

AUTOMATIC WATER LEVEL CONTROLLER WITH DRYRUN PROTECTION



MODEL No. DRWLC-03

Congratulations on your selection of the **All About Electronics** automatic water level controller with dry run protection! This unit provides you with fully automatic control of your submersible pump based on the water available in the tank as well as in the borewell.

PRODUCT CONTAINS:

- | | |
|---|---|
| • Automatic water level controller with dryrun protection panel ----- | 1 |
| • Sensors (two sensors for top tank) ----- | 2 |
| • Screw with wall plugs ----- | 4 |
| • Installation Manual ----- | 1 |

ON FRONT PANEL :

16x2 LCD DISPLAY: for observation of various parameters like the status of the pump, current monitor, etc.

3-POSITION TOGGLE SWITCH: to set the mode of operation such as automatic mode, off mode, bypass mode, etc.

SETTING BUTTONS: to set various parameters like overcurrent, dry run current, on-off timer settings, etc.

Product improvement is a continuous process. For the latest information and special applications, please contact our office listed here.

Registered Office:

ALL ABOUT ELECTRONICS
8-krishna Nagar, Near Swaminarayan Chowk,
B/h P.d. Malviya College,
Rajkot-360004 (Gujarat) India.
Phone: +91 9376800800/9714700700
E-mail: allaboutelectronics123@gmail.com
Web: www.allaboutelectronics.co.in



MODE OF OPERATIONS:

The automatic water level controller with dry run protection has three working modes.

1. AUTOMATIC MODE :

To operate the system in automatic mode, the toggle switch on the front panel must be in the AUTOMATIC position. As its name suggests, in this mode, the pump operates (ON and OFF) automatically. It detects the water level in the tank from sensors inside the tank. The top tank contains two sensors: one to detect an empty tank (blue wire sensor) NC Type and another to detect a full tank (yellow wire sensor) NO Type. When the water in the top tank falls below the empty sensor, it is sensed by the panel, and it turns ON the water pump. Similarly, when the water in the top tank reaches the full sensor, it sends an OFF command to the unit, and the unit turns OFF the water pump.

This panel operates on the current detection method, where all the pump currents pass through the panel and are monitored by it. When water is available in the borewell, the pump will run at its normal current. However, if the water in the borewell becomes empty, the pump currents will reduce. This reduction in currents is detected by the panel, and if the current becomes lower than the set limit of dry run currents, the panel will turn OFF the pump in 10-20 seconds, and the panel will go into the off duration (which is set by the user).

SETTING OF VARIOUS PARAMETERS:

1. SETTING OF TIMERS: In this setting menu, the user can set pump ON and OFF times as per his/her needs. To enter the setting mode, the user needs to press the SELECT and INC switches simultaneously for 5 seconds. This action prompts the panel to enter the setting mode and request a password for configuring parameters. By entering the password 111, the user will be directed to the timer settings, with the first setting among them being the pump ON time setting.

A. PUMP ON TIME: On time is the duration for which the pump remains turned ON. It starts reducing once the pump starts, and it turns OFF the pump when the timeout occurs. The pump may also turn OFF due to the dry running of the motor before the timeout.

SET PUMP ON TIME
H:00 M:00

By selecting particular digits using the SEL switch on the front panel and changing values using the INCR switch, the user can set the required ON time as per their own needs.

If the user sets the ON time, hour, and minute to 00, the ON timer will remain off, and the pump will never turn off using the timer. After setting the ON time, press the enter button, and you will be redirected to the setting of the OFF time.

B. SET OFF TIME: Once the pump becomes turned OFF by the ON timer or dry running, the pump will remain turned off, and this off time can be set by the user as per their own requirement. After completing this time, the pump will start again (if the water level in the top tank is below the top turn-off sensor only) and fill water in the tank.

SET PUMP OFF
TIME H:00 M:00

By selecting particular digits using the SELECT switch on the front panel and changing values using the INC switch, the user can set the required OFF time as per their own needs.

SETTING OF CURRENTS: In this setting menu, the user can set various currents like overcurrent, dry running current, etc. This system has a feature of overcurrent protection, whereby when the pump current exceeds the set limit of overcurrent, the pump will turn off and remain off until someone becomes aware of this condition and restarts the system by pressing the Restart button located on the left side of the panel. To enter the setting mode, the user needs to press the SELECT and INC push buttons simultaneously for 5 seconds, prompting the panel to enter the setting mode and request a password for configuring parameters. By entering the password 123, the user will be directed toward current settings, with the first setting among them being the pump on time setting.

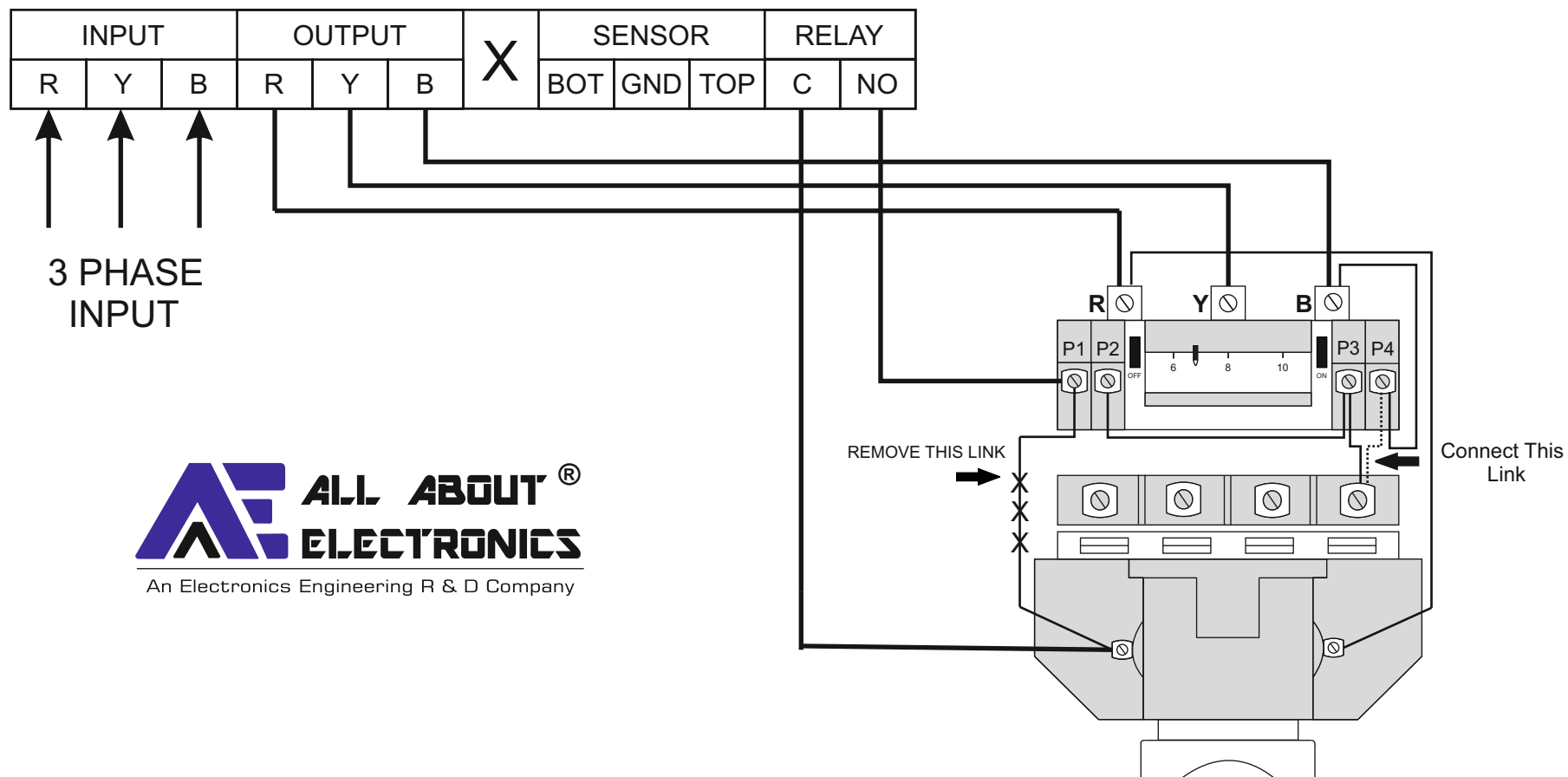
OVERLOAD: AMPERE
R:05 V:05 B:05

A. SET OVERLOAD CURRENT: This setting allows the user to set the value of overcurrent. The overcurrent must be set 2 amperes more than the normal current (the current when the pump is working properly, and water is also available).

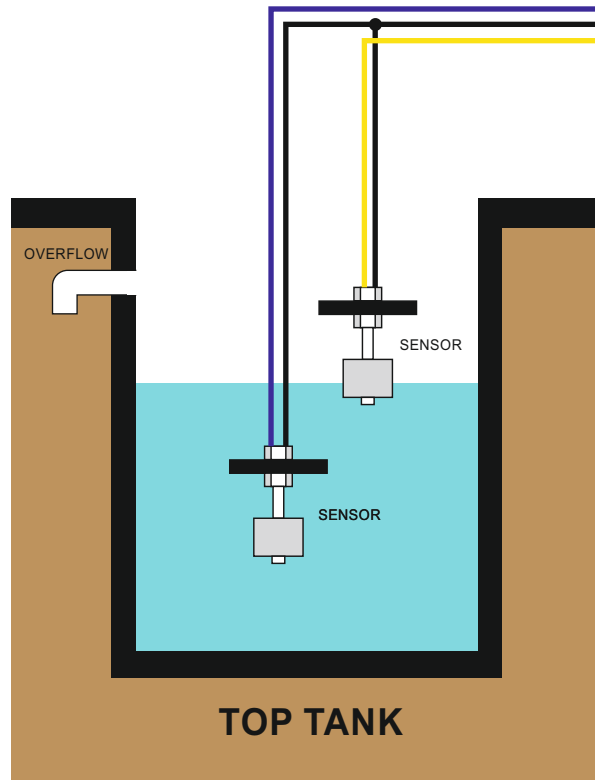
DRY RUN: AMPERE
R:00 V:00 B:00

B. SET DRY RUN CURRENT: This is the current taken by the pump when the water in the borewell becomes empty (the pump takes less amount of current than the normal current). This will be detected by the panel, and it will turn off the pump in 20 seconds. The value of the dry run current can be 1 or 2 amperes less than the normal current and can be set by the user according to their own application.

3 Phase DOL Starter Interface Diagram for Model No. DRWLC-03



Sensor Interface Diagram for Model No. DRWLC-03



NOTE: The joint between the extension wire and the sensor wire must be done using the proper method. First, cover the joint with insulation tape. Then, apply waterproof tape over the joint. Finally, cover the joint again with insulation tape, this time over the waterproof tape.

Remember to follow these steps carefully to ensure a secure and reliable connection.

INPUT			OUTPUT			X	SENSOR			RELAY	
R	Y	B	R	Y	B		BOT	GND	TOP	C	NO



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