP (figure.8), You will also get an OTP. Enter the OTP and click on **Verify OTP**.
- Now, You will lead to Home page (figure.9), where you can add your device.
- Click **Add Device** option in Home page.
- Now a window opens as in figure 10. In this click on **SCAN QR CODE tab** and Scan the QR code given on the product. If you are unable to scan, Enter the Serial No. and Activation Code given to you and save it.
- Now, You can see the respective options of the controller device in your App. **PUMP STATUS, DRY RUN STATUS AND TANK LEVELS** etc.
- By clicking the in the screen, You can change the name of your tank, and set the **Dry run Sense time** and **Dry run reset time** (figure.12).

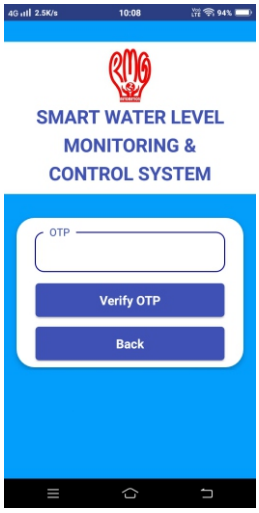

Figure 8

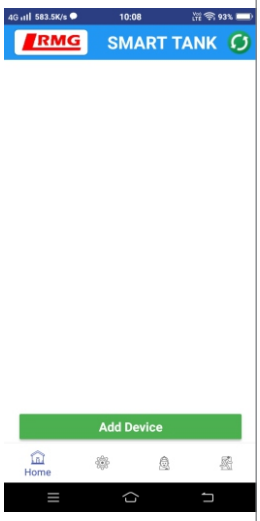

Figure 9

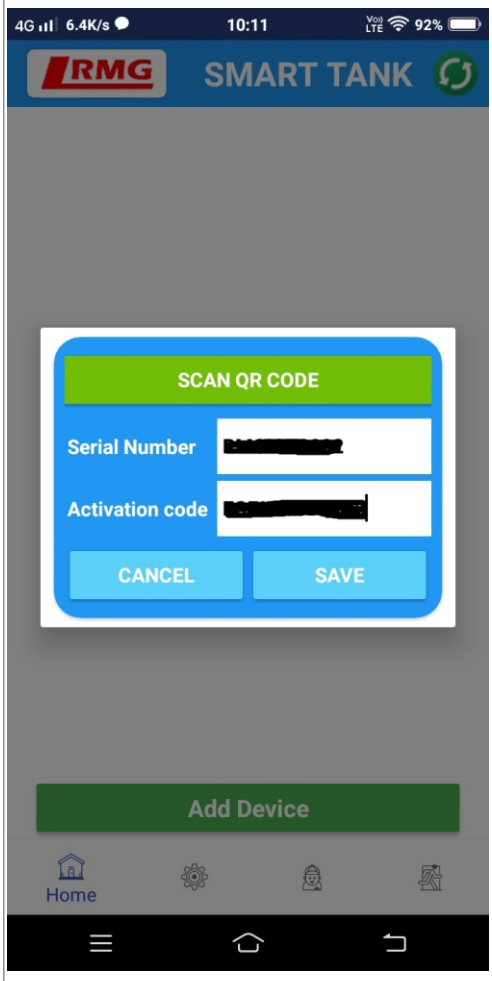

Figure 10

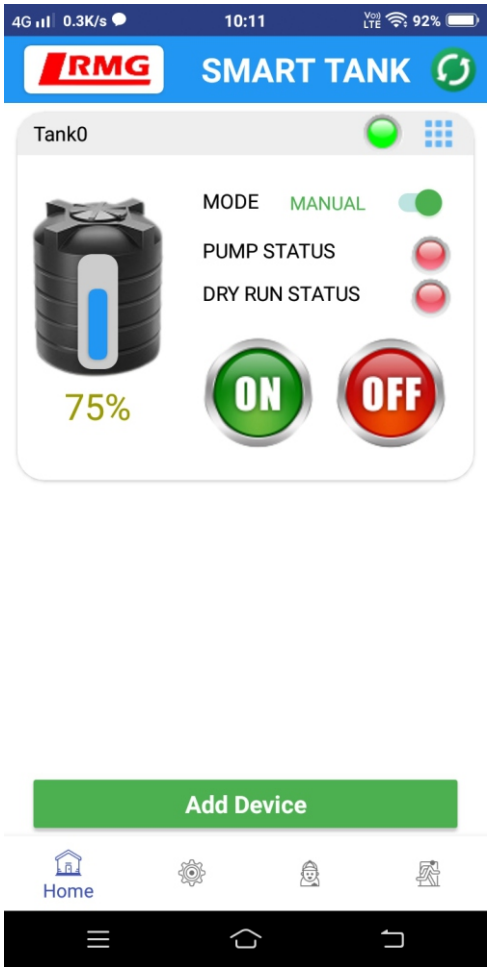

Figure 11

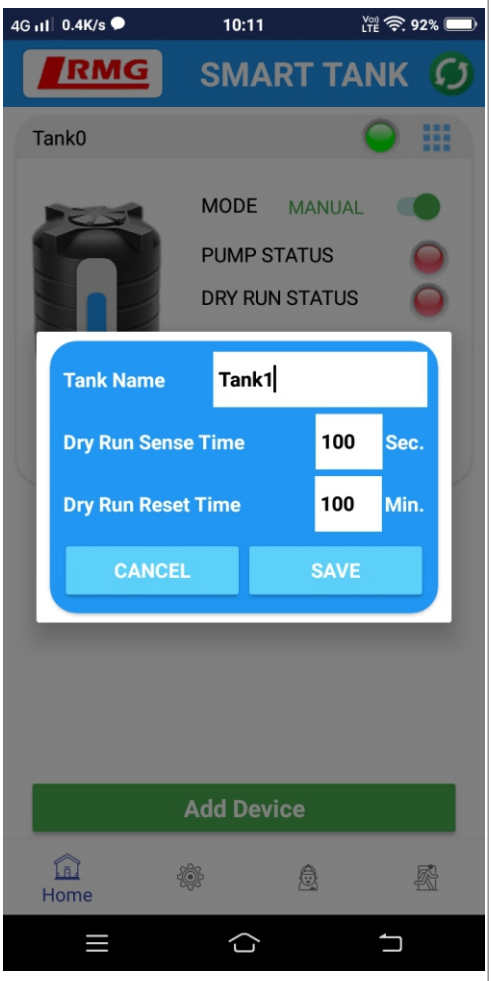

Figure 12

4. INSTALLATION PROCEDURE

Caution: Switch off the main power while doing the Power Connection steps.

Step 1: Wall mount the Controller unit nearby motor pump switch/starter location.

Step 2: As per the model purchased, check the label and connect AC supply 230V to red and black wire of the controller refer figure 13 and figure 14.

Step 3: For switch or MCB, Connect blue pair wire of the controller to the switch/MCB of the motor in parallel as shown in figure1.

Step 4: For starter, Connect blue pair wire of the controller to ON button of starter in parallel and black pair wire to OFF button in series(Refer to figure. 14 and figure. 15)

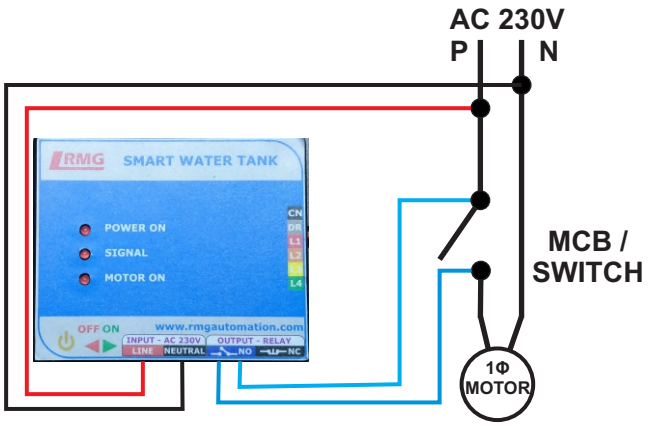

Figure 13: 1Φ SWITCH/MCB

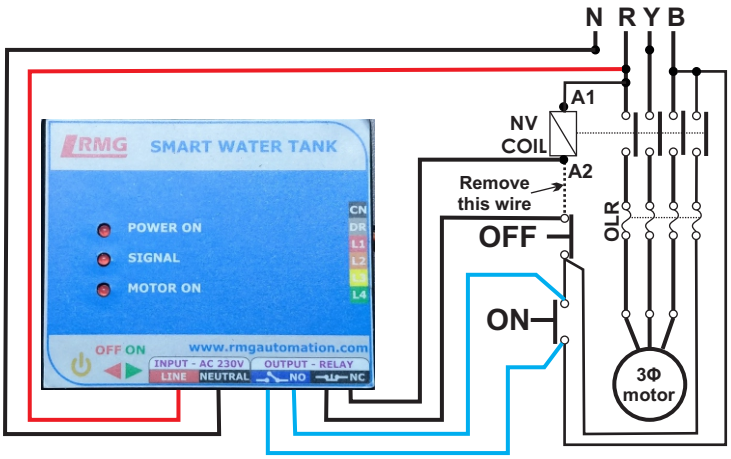

Figure 14: 3Φ Starter

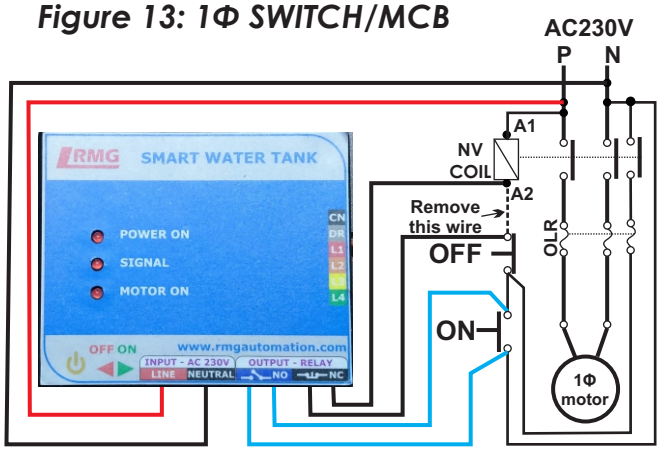

Figure 15: 1Φ Starter

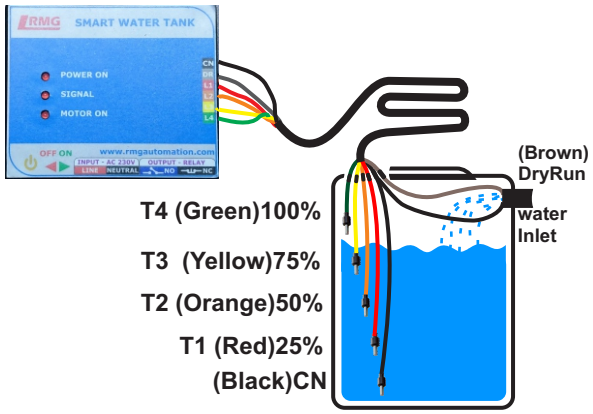

Figure 16: sensor connection

Note: In case of doubts please call 044 - 43180017 or What's App 9940594413 from Monday to Friday 10 am to 6 pm.

Step 5: Lay 6 core cable between controller and tank. Join one end of the 6 core cable to sensor line of controller as per label. In tank side, **Contact type sensor connection:** Take the sensors and cut them according to the levels of tank and join them with the 6 core cable as per label coded.(Refer figure. 16) **Magnetic float sensor connections:** These Sensor has 2 wires, Use any one wire in each sensor as common. Other wires left in each can be used for levels. Join them with the 6 core cable as per label coded.

Step 6: Immerse the Sensors inside the Over Head Tank (OHT) and tape it. Sensors should be in 25%, 50%, 75% and 100% of tank. Dry run sensor should be fixed in the inlet of the tank. (Refer figure. 16)

This completes installation.

5. OPERATING PROCEDURE

- Turn on the Power On/OFF switch in your controller. Power ON LED will glow.
- Confirm Signal LED glows permanently, indicates that device is connected to RMG Cloud Server.
- Now Open the RMG Smart Water Tank App from your mobile.
- Tank levels can be seen in your app.
- Keep the Manual/Auto mode selection in your application in Auto mode for automatic operation.
- When tank level goes below 50%, controller turns ON the motor. Then MOTOR ON LED will glow.
- When tank is full and reaches 100% controller turns OFF the motor and MOTOR ON LED will be OFF.
- In Manual Mode, You Can Turn ON/OFF your motor pump at any time.
- By clicking the in the screen, You can change the name of your tank, and set the **Dry run Sense time** and **Dry run reset time** (figure. 12).

6. TROUBLE SHOOTING METHODS

Sl. no	**Error**	**Solutions**
1	Device dead / Not Powered ON	**a.** Check the power connection to device. **b.** If problem continues, contact RMG for support.
2	Signal LED blinks continuously	It means, the Smart Device is not connected with RMG Cloud Server. **a.** Check whether the WiFi is available. **b.** Check whether internet connection is available.