

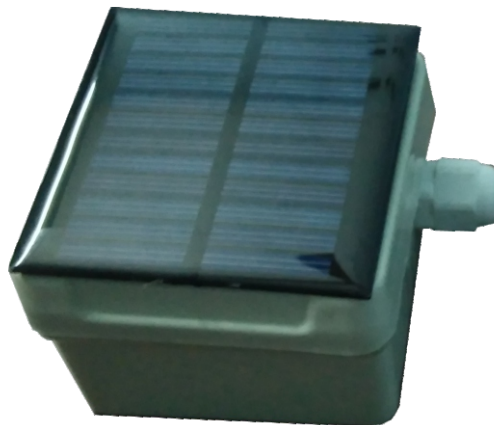
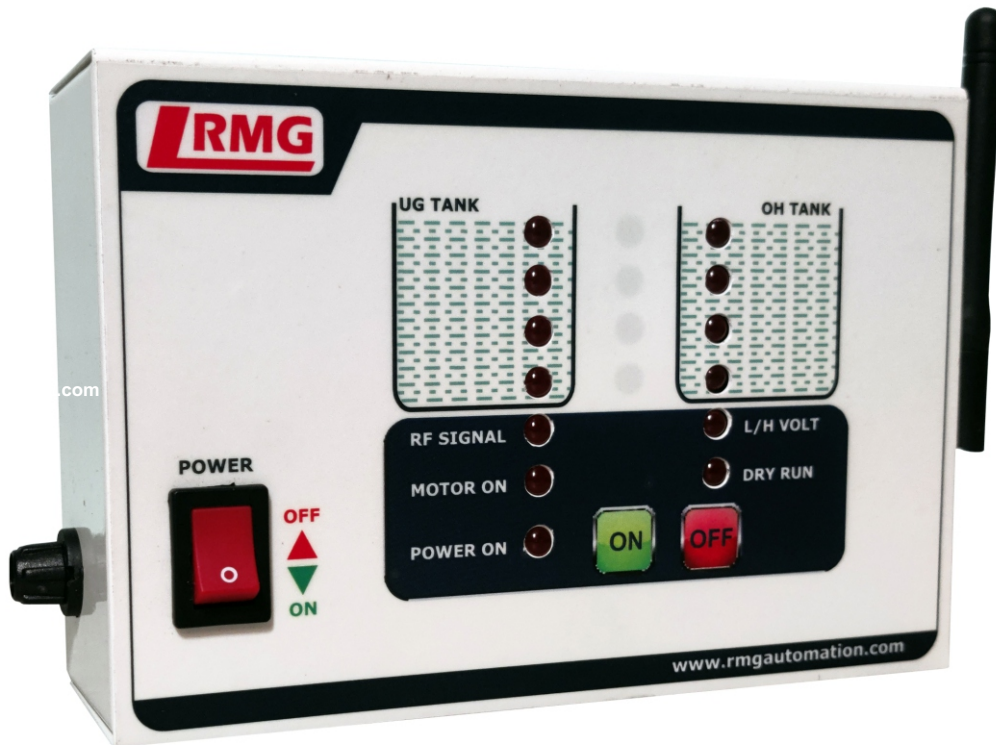


RMG AUTOMATION

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Advanced Wireless Long Range Fully Automatic Water Level Controller

Model : AFWAFLC-044



User Manual

1. INTRODUCTION

Water saving is Lifesaving. RMG Automation introduces an automated way to save water. AWFALC-044 is a Radio Frequency Based Wireless Water Level Controller with Indicators, in which it helps to ascertain the level of water in the over head tank & sump as well as automatically control the motor pump. The motor is switched ON automatically when the water level in the over head tank is low, making sure water is present in the under ground tank (sump). The motor is switched OFF automatically when the tank becomes full, or when the sump is empty. It also has low voltage, high voltage and dry run indications.

The maximum range that the product can work in line of site is 700 to 1000 meters. It has 2 outdoor transmitter units and 1 indoor controller unit. The transmitter units are placed near the water tanks, whereas the controller unit is placed near the motor pump control switch/starter location. This product is suitable for underground to over head tank setup.

2. DESCRIPTION

2.1 CONTROLLER / RECEIVER

- **Power ON/OFF switch** – used to switch ON / OFF the device.
- **Power ON LED** – shows ON/OFF status of device.
- **ON button** – Used for manual motor ON. And for pairing the controller with transmitter.
- **OFF button** – Used for manual motor OFF. And to enable/disable dry run option.
- **RF SIGNAL LED** – shows the signal status. When it blinks the communication between transmitter & controller is good. When it is continuously glowing, it means there is no communication.
- **L/H VOLT LED** - shows high/low voltage indication. If the LED glows motor will not run and protect from voltage fluctuations.
- **DRY RUN LED** - It indicates the dry run of motor and glows when there is no water in the inlet of the tank for 90 seconds.
- **MOTOR ON LED** - It indicates the motor ON/OFF status.
- **Level Indicator LEDs** - These LEDs shows the water levels of the tank and sump. There are 4 level indications for both, each with 25%,50%,75% and

2.2 TRANSMITTER

- **RF signal LED** – It blinks once when the battery is inserted. It also blinks whenever the controller device asks it for the water level.
- **Charging LED** – glows when battery is charging (red LED)
- **Charging complete LED** – glows when battery is fully charged (blue LED)
- **Solar panel** – 6V/100mA solar panel for charging battery.
- **Li-ion battery** – 3.7V rechargeable battery.

3. TOOLS REQUIRED

- Drill gun, Simple hammer
- Wooden gattas
- Screws for mounting units on wall
- Line tester
- Wire stripper
- 1.5Sq.mm Wire for power & control wiring
- Insulation tape, Cable (6 core)

4. INSTALLATION PROCEDURE

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

Step 1: Wall mount the Controller unit nearby motor pump switch/starter location. The location chosen should be near the window or in open space to ensure good signal strength.

Step 2: As per your model purchased, Connect AC supply (AC 230/440V) to 1st and 2nd terminal of the controller as shown in the figure 1 or figure 2.

Step 3: For switch or MCB, connect 3rd and 4th terminal of device in parallel to the switch as shown in figure 1.

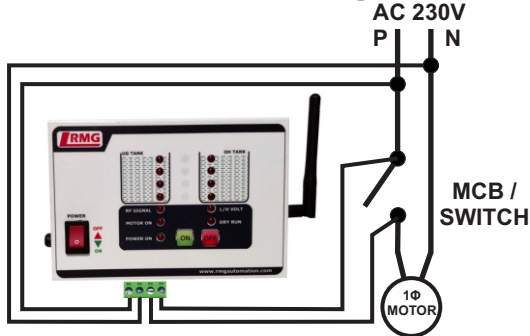


Figure 1: 1Φ SWITCH/MCB

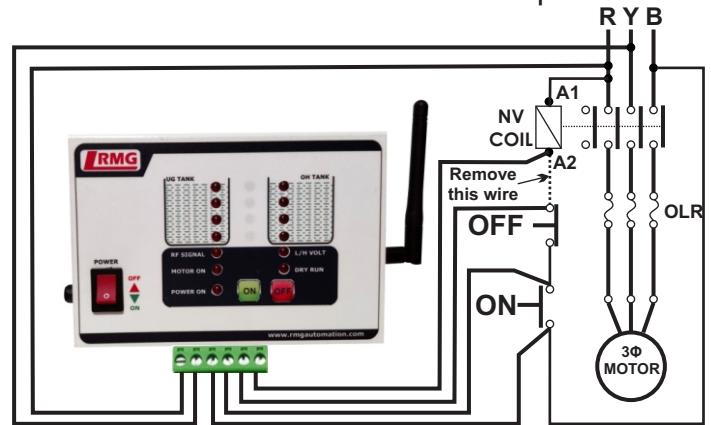


Figure 2: 3Φ Starter

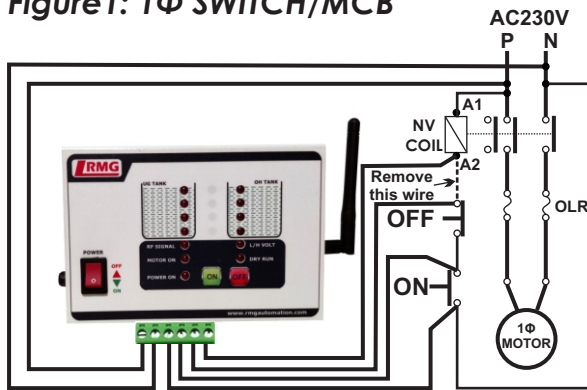


Figure 3: 1Φ Starter

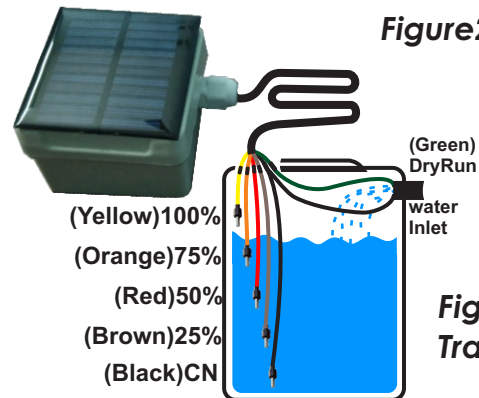


Figure 4: Transmitter

Step 4: For starter type connection refer to figure 2 & Figure 3. In case of other types of connections or doubt what's app to 9940594413 or call 044-43180017

Step 5: Turn ON the controller. Now, Power ON LED will glow. Unscrew the top panel of transmitter. There is a battery holder inside it. Put the given Li-ion battery inside the case, according to polarity. RF Signal LED blinks once.

Step 6: Take the transmitter near the overhead / underground tank. To check the communication between transmitter and controller, Press the push button inside transmitter for more than 16 seconds. RF Signal LED blinks two times with 5 seconds interval. This ensures the perfect communication between them. .

Step 7: Now power off the controller unit. **Contact type sensor connection:** Take the sensors and cut them according to the levels of the tank and join them with the sensors lines of transmitter as per color coding. (Refer figure 4). **Magnetic float sensor connection:** These sensors has 2 wires. Use any one wire in each sensor as common. Other wire left in each can be used for levels.

Step 8: Immerse the sensors in the water tank and place at 25%, 50%, 75%, 100% levels. Dry run sensor should be fixed in the inlet of the tank. Join black & green wire of transmitter to this sensor. No dry run connection for UG tank.

Step 9: Close the top panel of the transmitter using the screws. Place the solar panel facing sun light using the double side tape.

This completes the installation

5. OPERATING PROCEDURE

- Power ON the controller unit.
 - Depending upon the water level in tanks, the level indication LEDs are ON.
 - If the water level goes low, controller automatically TURNS ON the motor (only when sump has water), during this time MOTOR ON LED glows. When the tank becomes full, controller unit automatically TURNS OFF the motor. Motor will get off even when sump level is low.
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- **PAIRING PROCEDURE:** The units are generally paired and given. In case of any trouble at the time of installation, users can pair the units once again.
 - Press the Green ON button and do not take the finger out while doing this. Turn ON the controller. All the tank level LEDs will blink. It means the device is ready for pairing.
 - In transmitter, there is a Push button inside it. By pressing the push button and without taking out the finger from it, insert the battery into the battery holder. Now the RF Signal LED inside transmitter blinks once and all the tank level LEDs goes off in the controller unit. Thus pairing is completed.
 - **DRY RUN ENABLE/DISABLE:** Set the controller in pairing mode. Use the OFF button to enable or disable the dry run function which is denoted with Dry Run LED indication.

6. TROUBLESHOOTING METHODS

S.No	Error	Solutions
1	No communication between controller and transmitter	<p>a. Check whether any obstacles are there in between transmitter and receiver units like large trees, buildings etc. (Repeater can be added if necessary).</p> <p>b. Check the battery in transmitter whether it is connected correctly without any loose contacts.</p> <p>c. Check whether the battery is completely drained out, If so, charge the battery using the USB port in it for instant charging.</p>
2	Dry run is not working	<p>a. Check whether dry run option is enabled in controller unit. Keep the controller in pairing mode. Press ON button and without removing the finger turn ON the controller. If DRY RUN LED is ON, the dry run option is enabled. If DRY RUN LED is in OFF state, the dry run is disabled.</p> <p>b. Check the dry run connection on the tank whether it has any loose contacts. If so correct it.</p>
3	Tank level indicator LEDs are off	<p>If one or all the level indicator LEDs are not glowing,</p> <p>a. Check common sensor connection is correctly made. If any loose contacts correct it.</p> <p>b. Check all the sensor connections if they are having any loose contacts. 3 Also, check if the cable lines are intact.</p>