

**VIDEON**

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## **USER'S MANUAL & WARRANTY CARD**

**VIDEON**

**AUTOMATIC  
WATER LEVEL CONTROLLER  
FOR 3 PHASE PUMP SETS  
WITH D.O.L STARTER**

**The smarter way  
to save power & water !**





## POSSIBLE SYMPTOMS AND REMEDIES

SYMPTOMS	LIKELY CAUSES	REMEDIES
Power in indicator OFF	No main supply Toggle switch in off/ Manual mode	Check mains power supply & connection Put the toggle switch in Auto position
Motor on indicator OFF	Input voltage improper Overhead tank full. Sub tank water level not enough Broken sensor wires	Verify the phase sequence and voltage Wait up to the tank becomes empty Check sub tank water level Check the wiring of sensors
Fault / Dry run indication with audio beep	Incorrect dry run sensor fitting Foot valve leak or improper pipe fitting Faulty motor; Fault starter Broken sensor / connection wire	Check pipe and dry run sensor fitting Check water in suction pipe and fill if necessary Correct the complaint Check the wiring and connection
Water over flowing	Toggle switch in manual mode. Improper overhead tank float connection Faulty starter	Put the Toggle switch position to Auto mode Check the float connection Correct fault
Motor is not stopping even if water goes below the lower float in the sub tank	Toggle switch in manual mode Improper float connection of sub tank faulty starter	Put the Toggle switch position to Auto mode Check the float connection correct fault
Motor is not working both in Auto / Manual mode	No power supply to motor Starter complaint	Check the input voltage of motor Check the starter
Empty Overhead Tank	Toggle switch in OFF position Improper float connections Faulty motor & starter Improper input voltage Empty sub tank	Put the switch in Auto position Check float connections Check the motor & starter Verify the input voltage and phase Verify sub tank water level.

● If you had other symptoms / doubts regarding your 3 phase WLC, please feel free to contact the nearby service centre / Dealer.

## INSTRUCTION MANUAL for

Automatic Water Level Controller for 3 Phase Pump Set  
with D.O.L. Starter

Read this Manual Carefully

Congratulations !

You are the proud owner of a **Videon Automatic WLC for 3 phase**, which is the result of years of technological research. The most up to date design, manufacturing & testing standards make this an ideal equipment for efficient management of your water availability.

This manual provides safe installation and operation instructions to help you to get the best performance from your **Videon Automatic WLC for 3 phase**. Moreover, installing and operating according to this manual assures maximum endurance to **Videon Automatic WLC for 3 phase** and the best service from **Videon**

### NORMAL SCOPE OF SUPPLY

1	3 Phase Videon WLC -	1 No.	6	Brass Screws -	2 Nos.
2	Stand base -	1 No.	7	Wire tie -	1 No.
3	Float Probes -	2 Nos.	8	Solvent cement -	25 ml.
4	Dry run sense probe -	1 No.	9	Instruction manual &	
5	PVC nipple -	1 No.		Warranty card -	1No.

## INTRODUCTION

This is a unique device that automatically controls the level of water in your overhead tank. This device helps to prevent the overhead tank from being empty or spillover by continuously observing the water level in the tanks with its digital technology. Hence, this unit provides efficient water management facility and thereby eliminates water wastage. It is an auxiliary unit, which should be fitted along with **D.O.L Starter**. The manual position of the front panel switch in 3 Phase WLC helps to operate the motor independent of water level. This device will be operational only with a suitable D.O.L. starter and corresponding motor.

## SALIENT FEATURES

- ◆ Digital technology
- ◆ Low \ high voltage cut-off
- ◆ In built single phase sensing
- ◆ Dry run cut-off
- ◆ Compatible with any types of D.O.L starter
- ◆ Automatic \ Manual operation
- ◆ User - friendly indications
- ◆ Float probes for trouble free level sensing

## SPECIFICATIONS

Model	: Automatic Water Level Controller for 3 Phase Pump Set with D.O.L. Starter
Application	: 3 Phase motors with suitable D.O.L.starter
Working range	: 300 V to 450V, 50 Hz a.c.
Low voltage cut off	: Below 300V
High voltage cut off	: Above 450V
Dry run protection delay	: 1.5mts.
Turn- ON delay after low Voltage cut- off	: 5 mts.
Low voltage cut-off delay	: 30 seconds
Calibration accuracy	: $\pm 2.5\%$

- The 3 phase Automatic WLC will not switch the starter ON at Low / High voltage and dry run conditions.
- If the motor is switched OFF due to lack of water in the Sub tank, it will not be switched ON again until the water reaches the upper float in the sub tank.
- If the customer does not require the automatic control for any reason and wants to operate the motor, he may put the Toggle switch in the manual mode and then operate the starter in usual procedure to make the motor ON. Please ensure that the toggle switch is kept again in the Auto mode after using in Manual mode.

## CAUTION !

There will not be any indication (Audio /Visual) and Automatic controls while the Toggle switch is in the **MANUAL** mode.

If 3 phase Automatic WLC switches OFF the pump set due to dry run, the toggle switch has to be put in OFF mode immediately. The reason for dry sensing has to be verified and corrected, before putting the toggle switch to **AUTO** position again.

## Checking

The motor status can be determined as per the given conditions in the table.

Sequence

Se- quence	Sub tank		Water level	Overhead tank		Water level	Dry run	Motor status
	Lower probe	Upper probe		Lowerprobe	Upperprobe			
1	No water	No water	Up	No water	No water	x	x	OFF
2	Water filled	No water	Up	No water	No water	x	x	OFF
3	Water filled	Water filled	Up	No water	No water	Up	No	ON
4	Water filled	Water filled	x	Water filled	No water	Up	No	ON
5	Water filled	Water filled	x	Water filled	Water filled	x	x	OFF
1	Waterfilled	Water filled	x	Water filled	Water filled	Down	x	OFF
2	Waterfilled	Water filled	x	Water filled	No Water	Down	x	OFF
3	Waterfilled	Water filled	x	No water	No water	Down	No	ON
1	Water filled	Water filled	Down	No water	No water	x	No	ON
2	Water filled	No water	Down	Water filled	No water	x	No	ON
3	No water	No water	Down	Water filled	No water	x	x	OFF
1	Water filled	Water filled	x	No water	No water	x	Yes	OFF
1	Water filled	Water filled	x	Water filled	No water	x	Yes	OFF

**Up** - Water level increasing, **Down** - Water level decreasing **X**- Don't care condition

**No** - No dry run sense (water pumping) **Yes** - Dry run sensed (water not pumping)

## APPLICATION

This **Videon 3 phase Automatic WLC** can be connected to 3 Phase motors only with suitable D.O.L. starter. It is designed for pumping clear water and not recommended to use in areas where is dusty / hard.

**The Automatic Water Level Controller for 3 Phase Pump Set with D.O.L. Starter will not protect the motor or starter from getting burned due to its own inherent problems like overload, shaft struck, heat rising situation etc. Also it will not switch ON the pump if the sub tank/ well did not have enough water to start pumping or the line voltage and phase sequence are not proper.**

## Operation of Videon 3 phase Automatic WLC

The Videon 3 phase Automatic WLC consists of a main electronic unit and 2 pairs of float probes, each for sub tank and overhead tank. These float probes are used to monitor the water level in both tanks. According to these water level conditions, the probes will send appropriate electronic signals to the main electronic unit. The Videon 3 phase Automatic WLC analyses these signals and as per the signals it switches the motor ON or OFF through the DOL starter. A dry sensing probe is employed to switch OFF the motor, if the water is not lifted within 1.5 minutes after motor switch ON.

## FRONT PANEL- INDICATIONS & TOGGLE SWITCH

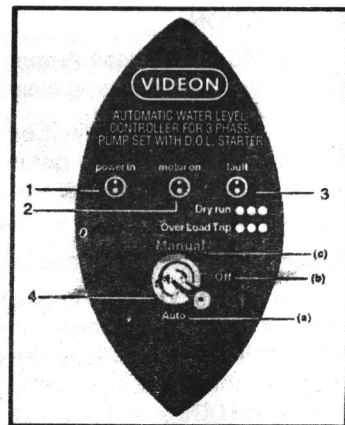
1. **Power IN** : This indicator will glow in **RED** when the mains input is fed to 3 phase Automatic WLC
2. **Motor ON** : This indicator will glow in **GREEN** when the starter and thereby the 3 phase motor, are switched ON.

### 3. Fault

- Dry run** : This indicator will flash in **YELLOW** along with an audio indication when the motor switched OFF due to dry run.
- Over load trip** : This indicator will flash in **RED** along with an audio indication when the starter tripped due to overload.

### 4. Toggle Switch : 3 positions

- Auto** : if we put the toggle switch in this position the Aquatron will work automatically as per the specifications.
- Off** : if the toggle switch is put in this position, the Aquatron will be OFF condition. The 3 phase Aquatron & starter will not operation in this mode.
- Manual** : The pump can be operated manually by putting the toggle switch in this position.

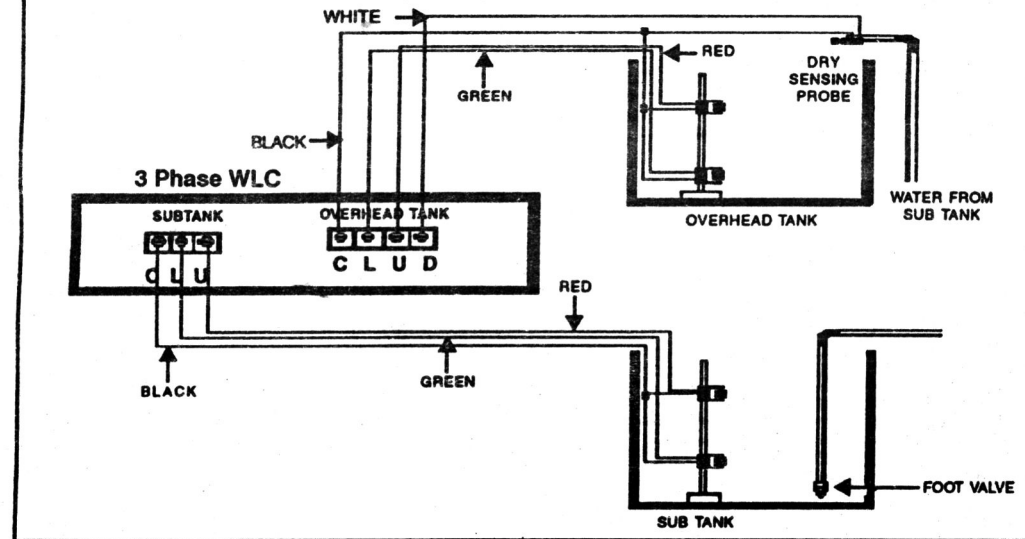


## INPUT & OUTPUT CONNECTIONS

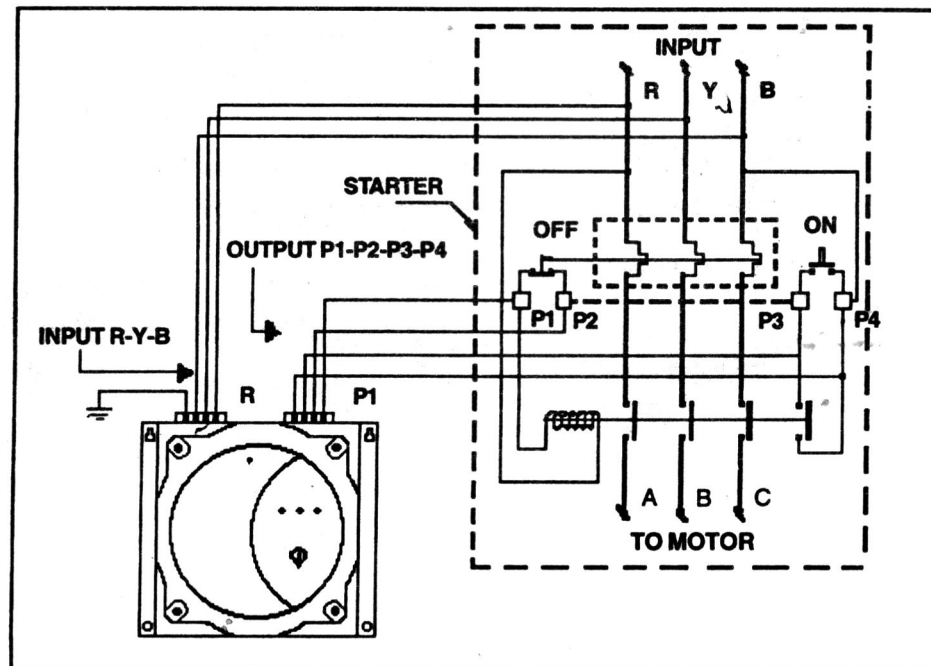
### POWER INPUT CONNECTOR

The mains power (415V, 50Hz) is connected to this INPUT terminal connector. It is indicated as R,Y,B & E for Rphase, Bphase and earth respectively. Care should be taken to connect the wires as per the indicated phase sequence.

## PROBE CONNECTORS



- Your Videon 3 phase Automatic WLC is now ready for operation and the motor will be switched ON and OFF automatically in accordance with the water level conditions of both tanks.



#### POWER OUTPUT CONNECTOR

The output power from the **Videon 3 phase Automatic WLC** is taken from this connector to switch ON/ OFF the starter. Here it is mentioned as P1,P2, P3 ,P4 that are to be connected to the respective contacts of D.O.L. starter.

#### FLOAT CONNECTORS

Float connectors are provided in the opposite side of the power connectors as shown in fig. The 3 terminal connector is meant for SUB TANK and 4 terminal connector is for OVERHEAD TANK.

The floats are coming with lengthy lead wires that should be properly routed and connected to the corresponding connectors. Below the sub tank connector it is marked as C L U, which represent COMMON, LOWER float, UPPER float wires respectively. The overhead tank connectors are also indicated as C L U D where the D represents DRY RUN probe wire.

#### Colour coding of float probe, dry run sensor wires

- 1) Red : Upper Float wire, which should be connected to U segment of upper / sub tank connector.
- 2) Green : Lower Float wire, which should be connected to L segment of upper / sub tank connector.
- 3) White : Dry run sensor probe wire, which should be connected to D segment of upper tank connector.
- 4) Black : Common wire from upper float , lower float & dry sensors which should be connected to C segment of the respective upper / lower tank connector.

#### Other Accessories (to be purchased from dealer)

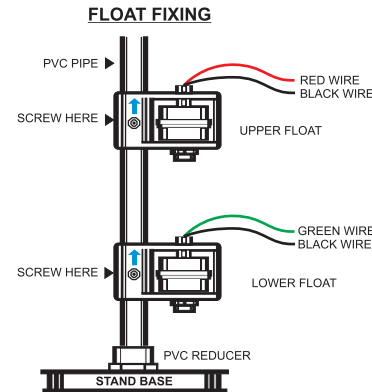
- a) PVC pipe- having 20mm diameter with required length according to the the tank dimensions.
- b) 4 - core cable - length according to the user's requirement. This 4- core single strand sheathed PVC cable is having 4 wires with Black, Red, Green and White colour configuration, which can be used as probe wire extension.

**Note:** It is not recommended to fix the floats into the well when you are using the Videon Three Phase Automatic Water Level Ccontroller for a well.

## INSTALLATION & CHECKING

Read the instructions carefully and follow it systematically. If you have any doubt, please contact 9847222202 / nearest service centre / dealer immediately.

1. Assemble the probes to the stand base using PVC nipples and PVC pipe as described.
  - a) Fill the stand base with pure sand / mettle for stability in water.
  - b) Assemble the PVC nipple with stand base. The nipple is to be fixed by tightening the thread after applying solvent cement into the centre hole of stand base.
  - c) Fix the PVC pipe nipple using the given solvent cement.
  - d) **Fix the lower & upper float probes facing the arrow mark (↑) on it towards up at appropriate distances. This distance selection depends upon the tank dimensions and pumping capacity.**
  - e) If you are pumping the water from a sump (sub tank), set another assembly of probes by repeating this procedure for sub tank.
  - f) Put the float assembly into the tank and provide the connections as per the instructions.



**Care should be taken to ensure that the lower probe of the sub tank is set above the foot valve and the upper probe of overhead tank below the overflow pipe.**

2. Fix the dry run sensor to the inlet pipe of the overhead tank in an inclined position (except the bottom & top position of water fall) to flow water through it.
3. The Videon 3 phase Automatic WLC should be installed near to the D.O.L. starter in a place free from humidity.
  - a) Install the D.O.L. starter as per the wiring diagram. R phase, Y phase, B phase and Earth should be connected to the corresponding terminals. Also, make the other required connections to operate the starter. After installation verify that the starter is working properly.
  - b) Switch OFF the input supply & install the Videon 3 phase Automatic WLC at a place near to the starter.
  - c) Remove the connection between points P2 and P3 terminals (dotted line in figure). Necessary precautions should be taken before connecting, to avoid the risk of electric shock.
  - d) Connect the P1, P2, P3 and P4 terminals of starter to the corresponding terminals of the "TO STARTER" connector in Videon 3 phase Automatic WLC
  - e) Keep the front panel switch of Videon 3 phase Automatic WLC in OFF position.
4. Connect input power wires to INPUT (R,Y,B,E) connector of 3 phase Automatic WLC. This phase sequence must be correct. Otherwise Videon 3 phase Automatic WLC will not function.
5. Connect the wires from the overhead tank probes and sub tank float probes to the C L U D connector and CLU connector respectively.
6. Switch ON the power supply and put the front panel toggle switch of Videon 3 phase Automatic WLC in Auto position.