

WATER LEVEL CONTROLLER

digitix[®]



USER'S MANUAL &
INSTALLATION GUIDE

777 v2
DWLC

Features

☀ **Overhead tank control:** The motor switches on when the water level in the overhead tank falls below the reserve level (OL sensor) and switches off when the water level rises to the full tank (OH sensor).

☀ **Dry-run protection with auto adjusting dry-run timeout and retry delay:** Running the pump without water for long periods can damage the impellers and water seals. To prevent this, after starting the motor, it is checked whether the water reaches the overhead tank within a specified time. The time for water to reach the overhead tank varies depending on the length of the delivery pipe, the voltage, and the efficiency of the pump. Water is considered properly pumped by the controller if it reaches the overhead tank continuously for more than ten seconds. If pumping is interrupted within this period or the water does not reach within the dry-run time limit, the motor switches off and tries again after a certain time (retry delay). The dry-run timeout and retry delay are auto-adjusted each time as pre-programmed based on the retry count. Pre-programmed dry-run timeouts are 15, 30, 45, 60, 90, 90, 120, 120, 120, 120, 120, 100, 100, 100, and 100 seconds. Pre-programmed retry delays are 5, 5, 5, 10, 15, 15, 15, 30, 30, 60, 90, 120, 180, and 240 minutes. After 15 attempts, operations will be suspended until the power is turned off and on again.

☀ **Sump timer:** The amount of water coming into the sump may vary from time to time. Sometimes it doesn't even reach the SH sensor. The sump timer monitors the sump's water level. When the water level recovers above the SL sensor, pumping resumes after waiting 30 minutes. This function ensures the availability of water in the overhead tank. Useful in areas where water supply is frequently disrupted and in the summer when water sources in wells are weak.

☀ Micro-computer based sensing algorithm prevents corrosion of sensor probes.

☀ **Sump control:** When the water level in the sump approaches the foot valve (SL sensor), the motor turns off to prevent air from entering the suction. The motor turns on when the water level rises enough for re-pumping (SH sensor).

☀ **Run timer & Standby timer:** When higher-capacity overhead tanks are used, the operating time of the pump will increase. This can cause the motor to overheat. The run timer limits pumping to 20 minutes. The standby timer cools the motor for 30 minutes and then resumes pumping.

☀ **Submersible pump control:** When the springs in the well recede in summer, if you wait for some time, the water level will rise and can be pumped for a while. When using submersible pumps, it is not always possible to place the sensor inside the sump or well. The controller does not sense the water level inside the sump or well because the SL and SH sensors are not installed. A dry run after continuous pumping for 10 seconds can be interpreted as the sump being empty. The controller uses this method to detect that the sump or well has run out of water. To do this, Connect the SL sensor terminal to the COM terminal with a wire. After starting the motor, water can be considered properly pumped if it reaches the overhead tank continuously for more than 10 seconds. When the sump or well runs out of water, air enters the suction and stops pumping. If pumping is interrupted for more than 8 seconds, the controller recognises that the water has run out and turns off the motor. After 30 minutes, the pump will turn on again. This method cannot be used with pumps other than submersible or self-priming pumps. For other pumps, sump sensors should be installed.

☀ Zero-cross-switching triac output (16A) to the motor avoids arcing and extra power loss while switching.

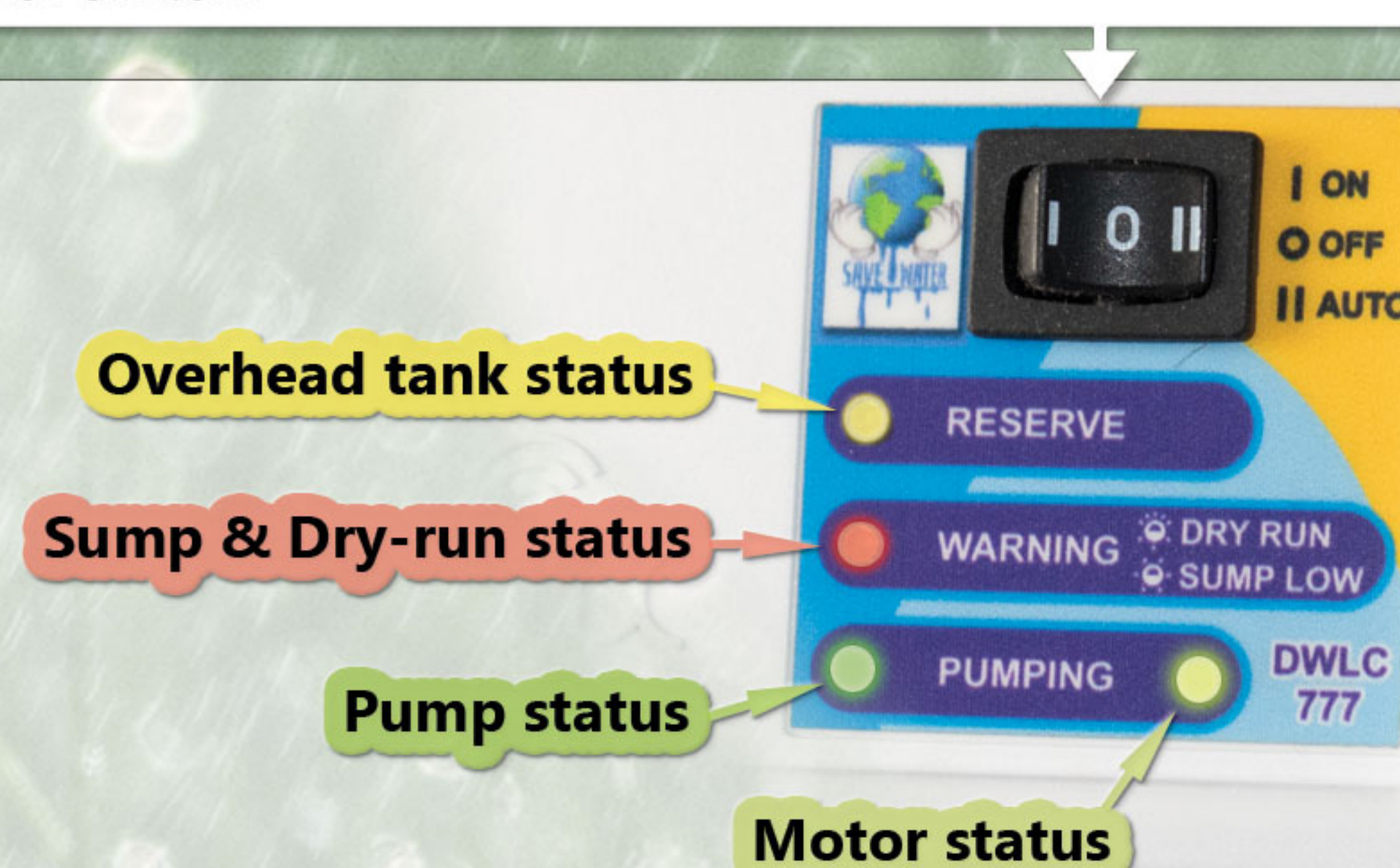
☀ Automatic / Off / Manual switch.

LED indicators

Overhead Tank		Overhead tank is full. Water level is above OH	Flashes rapidly twice every two seconds
		Water level is above the reserve, above OL	Flashes once every two seconds
		Water level is below the reserve, below OL	Blinks once every two seconds
Motor		Motor is OFF	LED is off
		Motor is ON	LED is on (in manual mode only this LED lights up)
Sump & Dry-run		Sump has plenty of water. Level is above SH	LED Remains off
		Water level in the sump is low, above SL	Flashes once every four seconds
		Sump is empty. Water level is below SL	Blinks once every four seconds
		Dry run of pump detected	Flashes at high speed for 4 seconds to show dry run status, then sump status is displayed for 12 seconds
		Faulty pump/motor, dry-run detected	Flashes at high speed. (Turn the power off and on again after troubleshooting)
		Sump timer, waiting for sump water recovery	Flashes twice for 4 seconds to show the sump timer, then for 12 seconds, shows the sump status
Pump		Pump is running, water does not reach the overhead tank	Blinks twice per second
		Pump is running, water is pumping, checking for 10 second continuous flow	Blinks fast
		Pump is running, water is pumping constantly	LED remains lit
		Standby timer-motor is cooling	Flashes three times at high speed at 8-second intervals
		Overhead tank - faulty wiring	LEDs blink fast
		Sump - faulty wiring	LEDs blink fast
		Overhead tank & Sump - faulty wiring	LEDs blink fast

The diagram shows a control panel with three main status indicators: 'Overhead tank status' (yellow), 'Sump & Dry-run status' (red), and 'Pump status' (green). Each indicator has a corresponding LED icon and a label. The 'Overhead tank status' indicator has a 'RESERVE' label. The 'Sump & Dry-run status' indicator has a 'WARNING' label and a 'DUMP LOW' label. The 'Pump status' indicator has a 'PUMPING' label and a 'DWLC 777' label. The 'Motor status' indicator is also shown, with a 'LED is on' label. The panel also features a 'SAFETY SWITCH' and a 'STOP' button.

QR code linking to the content.



[/c/DigitixIn](https://www.youtube.com/channel/UCc/DigitixIn)



IMPORTANT INSTRUCTIONS

1. Read all instructions before installing the unit for safety operations. All instructions should be carefully followed. Retain this manual for future reference.
2. DANGER : Hazardous voltage can cause death or serious injury. Disconnect power before working on equipment.
3. This unit should not be installed near any heat source or inside a closed cabinet. Place away from direct sun light to prevent plastic components from aging.
4. Ensure that the power voltage, frequency, and current are the same as those of the product specifications. Failure to do so may result in electric shock or fire.
5. Do not install in a humid, oily or dusty location, or in a location exposed to direct sunlight or water (rain drops).
6. Do not wash or clean with petrol, kerosene, benzene, paint thinner, alcohol or other inflammable or explosive substances. This may result in electric shock, fire, or an explosion.
7. Do not touch the auto-manual-off switch with wet hands. This may result in electric shock.
8. Never push objects of any kind or never allow any liquid enter into this unit through slots provided as that could result in fire or electric shock.
9. Do not attempt to service this unit by yourself. Opening covers may expose to high voltages. Unauthorised service void warranty terms.
10. Operating the motor in manual mode is at user's risk. Damage caused by manual mode to the unit may void warranty.

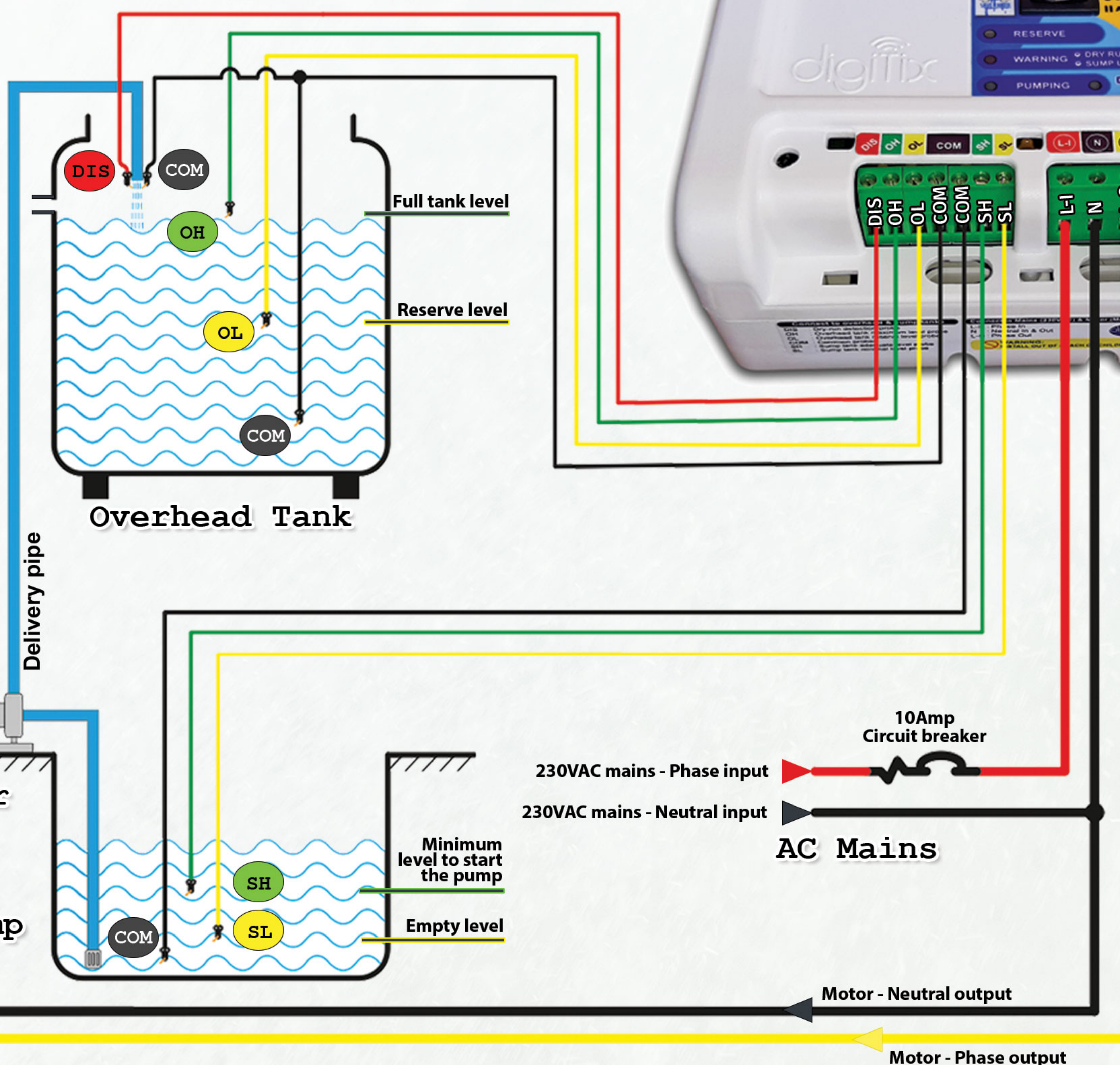
YouTube /c/DigitixIn



Wiring diagram

DWLC777-V2

Sensor Probes



* Features and specifications are subject to change without notice.



If sump control using sensors is not required for submersible pump users, connect the SL and COM Terminals together using a wire. This is not recommended, as frequent dry runs may reduce the lifespan of the pump.



TIPS

Installation

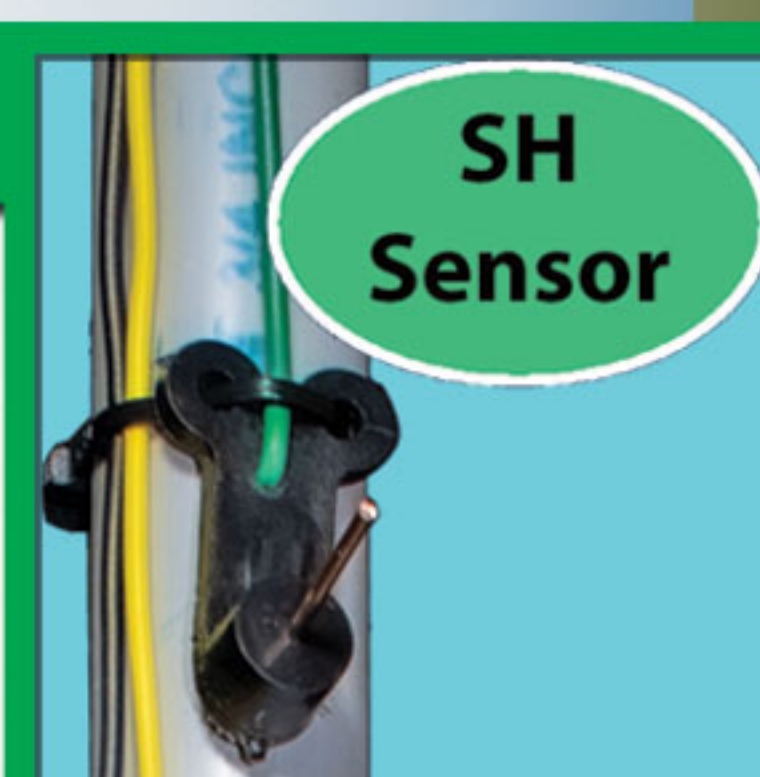
Dry-Run Sensor Probes

Set the DIS and COM sensor probes at the end of the delivery pipe as shown in the picture to sense water output and prevent dry-running of the pump. Prolonged running without water will reduce the pump's life span



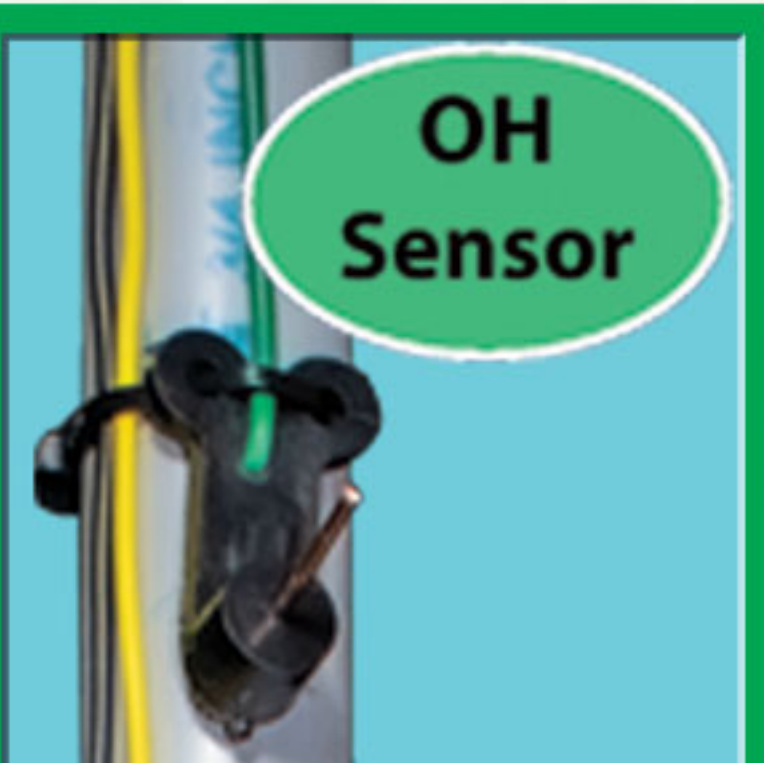
'Minimum level to start the pump'

Set the SH sensor probe at a level where enough water is normally available for pumping. On regaining the water level in the emptied sump, the pump will start.



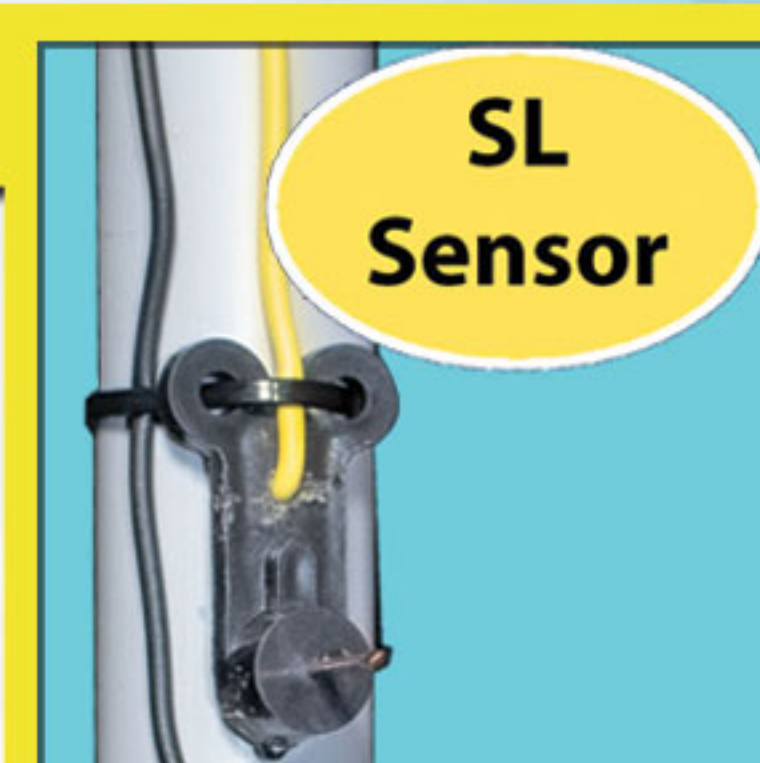
'Full Tank Level' Sensor Probe

Set the OH sensor probe at the maximum capacity level of the main tank, below the overflow pipe. The motor will stop when the water reaches this level and prevent overspilling.



'Empty Level' Sensor Probe

Set the SL sensor probe just above the foot valve at a level where air entry inside the suction pipe will not happen. The hassle of removing trapped air inside the suction pipe is avoided.



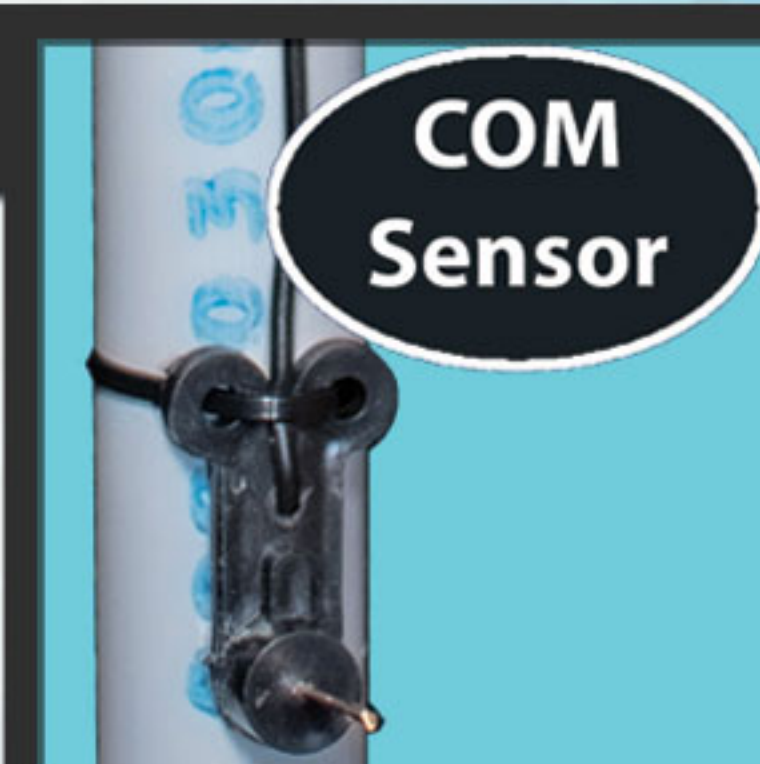
'Reserve Level' Sensor Probe

Set the OL sensor probe at a level where you want to keep the water reserve. The pumping will start when the water level falls below this level.



Sensor probes-Common

Set the COM sensor probe near the DIS sensor, below the OL sensor, and below the SL sensor.



Overhead Tank

**1**

One Year Warranty

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DEALER

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Product : WATER LEVEL CONTROLLER
Model : DWLC-777-V2
Serial No. :

Invoice No. :
Date :

Stamp

WARRANTY TERMS: The Company grants warranty to the actual user only, a limited conditional warranty for the product supplied by it to the extent and purpose detailed below.

1. The Warranty shall be only with respect to defects in manufacturing for a period of 12 months from the date of purchase.
2. The scope of the warranty shall extend only to the repairing or replacing the defective parts, free of charge. The decision as to whether a part should be repaired or replaced shall be on the sole discretion of the company. In case of replacement of a part, the defective part will become the property of the company. As this is not an onsite warranty, the defective product has to be brought to the authorised dealer or authorised service centre. Failure to present documents evidencing purchase shall render the claim invalid.
3. The warranty shall not cover any cost or charges including cost of removal, installation, transportation etc.
4. This warranty does not extend to any damage or wear to the product, resulting from abnormal operating conditions, accidents, abuse, misuse, unauthorised alteration, repair etc..
5. The warranty does not cover any damage or wear to the product and its accessories if it was not installed, operated and maintained in accordance with the company's installation guide.
6. The liability of the company under this warranty shall not extend to any incidental or consequential damages, losses or expenses arising out of or in the course of installation, or any other causes or any claim arising out of fire, accident, wilful damage, transit damage or any other force majeure conditions.
7. The scope of warranty does not hold good if the serial number or warranty seal is deleted, defaced or altered.
8. In case of any dispute or claims over the terms of this warranty, Warranty liability on seller is limited to the selling price of the product and the decision of the company shall be final.
9. Any dispute is subjected to Ernakulam jurisdiction and the jurisdiction of other courts is excluded.



Digitix Techno Solutions, Kochi, Kerala, India

e-mail :- care@digitix.in