



DIN 35mm

Features :

- Specially Designed Sensors
- Trip Relay Indication
- Used for Drain and Fill Control
- 1 C/O Output
- Adjustable Sensitivity 1k to 200k Ohms
- DIN Rail Mount

Certification :

Display Specifications

Type	Analog
No. of LED	2
No. of Knob	1
LED Indication	Power ON, Relay ON

LED Indication Chart

Condition	'ON' LED	'R' LED
Nominal Condition	ON	ON
Fault Condition	ON	OFF

Input Specifications

Functions	
Function	Level Monitoring of Conductive Liquid One Level or Two level monitoring One tank or Two Tank Level monitoring Using Suction Logic & Delivery Logic
Reset	Automatic
Input Sensor	3 no. Stainless steel prods
Electrical Connection	1Ø - 2 wire
Trip Settings	According to the levels of sensor placed in the water tank
Trip Time Settings	0.5sec (approx.)

Output Specifications

Relay Contact	SPDT (1 C/O)
Relay Rating	10A@250VAC / 28VDC

Auxiliary Supply Specifications

Supply Voltage	85 to 270V AC / DC
Frequency	50 / 60Hz
Power Consumption	3VA max

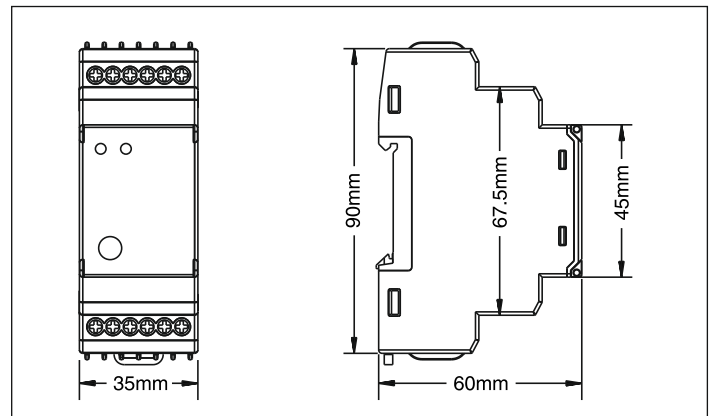
Environmental Specifications

Temperature	Operating Temperature : 0° to 50°C Storage Temperature : -20° to 70°C
Humidity (non - condensing)	Upto 95% RH
Pollution Degree	
For PCB	2
For Product	3
Degree of Protection Devices	IP20

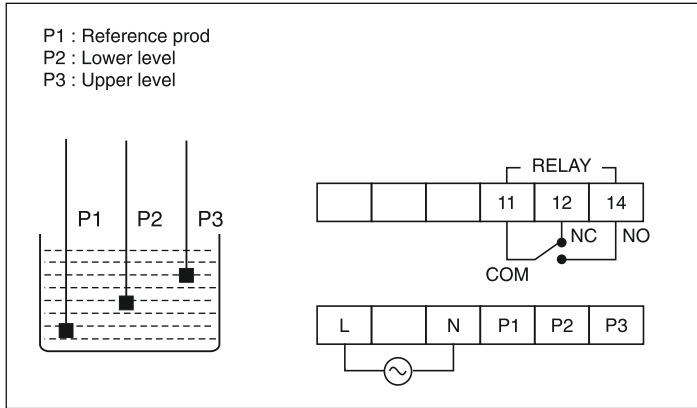
Mechanical Specifications

Mounting	DIN Rail
Weight	Sensors : 50gms each Unit : 105gms
Screw Tightening Torque	0.5 NM

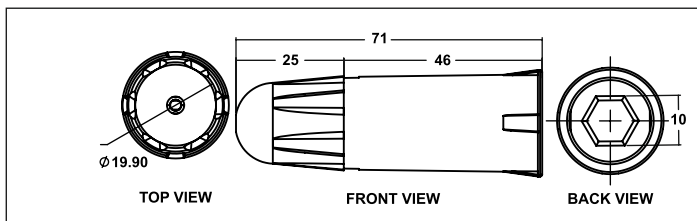
Dimensions



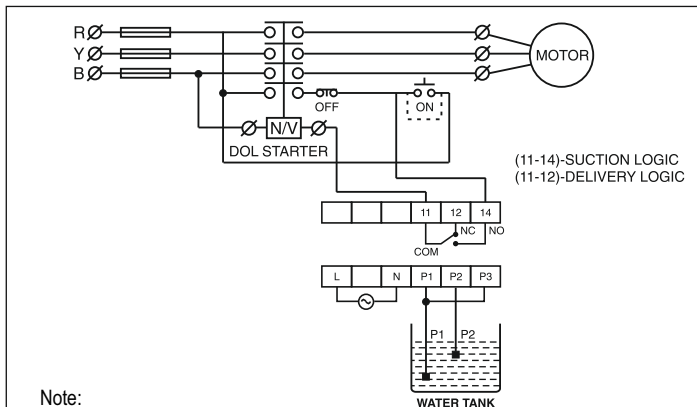
Terminal connection



Input Sensor Dimensions



One Level Controller

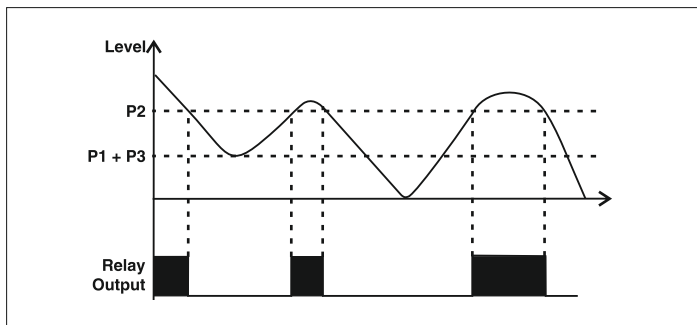


- Note:
1. Relay contacts shown in healthy condition
 2. The connection shown in fig 1 for suction logic.
 3. Provide an external link across ON push button as shown by dotted line

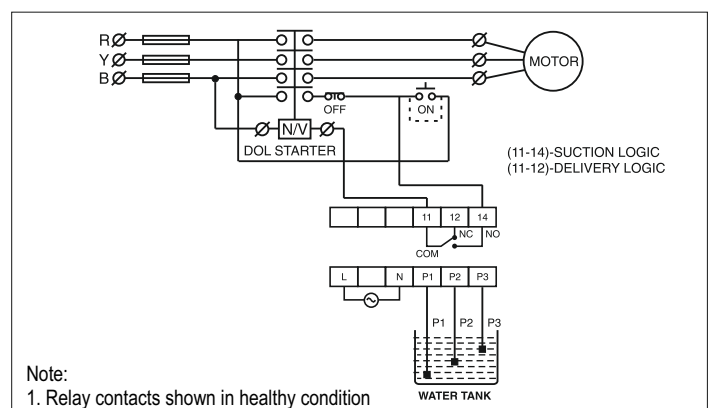
TESTING CHART

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

Timing Diagram



Two Level Controller

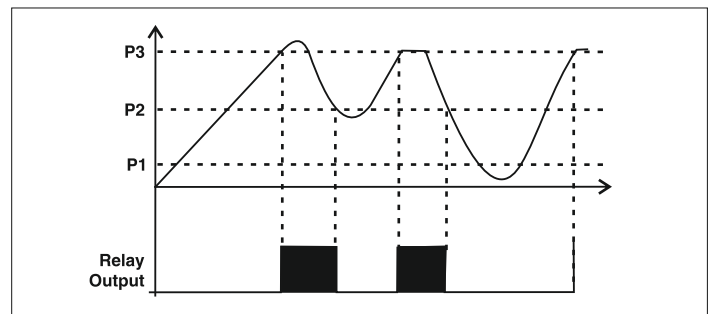


- Note:
1. Relay contacts shown in healthy condition
 2. The connection shown in fig 1 for suction logic.
 3. Provide an external link across ON push button as shown by dotted line

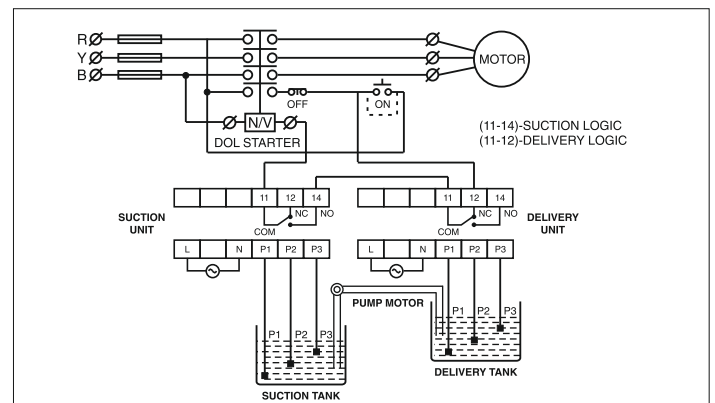
TESTING CHART

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

Timing Diagram



Two Level Controller for Both Tank



- NOTE:
1. Relay contacts shown in healthy condition.
 2. 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

Compliance

Applicable EMI / EMC Standards		
Product Standard : IEC 60947-2		
Category	Reference Standards	Testing Level
Radio Frequency Interference Radiation Disturbance Test	IEC 61000-4-20	Class-A
Electrostatic Discharge Immunity Test	IEC 61000-4-2	Class-A
Radio Frequency Interference Conducted Disturbance Test	CISPR 11	Class-A
Immunity To Conducted Disturbances, Introduced By Radio Frequency Fields Test	IEC 61000-4-6	Class-A
Electrical Test Transient / Burst Immunity	IEC 61000-4-4	Class-A
Radiated, Radio-Frequency, Electromagnetic Field Immunity test	IEC 61000-4-8	Class-A
Surge Immunity Test	IEC 61000-4-3	Class-A
Voltage Dips, Short Interruption And Voltage Variations Immunity Test	IEC 61000-4-5	Class-C
AC Voltage Test	IEC 61000-4-11	Clause 6.7
Temperature Rise Test	IEC 61010-1	Clause 10.1-10.4
Resistance To Heat Test (RTH)	IEC 61010-1	Clause 10.5
Single Fault Test (SFT)	IEC 61010-1	Clause 4.4

Ordering Information

Product Code	Supply Voltage	Certification
WLCA2M1-CE-RoHS	85 to 270V AC / DC	CE

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

LED Indications	: Green LED : Power ON Red LED : Relay ON
AUXILIARY SUPPLY	: 85 – 270V AC/DC
FREQUENCY	: 50Hz/60Hz
INPUT SENSOR	: 3 nos Stainless steel prods.
SENSITIVITY	: 1Kohms - 200Kohms
POWER RATING	: 3VA max.
TRIP SETTING	: According to the levels of sensor placed in the water tank.
TRIP TIME DELAY	: 0.5 sec. (approx)
RESET	: Automatic

OUTPUT SPECIFICATION

Output Contact	: 1 C/O (SPDT) Resistive
Output Rating	: 10A @250VAC/28VDC

MECHANICAL SPECIFICATIONS

Dimension	: 35x90x60mm
Mounting	: 35mm DIN Rail mount
Screw tightening torque	: 0.5N.m

ENVIRONMENTAL SPECIFICATIONS

- 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 |

WEIGHT

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.

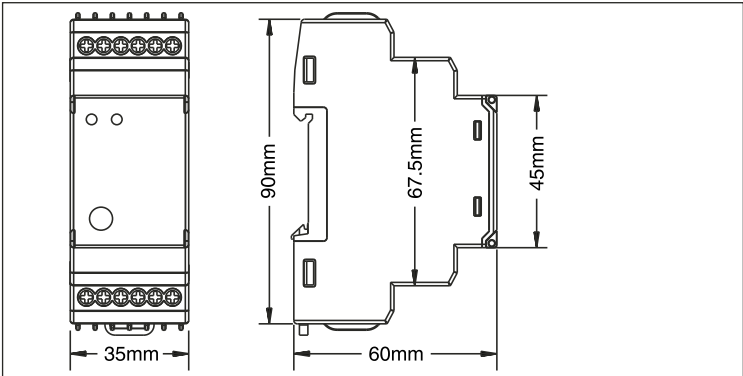
- 1) Keep all prods in water and set the pot at maximum position. Now the relay becomes ON.
- 2) Then turns the pot towards the minimum side till the relay becomes OFF.
- 3) Now to adjust the pot above setting where the relay becomes ON and does not chatter.

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

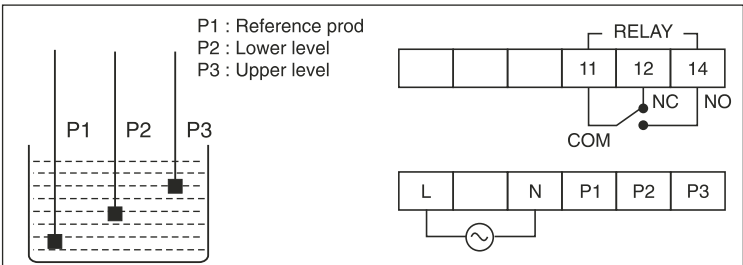
INPUT SENSOR

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.

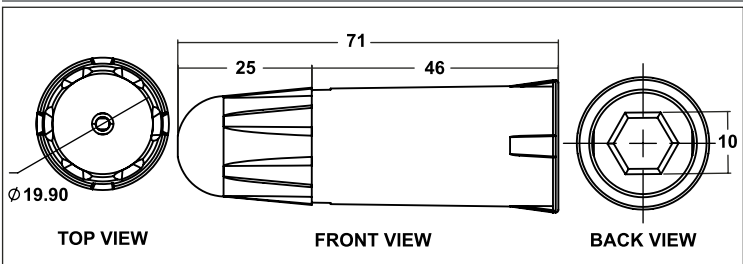
MECHANICAL INSTALLATION / DIMENSIONS



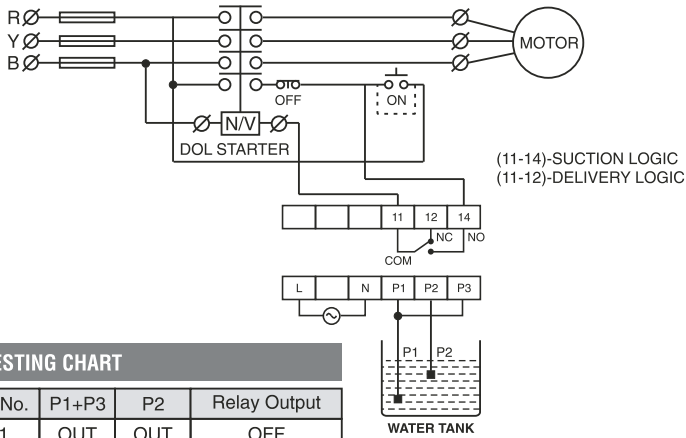
TERMINAL CONNECTION



INPUT SENSOR DIMENSIONS



ONE LEVEL CONTROLLER



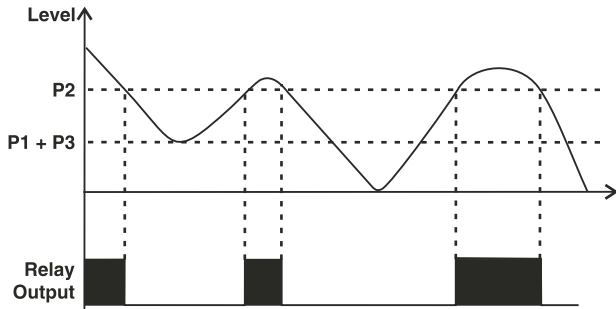
TESTING CHART

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

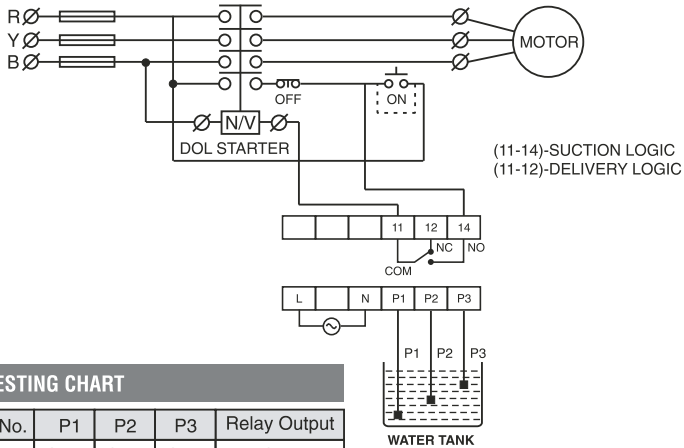
NOTE : -

- 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



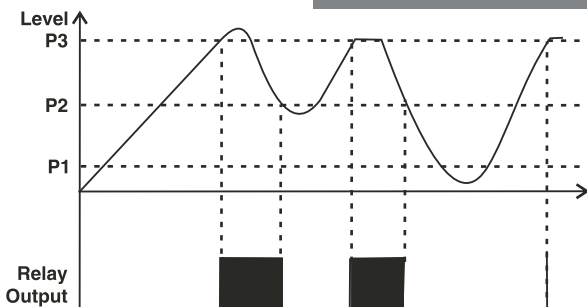
TESTING CHART

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

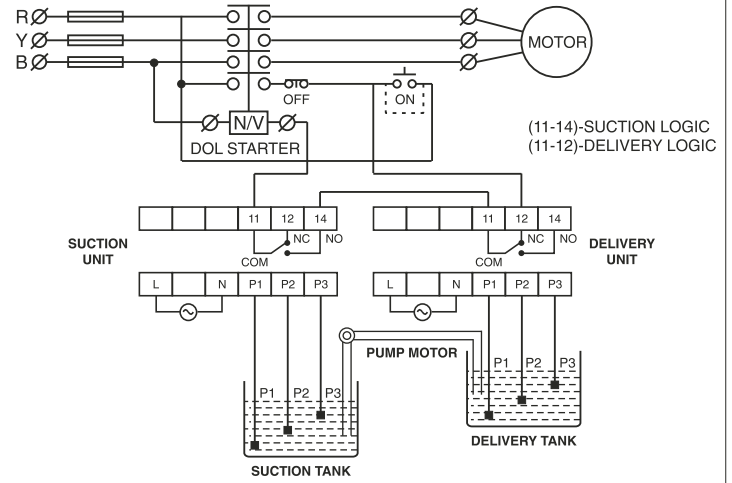
NOTE : -

- 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.)

Selec Controls Pvt. Ltd., India

Factory Address :
EL-27/1, Electronic Zone, TTC Industrial Area, MIDC, Mahape, Navi Mumbai - 400 710, INDIA.
Tel. No. : +91-22-41 418 419/430 | Fax No. : +91-22-28471733
Toll free : 1800 227 353 (BSNL/MTNL Subscribers only)
Website : www.selec.com | Email : sales@selec.com