



RMG AUTOMATION

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Semi-Automatic Water Level Controller

Model : SAWLC-010



User Manual

Version 2.1-09/23

1. INTRODUCTION

Water conservation is essential in our day to day life to make a water sufficient society. Semi-automatic controller is best suited for users who are landlords want to have the control of motor to run under their supervision. They do not prefer their tenants to turn on the motor. SAWLC-010 is a semiautomatic water level controller in which when they can manually switch ON the motor and the controller automatically turns OFF when tank is full. It also has dry run and L/H voltage indications to protect motor.

2. DESCRIPTION

- **POWER ON/OFF Switch**- used to switch ON and switch OFF the controller unit. (provided on the left side of controller)
- **POWER ON LED**- indicates power supply to controller.
- **L/H VOLT LED**- indicates low and high voltage. It protects motor by turning OFF motor during low and high voltages.
- **DRY RUN LED**- glows when dry run of motor occurs. If there is no water flow in the inline pipe of the overhead tank for 90 seconds, motor gets switched OFF preventing it from Dry Run.
- **MOTOR ON LED**- indicates motor ON condition.
- **TANK FULL LEVEL LED**- indicates tank full level.
- **MANUAL START/STOP push button**- used to turn ON/turn OFF motor manually

3. TOOLS REQUIRED

- Single or 2 pair communication cable.
- Drill gun
- Simple hammer
- Wooden gattas
- Screws for mounting units on wall
- Line tester
- Wire stripper
- 1.5Sq.mm Wire for power connections
- Insulation tape

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 / 440 V) to 1st and 2nd terminal of the controller (red and black wire) refer figure. 1 and figure. 2.

Step 3: For switch or MCB, Connect 3rd and 4th terminal of the controller (blue pair wire) to the switch/MCB of the motor in parallel as shown in figure 1.

Step 4: For starter, Connect 3rd and 4th terminal of the controller (blue pair wire) to ON button of starter in parallel and 5th and 6th terminal (black pair wire) to OFF button in series (Refer to figure. 2 and figure. 3)

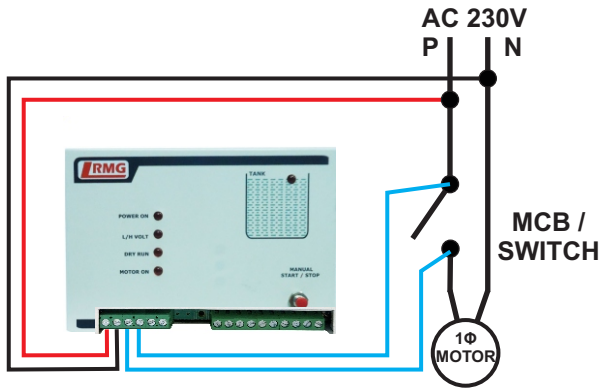


Figure1: 1Φ SWITCH/MCB

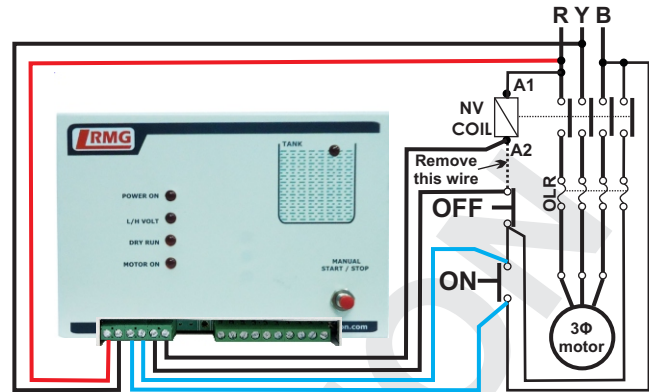


Figure2: 3Φ Starter

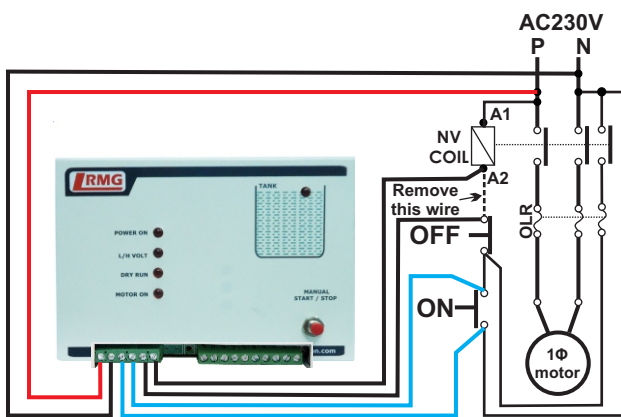


Figure3: 3Φ Starter

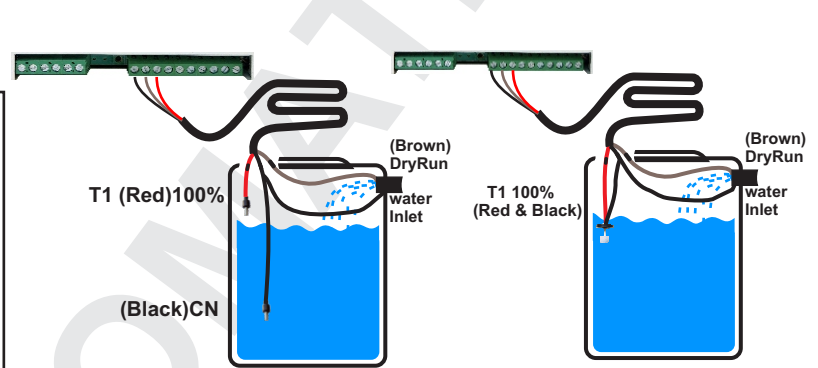


Figure5: contact type sensor connection

Figure6: magnetic float sensor connection

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

Step 5: Lay 2 core cable between controller and tank. Join one end of the 2 core cable to sensor line connector 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 2 core cable as per label coded. (Refer figure. 4) **Magnetic float sensor connections:** These Sensor has 2 wires, Use any one wire as common. other wire left can be used for level. Join them with the 2 core cable as per label coded. (Refer figure. 5)

Step 6: Connect common sensor line (black) and dry run sensor line (brown) to two terminals of dry sensor and screw it. Tape the sensor on the water inlet pipe. Two metal rods in dry run sensor should be in contact with water while water is pouring into tank.

Step 7: Immerse the Sensors inside the Over Head Tank (OHT). The Higher Level Sensor (motor OFF level) must be placed 2 to 3 inches below the 100% level of the OHT (overflow level).

This completes installation.

5. OPERATING PROCEDURE

- Use Power ON/OFF switch to ON the controller. Then POWER ON LED will glow in controller unit.
- When you want to ON the motor do it by using Manual ON/OFF push button. Now, MOTOR ON LED will glow
- When tank becomes full TANK FULL LED will glows. Motor gets turned OFF. MOTOR ON LED goes off.

6. TROUBLE SHOOTING METHODS

Sl. No	Error	Solutions
1	Device dead / Not Powered ON	a. Check the power connection wires for loose contacts. b. If problem continues, contact RMG Automation for support
2	Tank level indicator LEDs are off	a. In the controller unit, join common terminal with a small wire to other terminals one by one and verify the tank LEDs are glowing. This means the controller unit is fine. b. Check the cables between controller and tank for cable breakage. If so correct it. c. Check common sensor and other sensor connections are correctly made. If any loose contacts correct it.
3	Dry run LED is ON continuously	Normally Dry Run LED will reset after 1 hour if dry run occurs, If it is not OFF a. Check whether water is coming in the inlet of the tank b. Check if any loose contacts present in the dry run connection and correct it. c. Check the cable between the controller and tank for cable breakage. If so, correct it.
4	L/H Voltage LED is ON continuously	a. Check whether voltage fluctuations are there in the input lines. b. L/H voltage LED resets after 1 minute, if the input lines becomes normal.