Installation Instructions
USC3 Ultimate Solid State Controller with Ultimate Sensor

Ultimate Sensor

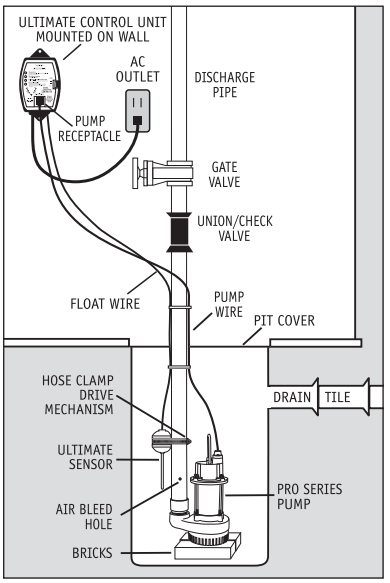
The Ultimate Sensor uses a unique, patented, smart sensor that has no moving floats. A single 3.5" corrosion proof, stainless steel, sensor rod will detect virtually any liquid. It's imbedded smart sensing software adjusts to the harshest conditions regardless of any accumulated coating. The ball shaped sensor has a 10' cord that includes a connector that can be separated from the controller when the cord needs to be threaded through small openings.

Note: When mounting the Ultimate Sensor, position the bottom of the sensor rod at the height you want the pump to activate.

Installing the Ultimate Sensor

The PHCC Pro Series Ultimate Sensor is easy to install by using the enclosed stainless steel hose clamp.

1. Hold the ball shaped sensor to the discharge pipe so that the sensor rod is below the ball.
2. Secure the sensor rod to the pipe with the enclosed hose clamp, but do not completely tighten the clamp at this time. Be sure to place the drive mechanism of the clamp on the opposite side of the sensor. This will allow the extra material of the clamp to be as close as possible to the sensor once it is completely tightened.
3. Position the sensor to a level where the bottom of the sensor rod is no lower than 3" above the bottom of the pump. To avoid debris pouring onto the sensor, it should be positioned on the side opposite the drain tile.
   Note: It is important to mount the sensor below the drain tile that empties into the pit. Mounting it above the drain tile would allow water to fill the drain tile before the pump is activated to pump out the water.



4. Once the sensor is in the desired position, tighten the clamp. Do not over tighten.

Note: Do not attempt to use sensors or float switches other than the Ultimate Sensor with this controller.

The Ultimate Solid State Controller Model # USC3

The benefit of this controller is that it will sound an alarm when problems exist or maintenance is needed. The controller will also run the pump once a week for approximately four (4) seconds. This test will exercise the pump and help ensure the pump is working properly.

The PHCC Pro Series Ultimate Solid State Controller features a series of warnings (audible and visual) that pinpoint potential problems with the pump, sensor and power conditions. The controller will sound an alarm when power has been interrupted, when the pump has run for more than 10 minutes continuously, when the 9V battery is low or if the controller detects a weak or no signal from the sensor. The 9V battery (sold separately) runs the controller during a power outage, allowing it to sound an alarm if the circuit breaker trips, the controller is not plugged in securely, or the home's power is interrupted.
Note: The 9V battery will only power the controller, not the pump.

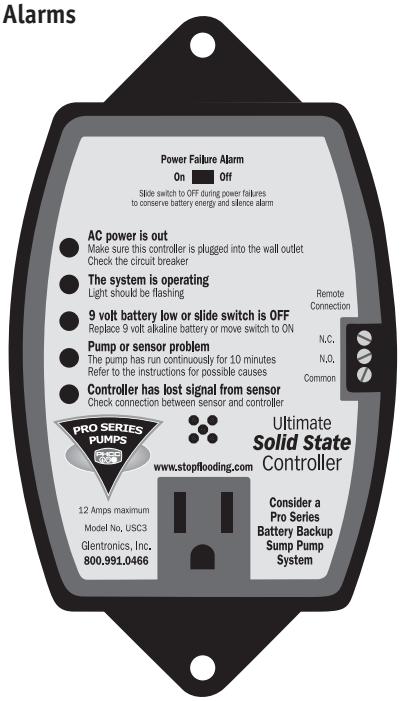
Installing the Ultimate Solid State Controller

1. Mount the controller to the wall through the 2 holes on the cabinet using the proper mounting hardware for the application. The controller should be mounted at least 4' from the floor and within 4' of the outlet.
2. Open the plastic door on the top of the unit and using a flat head screwdriver adjust the dial to select the number of seconds that the pump will run after the water falls below the sensor. The timer can be adjusted from 5-45 seconds. The manufacturer default is about 10 seconds. Install a 9V alkaline battery and replace the plastic door.
3. Plug the control box into a properly grounded, 3-prong receptacle (preferably with ground fault circuit interrupt). Then, plug the pump into the receptacle on the control box. Do not use an extension cord.
4. Make sure the Power Failure Alarm slide switch is in the ON position.

Completing the Installation

1. After the initial installation, be sure to check the pump operation by filling the sump with water and observing the pump through one full cycle. When using the Ultimate Sensor, the pump should run for 10 seconds after the water level reaches the bottom of the sensor rod.
2. Replace the pit cover making sure not to pinch or crimp the pump wire with the cover. The pit cover either has a 'hole punch' that will allow the cord to be passed through it, or a hole can be drilled in the cover.

Understanding the Warnings & Alarms



AC power is out

There are several causes for power failure. The most common causes are a power outage by the electric company or a tripped circuit breaker. Although the Ultimate Controller can not run the pump, it will sound an alarm indicating the loss of power. This will allow the homeowner to address the problem.

If this warning light and alarm are on, the control box is not receiving AC power for one of many reasons:

1. The control box is not plugged in
2. The power to the house is out
3. The circuit breaker to that outlet has been tripped
4. The ground fault interrupter on that outlet has been tripped
5. A power brownout is taking place

Power Failure Alarm slide switch

When the controller is not receiving AC power, the monitoring features and the audible alarms are powered by the 9-volt battery. This type of battery will power the controller for many hours, but not indefinitely. Once the source of the AC power alarm is determined, it is suggested that the Power Failure Alarm slide switch be turned to the **OFF** position until the power is restored. This will preserve the battery and silence the alarm. When AC power is restored, slide this switch back to the **ON** position.

Note: If the AC power is restored and the slide switch is in the OFF position, the alarm and light for the 9-volt battery warning will activate, even if the battery is good. This is a reminder to reset the alarm. Slide the switch to the ON position. If the battery is good, the light will go out. If the alarm continues to sound, replace the battery.

The system is operating

This light should be **ON** and flashing at all times. It is included to indicate that the system is monitoring the sump conditions. This light will not illuminate when:

1. The power is out and the Power Failure Alarm slide switch is in the **OFF** position
2. The power is out and the 9V battery is discharged
3. The controller is not functioning. Contact the Glentronics service department

The 9-volt battery is low

1. The 9-volt battery located in the top of the control box is coming to the end of its useful life. Replace it with a new 9-volt alkaline battery.
2. The Power Failure Alarm switch is in the **OFF** position. It must be in the **ON** position at all times, except when silencing an actual power failure condition.

Pump or sensor problem

This key feature monitors the time that the sensor has been activated. It is unusual for a pump to run for 10 or more minutes continuously. This can occur for many different reasons. Either the sensor has a large amount of debris stuck to it, there is a mechanical problem with the pump, or there is a problem with the plumbing connections. Please refer to the Troubleshooting Guide.

Controller has lost signal from sensor

This alarm will sound if the controller has detected a weak signal or has lost the signal from the sensor. Check for a secure connection between controller and sensor wire or clean the sensor rod.

Glentronics, Inc.
Lincolnshire, IL 60069
800-991-0466
www.stopflooding.com

Troubleshooting (Always unplug the pump from the controller before performing any maintenance)

The pump will not start or run	Pump is not plugged in	Plug pump in properly (see instructions)
	Water is not high enough to activate the pump	Make sure float switch is positioned properly
	Open circuit	Check circuit breaker or fuse, and GFI reset button
	Poor power source	Check circuit line wires and cable*
	Low voltage	Check line wires and source voltage*
	Bad power cable	Replace with new cable*
	Locked impeller	Remove strainer and clear obstruction
	Defective float switch	Replace float switch with new float switch
	Defective pump	Replace pump with new pump
Thermal protector tripping or not functioning	Locked impeller	Remove strainer and clear obstruction
	Incorrect power supply	Check power supply source and voltage
	Overburdened due to heavy sand content in the water	Use water filter or replace with a higher wattage pump
	Pump running continuously with no water present	Check sensor rod
Pump starts and stops too frequently	Sensor is mounted too low	Raise sensor or adjust timer
	Water flowing back from pipe	Install or replace check valve
	Malfunctioning sensor rod	Replace sensor rod with new sensor
Pump will not shut off	Clogged or frozen discharge	Clear blockage or thaw frozen line
	Blocked intake strainer	Clear debris from intake strainer
	Check valve installed with no air bleed hole in pipe or pump	Drill a bleed hole in the discharge pipe, or clean debris from the existing hole in the pipe or pump
	Check valve is stuck or installed upside down	Reverse or replace check valve. Make sure the check valve is installed with the flow arrow pointing up and out of the pit.
	Sensor rod is obstructed with large amount of debris	Clean debris from sensor rod
Insufficient or no water volume	Check valve on secondary pump will not close and water re-circulates within the system	Replace the check valve on the secondary pump
	Worn impeller	Replace impeller & adjust spacing between impeller and cover
	Partially blocked impeller	Remove strainer and clear obstruction
	Clogged or frozen discharge	Clear blockage or thaw frozen line
	Broken or leaking pipe	Repair piping
	Low power voltage	Check power voltage, wires and cable condition
	Check valve installed with no air bleed hole in pipe or pump	Drill a bleed hole in the discharge pipe, or clean debris from the existing hole in the pipe or pump
	Check valve is stuck or installed upside down	Reverse or replace the check valve. Be sure check valve is installed with flow arrow pointing up and out of the pit
	Pump is air locked	Remove debris from the air bleed hole
Abnormal sound or vibration	Check valve on secondary pump will not close and water re-circulates within the system	Replace the check valve on the secondary pump
	Blocked intake screen	Clear debris from intake screen
	Broken impeller	Replace impeller with new one
Pump unexpectedly turns off for 5 seconds	Pump is experiencing an anti air lock safety feature	Pump is frequently cycling on and off. The controller has a safety feature that turns the pump off for 5 seconds if it detects a possible air lock. This is normal. No action is required.

*Consult a licensed electrician.
If the above solutions do not solve the problem, contact Glentronics customer service 800-991-0466, option 3.

Warranty

GLENTRONICS, INC. warrants to the end purchaser that its switch and control unit products are free from defective materials and workmanship for the periods indicated below:
All parts and labor (excluding installation) for a period of:

- 1 year from the date of purchase, when purchased individually for use with another brand of pump
- 3 years from the date of purchase, when purchased with the PHCC Pro Series S3 Series pumps
- 5 years from the date of purchase, when purchased with the PHCC Pro Series S5 Series pumps

The defective product must be returned directly to the factory, postage prepaid with the original bill of sale or receipt to the address listed below. GLENTRONICS, INC., at its option, will either repair or replace the product and return it postage prepaid.

Conditions

The unit must be shipped, freight prepaid, or delivered to GLENTRONICS, INC. to provide the services described hereunder in either its original carton and inserts, or a similar package affording an equal degree of protection.

The unit must not have been previously altered, repaired or serviced by anyone other than GLENTRONICS, INC., or its agent; the serial number on the unit must not have been altered or removed; the unit must not have been subject to accident, misuse, abuse or operated contrary to the instructions contained in the accompanying manual.

The dealer's dated bill of sale, or installers invoice must be retained as evidence of the date of purchase and to establish warranty eligibility.

This warranty does not cover product problems resulting from handling liquids hotter than 104 degrees Fahrenheit, handling inflammable liquids, solvents, strong chemicals or severe abrasive solutions; user abuse; misuse, neglect, improper maintenance, commercial or industrial use; improper connection or installation, damages caused by lightning strikes; excessive surges in AC line voltage; water damage to the controller; other acts of nature, or failure to operate in accordance with the enclosed written instructions.

GLENTRONICS, INC. WILL NOT BE LIABLE FOR ANY INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTIES ON THIS PRODUCT. SOME STATES DO NOT ALLOW FOR THE EXCLUSION OR LIMITATION OF CONSEQUENTIAL OR INDIRECT DAMAGE. THE ABOVE LIMITATION MAY NOT APPLY TO YOU. THIS EXPRESS WARRANTY SHALL BE EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, WRITTEN OR ORAL, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THIS CUSTOMER'S EXCLUSIVE REMEDY FOR BREACH OF THIS WARRANTY, OR OF ANY IMPLIED WARRANTY NOT EXCLUDED HEREIN, SHALL BE LIMITED TO REPAIR OR REPLACEMENT OF THE PRODUCT.

For information or service contact:

Glentronics, Inc., 645 Heathrow Drive, Lincolnshire, IL 60069 800-991-0466

Model No. USC3 Serial No. _____ Purchase Date _____