

## PRODUCT PROFILE



## FEATURES

- Pump Protection from dry run and overflow condition.
- Specially Designed Sensors
- Trip Relay Indication.
- Used for Drain and fill control.
- 10A SPDT output (Resistive)
- Adjustable sensitivity 1K to 200K Ohm.

## SPECIFICATIONS

<b>LED Indications</b>	: Green LED : Power ON Red LED : Relay ON
<b>AUXILIARY SUPPLY</b>	: 85 – 270V AC/DC
<b>FREQUENCY</b>	: 50Hz/60Hz
<b>INPUT SENSOR</b>	: 3 nos Stainless steel prods.
<b>SENSITIVITY</b>	: 1Kohms - 200Kohms
<b>POWER RATING</b>	: 3VA max.
<b>TRIP SETTING</b>	: According to the levels of sensor placed in the water tank.
<b>TRIP TIME DELAY</b>	: 0.5 sec. (approx)
<b>RESET</b>	: Automatic
<b>OUTPUT SPECIFICATION</b>	
Output Contact	: 1 C/O (SPDT) Resistive
Output Rating	: 10A @250VAC/28VDC
<b>MECHANICAL SPECIFICATIONS</b>	
Dimension	: 35x90x60mm
Mounting	: 35mm DIN Rail mount
Screw tightening torque	: 0.5N.m
<b>ENVIRONMENTAL SPECIFICATIONS</b>	
– Indoor use	
– Altitude of up to 2000 meters	
– Pollution degree 2	
Temperature	: Operating : 0° to 50°C Storage : -20° to 70°C
Humidity	: Up to 95% RH, non-condensing
<b>WEIGHT</b>	
Sensor	: 50gms each
Unit	: 105gms

## SAFETY PRECAUTIONS

All safety related codifications, symbols and instructions that appear in this operating manual or on the equipment must be strictly followed to ensure the safety of the operating personnel as well as the instrument.

If the equipment is not used in a manner specified by the manufacturer it might impair the protection provided by the equipment.

If there is physical damage to the unit then do not use it.

Read complete instructions prior to installation and operation of the unit.

## CAUTION

Ensurrements of your WLCA2M1.

- 1) Ensure the connection as per terminal diagram.
- 2) To be Handle by only authorized and technical person.
- 3) Not installed near any heat sources like burner, electric arc.
- 4) Installed as near to the starter as possible.
- 5) The sensor prods are suspended from the top opening of the water tank in a suitable PVC conduct piping. Metal pipes should not be used.
- 6) The sensor prods should not be wall mounted on metallic water tank.
- 7) Adjust the sensitivity of water resistance given on front plate.

## APPLICATIONS

1. Level Monitoring of conductive Liquid.
2. One Level or Two Level monitoring.
3. One tank or Two Tank level monitoring.
4. Using Suction Logic & Delivery Logic.

NOTE : The WLCA2M1 unit is operating in AUTOMATIC MODE only.

## LOGIC SELECTION

WLCA2M1 can be operate either in SUCTION logic or in DELIVERY logic using output relay contact terminals 11 & 14 (COM-NO), 11 & 12 (COM-NC) respectively.

## FUNCTION OF SUCTION LOGIC

When you select SUCTION LOGIC using the relay contact terminals 11 & 14. Put sensors prods P1, P2 and P3 in water tank. The pump motor will start automatically when the tank is full. (i.e prod P1,P2 and P3 are under water) and will stop automatically when the water tank is empty (i.e P2, P3 out of water and P1 under water).

## FUNCTION OF DELIVERY LOGIC

When you select DELIVERY LOGIC using the relay contact terminals 11 & 12. Put sensors prods P1, P2 and P3 in water tank. The pump motor will start automatically when the tank is empty. (i.e prod P1 is under water P2, P3 are out of water) and pump motor will stop automatically when the water tank is full (i.e P1, P2 and P3 are under water).

## SENSITIVITY SETTING

Refer below procedure for adjusting sensitivity according to conductivity of water.

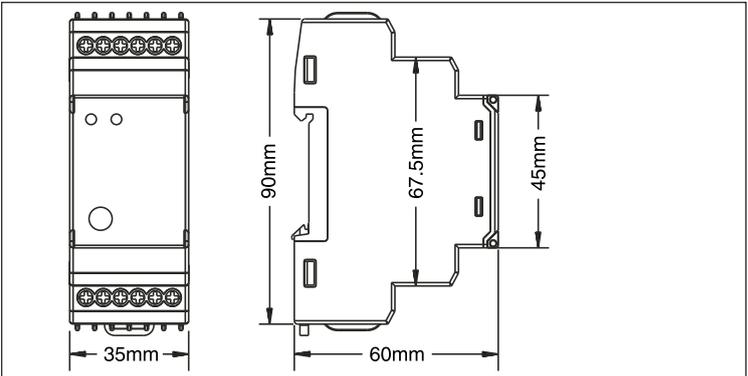
- 1) Keep all prods in water and set the pot at maximum position. Now the relay becomes ON.
- 2) Then turns the pot towards the minimum side till the relay becomes OFF.
- 3) Now to adjust the pot above setting where the relay becomes ON and does not chatter.

**NOTE :** Position of potentiometer is adjusted according to conductivity level of water, Do not disturb potentiometer setting once fixed.

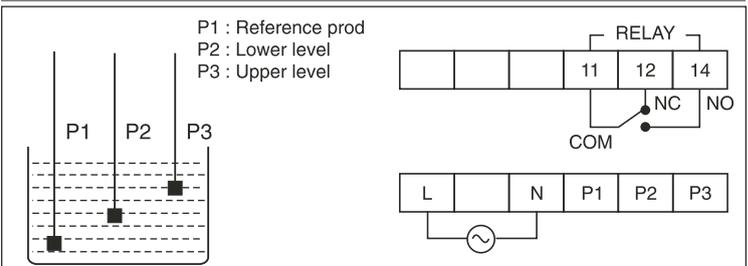
## INPUT SENSOR

WLCA2M1 is to be used with Selec sensor prod only. The sensor is of stainless steel Material (For specific and typical applications you may use a sensor prod suitable electrically conductive material in case Selec sensor prod does not suit your requirement). Consult Selec before using modified prod. The Selec sensor prod has a bolting arrangement for connecting a suitable cable and it is to be suspended from top opening of the water tank.

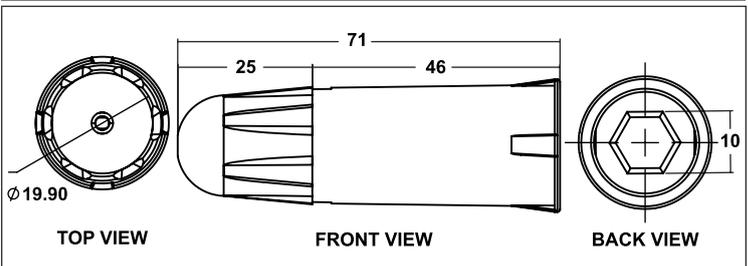
## MECHANICAL INSTALLATION / DIMENSIONS



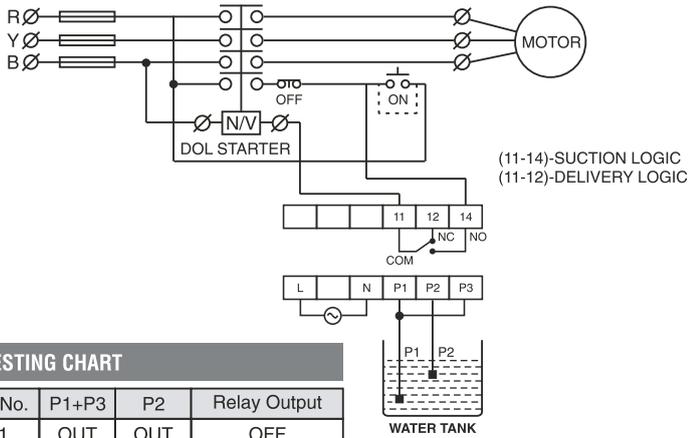
## TERMINAL CONNECTION



## INPUT SENSOR DIMENSIONS



### ONE LEVEL CONTROLLER

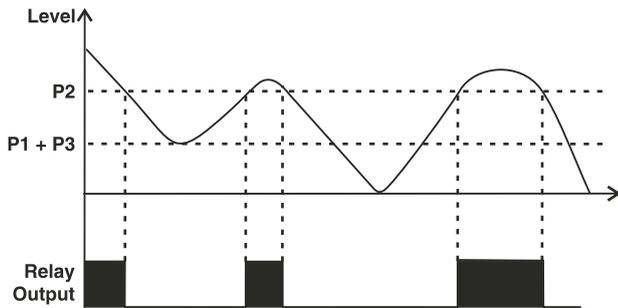


#### TESTING CHART

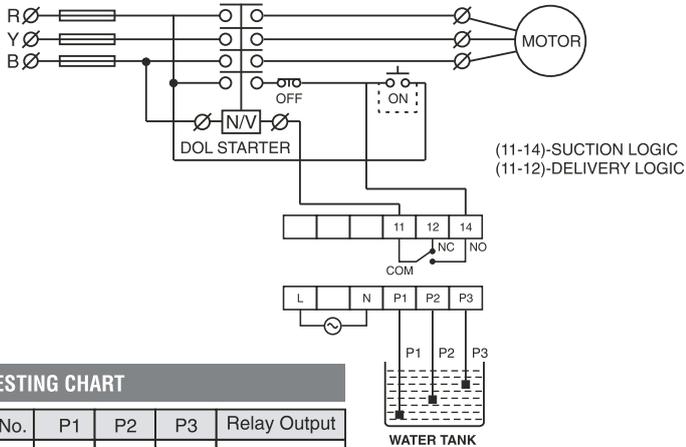
Sr No.	P1+P3	P2	Relay Output
1	OUT	OUT	OFF
2	IN	OUT	OFF
3	IN	IN	ON
4	IN	OUT	OFF
5	OUT	OUT	OFF

- NOTE :-
- Relay contacts shown in healthy condition.
  - The connection shown in fig. for SUCTION LOGIC.
  - Provide an external link across ON push button as shown by dotted line.

#### TIMING DIAGRAM



### TWO LEVEL CONTROLLER

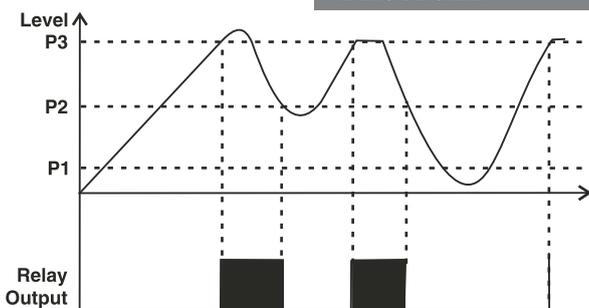


#### TESTING CHART

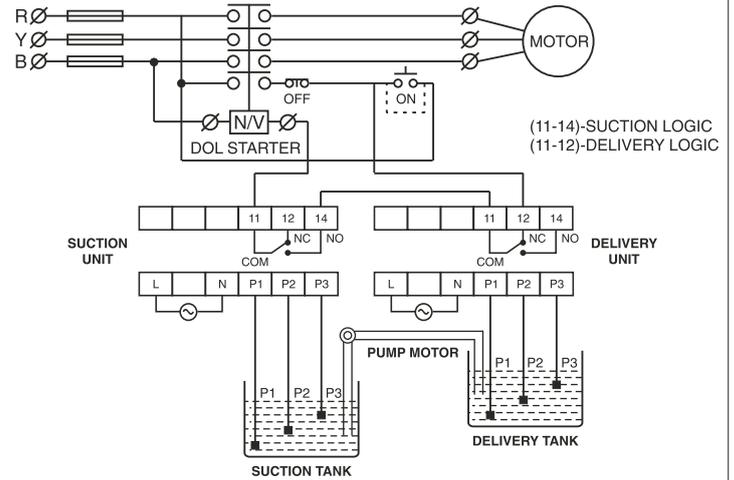
Sr No.	P1	P2	P3	Relay Output
1	OUT	OUT	OUT	OFF
2	IN	OUT	OUT	OFF
3	IN	IN	OUT	OFF
4	IN	IN	IN	ON
5	IN	IN	OUT	ON
6	IN	OUT	OUT	OFF

- NOTE :-
- Relay contacts shown in healthy condition.
  - The connection shown in fig. for SUCTION LOGIC.
  - Provide an external link across ON push button as shown by dotted line.

#### TIMING DIAGRAM



### TWO LEVEL CONTROLLER FOR BOTH TANK



- NOTE :-
- Relay contacts shown in healthy condition.
  - Provide an external link across ON push button as shown by dotted line.

#### TESTING CHART

Sr. No.	SENSOR PROD IN SUCTION TANK (T1)			SENSOR PROD IN DELIVERY TANK (T2)			RELAY OUTPUT STATUS WLCA2M1
	P1	P2	P3	P1	P2	P3	
1	IN	IN	IN	IN	IN	IN	OFF
2	IN	IN	IN	IN	IN	OUT	OFF
3	IN	IN	IN	IN	OUT	OUT	ON
4	IN	IN	OUT	IN	IN	IN	OFF
5	IN	IN	OUT	IN	IN	OUT	OFF
6	IN	IN	OUT	IN	OUT	OUT	ON
7	IN	OUT	OUT	IN	IN	IN	OFF
8	IN	OUT	OUT	IN	IN	OUT	OFF
9	IN	OUT	OUT	IN	OUT	OUT	OFF

- NOTE : IN : SENSOR PROD INSIDE THE WATER  
OUT : SENSOR PROD OUTSIDE THE WATER

#### ORDER CODE INFORMATION

PRODUCT	SUPPLY	CERTIFICATION	
		CE	UL LISTED
WLCA2M1	85 – 270V AC/DC	—	—

(Specifications are subject to change, since development is a continuous process.)

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