

# PHCC Pro Series Deluxe Float Switch & Controller

## Instruction Manual & Safety Warnings

**SAVE THESE INSTRUCTIONS.** This manual contains important SAFETY WARNINGS and OPERATING INSTRUCTIONS for the PHCC Pro Series Deluxe Float Controller with dual float (DFC2), vertical float (VSC2) and tether float (TSC2) switch. You will need to refer to it before attempting any installation or maintenance.

**ALWAYS** keep these instructions with the unit so that they will be easily accessible. Failure to read and follow these warnings and instructions could result in property damage, serious injury, or death.

### ⚠ WARNING

**Risk of electric shock. To reduce this risk, observe the following precautions**

- **ALWAYS** disconnect the pump and float controller from the power source before servicing or making adjustments.
- **NEVER** handle the controller, float switch, pump or motor with wet hands or when standing on a wet or damp surface while the pump or controller is plugged into the power source.
- **MAKE SURE THERE IS A PROPERLY GROUNDED RECEPTACLE AVAILABLE.** This controller is wired with a 3-prong grounded plug. To reduce the risk of electric shock, be certain that it is only connected to a properly grounded, 3-prong receptacle. If you have a 2-prong receptacle, have a licensed electrician replace it with a 3-prong receptacle according to local codes and ordinances.
- **NEVER** bypass grounding wires or remove the ground prong from the controller.
- **DO NOT** use an extension cord. The electrical outlet should be within the length of the pump's power cord, and at least 4 feet above the floor level to minimize potential hazards from flood conditions.
- **DO** protect the electrical cord from sharp objects, hot surfaces, oil, and chemicals. Avoid kinking the cord.
- **MAKE SURE** the supply circuit has a dedicated fuse or circuit breaker rated to handle the power requirements noted on the nameplate of the pump.

### ⚠ CAUTION

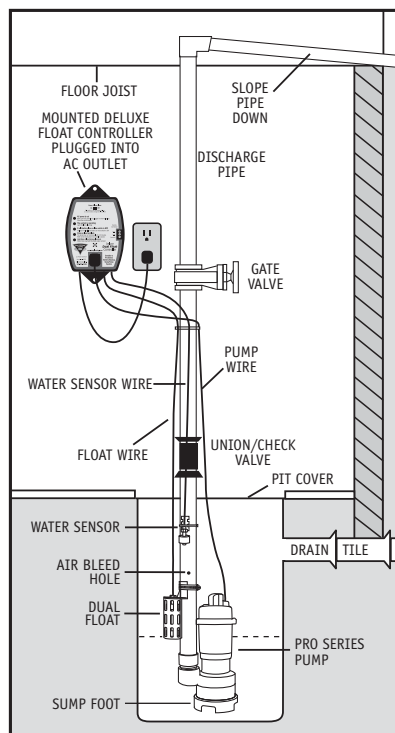
**To reduce the risk of hazards that can cause injury or property damage, observe the following precautions**

- **DO NOT** expose the control unit to any type of moisture, water, rain or snow.
- **DO NOT** operate the pump, control unit or float switch if it has been damaged in any way.
- **DO NOT** use the caged dual float switch with pumps in pits handling raw sewage, salt water or hazardous liquids. This product is for ground water applications only.
- **DO NOT** use the vertical float or tether float switch with pumps in pits handling salt water or other hazardous liquids..
- **DO NOT** use in continuous duty applications such as fountains or ponds.
- **DO NOT** disassemble the pump or control unit. When service is required, contact Glentronics technical support at 800-991-0466. Return the product to the manufacturer for any repairs at the following address:

Glentronics, Inc., 645 Heathrow Drive, Lincolnshire, IL 60069

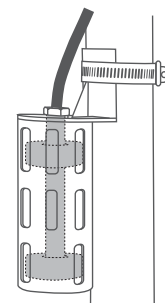
### NOTICES

- The control unit must receive 110-115-120V and 60 Hz from the AC outlet.
- The controller will not provide protection during a power outage. With the risk of property damage from high water levels, the addition of a PHCC Pro Series battery backup sump pump system is highly recommended.
- After the initial installation, be sure to check the operation by filling the sump with water and observing the pump operation through several full cycles.



### Dual Float Switch (Model DFC2)

The dual float switch contains two large floating rings enclosed within a protective cage. Water will lift the bottom float by a 1/4", which will activate the pump. If for any reason the lower float does not activate the pump, the water will rise and activate the second switch. As the pump evacuates the water from the pit, the floats will drop. The pump will run for an additional 10 seconds to evacuate the pit completely after the float drops. The float switch wire includes a connector that can be separated from the controller when the wire needs to be threaded through small openings. The float switch connector has a safety locking pin. This pin will prevent the float switch from accidentally being disconnected from the controller. To remove the pin, push the pointed end of the pin into the float connector and pull it out from the other end. The float switch wire can now be disconnected. Make sure to reinstall the pin after the float switch is reconnected. *Note: When mounting the float switch, position the bottom of the cage at the height you want the pump to activate.*



### Installing the Dual Float

The PHCC Pro Series dual float switch is easy to install by using the enclosed stainless steel hose clamp.

1. Hold the float switch to the discharge pipe so the cage is below the bracket.
2. Secure the float to the pipe with the enclosed hose clamp, but do not completely tighten the clamp at this time.
3. Position the float switch to a level where the bottom of the float cage is no lower than 3" above the bottom of the pump. To avoid debris pouring onto the float, it should be positioned on the side of the discharge pipe opposite the drain tile. *Note: It is important to mount the float 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 float switch is in the desired position, tighten the clamp.

### Vertical Float Switch (Model VSC2)

The vertical float switch contains a single large float. Water will lift the float by a 1/2", which will activate the pump. As the pump evacuates the water from the pit, the float will drop. The pump will run for an additional 10 seconds to evacuate the pit completely after the float drops. *Note: There are two rubber stoppers on the float switch rod. Do not remove or alter their position as it will disrupt the timing of the controller and how long the pump runs.* The float switch wire includes a connector that can be separated from the controller when the wire needs to be



## Installation Instructions

### Prior to Installation

1. Visually inspect the product. Products may be damaged during shipping. If the product has been damaged, contact your place of purchase or Glentronics, Inc. before installation.
2. Thoroughly read the instructions provided to learn specific details regarding installation and use. This manual should be retained for future reference.

threaded through small openings. Prior to operation, be sure to check the float switch is properly connected to the controller. *Note: When mounting the float switch, position the bottom of the float at the height you want the pump to activate.*

### Installing the Vertical Float

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

1. Hold the float switch to the discharge pipe so the float is below the bracket.
2. Secure the float to the pipe with the enclosed hose clamp, but do not completely tighten the clamp at this time.
3. Position the float switch to a level where the bottom of the float is no lower than 3" above the bottom of the pump. To avoid debris pouring onto the float, it should be positioned on the side of the discharge pipe opposite the drain tile. *Note: It is important to mount the float 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 float switch is in the desired position, tighten the clamp.

### Tether Float Switch (Model TSC2)

The tether float contains a single float connected to a flexible tether. Water will raise the float to activate the pump. As the pump evacuates the water from the pit the float will fall and the pump will run for an additional 10 seconds to empty the pit. The tether float switch wire includes a connector that can be separated from the controller when the wire needs to be threaded through small openings. Prior to operation, be sure to check the float switch is properly connected to the controller.

*Note: The tether float switch must be moving freely at all times. If the float switch does not move freely the pump will not activate.*



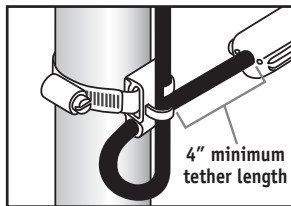
### Installing the Tether Float Switch (Model TSC2)

The tether float switch is easy to install with the enclosed stainless steel hose clamp and mounting bracket.

1. The tether length is set to 4". Do **not** adjust the tether length as it will disrupt the timing of the controller and how long the pump runs. Setting the tether length to less than 4" can also cause excessive stress on the cable or prevent the switch from operating.

*Note: To avoid debris pouring into the float, it should be positioned on the side of the discharge pipe opposite the drain tile.*

2. Locate the desired activation height and secure the hose clamp to the discharge pipe. Be sure the bracket is positioned as shown at right. Do not overtighten the hose clamp. Overtightening may cause damage to the mounting bracket.



*Note: It is important to mount the float 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.*

3. Check the pump operation by filling the sump with water and observing the pump through several full cycles. **The tether float switch must be moving freely at all times. Make sure the float switch does not come into contact with other pumps, wires, pipe or any other object that may be in the sump pit. The float switch must not come into contact with the sump pit floor or wall.** If the float switch does not move freely the pump will not activate.

### Deluxe Float Controller

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 Deluxe Float Controller features a series of warnings (audible and visual) that pinpoint potential problems with the pump, switch 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, or when the 9V battery is low. 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 Deluxe Float 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 float drops. The dial 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. 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.
5. Plug the float switch into the bottom of the controller.

### 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 several full cycles. The pump should run for 10 seconds after the float drops to its original position.
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.

### High Water Alarm - Accessory for the Deluxe Controller

(Requires the additional purchase of Model PS-WS)

#### Water Sensor

The water sensor is designed to warn you of a potential flood. If you are installing it in the sump pit, it must be installed between the basement floor and the primary float switch. If there is a failure with either the main pump or the plumbing system, the water level will rise past the primary float switch and activate the water sensor. When the water sensor is activated, it will trigger a warning light, an audible alarm, and the remote terminal on the controller.

*This water sensor is only designed to give you a warning of a potential problem; it will not activate the primary pump.*

#### Installing the Water Sensor

The water sensor should be mounted near the top of the pit or where it is appropriate for your installation (see diagram). Attach the water sensor very securely with the included plastic wire tie. Be sure the water sensor is positioned vertically with the mounting bracket at the top. Plug the water sensor into the bottom of the controller. *Do not tilt the water sensor. Do not position the water sensor on the side of the discharge pipe facing the drain tile or any incoming rush of water.*

#### Testing the Water Sensor

Lift up the float on the water sensor with your fingers. As long it is up, the high water alarm warning light and the audible alarm should be on. When the float is down, the warning light and audible alarm will turn off.

## 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 deluxe 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.

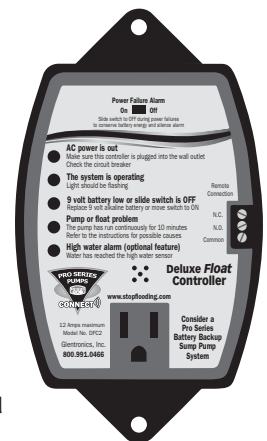
If this warning light and alarm are on, the control box is not receiving AC power for one of many reasons:

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. 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 float problem

This key feature monitors the time that the float switch is up continuously or in the activated position. It is unusual for a pump run for 10 or more minutes continuously. This can occur for many different reasons. Either the float is stuck in the up position, there is a mechanical problem with the pump, or there is a problem with the plumbing connections. Please refer to the Troubleshooting Guide on the last page.

#### High water alarm (optional feature\*)

When water reaches the optional water sensor, it will activate the warning light, audible alarm, and remote terminal. The activation of the water sensor could indicate that there is a failure of the main pump or plumbing problem. Please refer to the Troubleshooting Guide on the last page.

\*This feature requires the additional purchase of the water sensor (Model PS-WS).

#### Connecting the remote terminal

The terminal is located on the side of the control unit. There are three (3) positions for wire connections on the terminal: N.C. - normally closed, N.O. - normally open, and common.

1. Check your security system or other device to determine whether an open (no contact) or closed (making contact) connection is needed to activate the alarm.
2. The security system or other device will provide two connection terminals. You will need to extend wires from the security system or other device to the Pro Series control unit. Strip the two wires, ¼" each. Connect either wire to the common terminal. To secure the wire into the terminal, insert the exposed wire into the hole on the back of the terminal next to the screw marked common. Turn the screw a few turns to lock-in the wire.

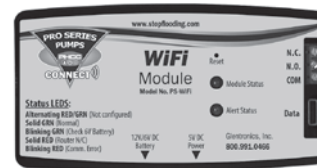
3. If the security system or other device requires a closing of a contact to activate the alarm, secure the other wire in the terminal hole labeled N.O. (normally open). If the security system or other device requires an opening of a contact, secure the wire in the terminal hole labeled N.C. (normally closed).

#### USB data port

This controller is equipped with a USB data port. The purpose of this port is to allow communication with the PHCC Pro Series Connect Modules. The PHCC Pro Series Connect Modules are separately sold accessories that will allow the user to stay connected and receive remote notifications of potential problems and needed maintenance while away from home. There are currently two PHCC Pro Series modules that can be connected:

#### PHCC Pro Series WiFi Module (Model PS-WiFi)

- Sends emails or text notifications and status alerts to your phone, tablet or computer
- No required monthly or yearly fees or subscriptions



Model PS-WiFi

#### PHCC Pro Series Home Automation Module (Model PS-HZM)

- Easily connects to compatible monitored security or home automation system
- Connects using Z-Wave Plus



Model PS-HZM

#### Maintenance Check List

Maintenance should be performed 1-2 times per year.

1. Remove all debris from the bottom of the pit and the pump strainer.
2. Remove all debris floating in the water.
3. Remove all debris from the float switch.
4. Fill the pit with water. Make sure pump turns on at the intended level and the float switch is moving freely.
5. While the pump is running, make sure pump is evacuating water at a good pace.

Glentronics, Inc., Lincolnshire, IL 60069

800-991-0466 [www.stopflooding.com](http://www.stopflooding.com)

## LIMITED WARRANTY

By opening this package and using this GLENTRONICS, INC. product, you are agreeing to be bound by the terms of the GLENTRONICS, INC. limited warranty ("warranty") as set out below. Do not use your product until you have read the terms of the warranty. If you do not agree to the terms of the warranty, do not use the product and return it within the return period stated on your purchase receipt from the retail store or authorized distributor where you purchased it for a refund.

To the extent permitted by law, this warranty and the remedies set forth are exclusive and in lieu of all other warranties, remedies and conditions, whether oral, written, statutory, express or implied. GLENTRONICS, INC. disclaims all statutory and implied warranties, including without limitation, warranties of merchantability and fitness for a particular purpose and warranties against hidden or latent defects, to the extent permitted by law. GLENTRONICS, INC. will not be liable for any incidental, special or consequential damages for breach of any express or implied warranties on this product. In so far as such warranties cannot be disclaimed, GLENTRONICS, INC. limits the duration and remedies of such warranties to the duration of this express warranty and, AT GLENTRONICS, INC.'s option, the repair or replacement services described below. Some states (countries and provinces) do not allow limitations on how long an implied warranty (or condition) may last, so the limitation described above may not apply to you.

Any and all causes of action arising from, filed as a result of or in reference to, this warranty or the products described under this warranty shall be governed by and construed under the laws of the State of Illinois. Any cause of action arising from, filed as a result of or in reference to, this warranty or the products described under this warranty shall be filed only in the Circuit Court of the 18th Judicial District, Lake County, Waukegan, Illinois, or in the Northern District of Illinois if filed in Federal Court. The maximum liability for any product described in this warranty shall be the cost of product replacement only.

If any term is held to be illegal or unenforceable, the legality or enforceability of the remaining terms shall not be affected or impaired.

#### What is Covered by this Warranty?

GLENTRONICS, INC. warrants to the end purchaser that its pumps, 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 sump pump
- When purchased with a PHCC Pro Series pump, the Deluxe Float Controller and float switch are covered under the pump's warranty

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.

Warranty continued on page 4.

### What is NOT Covered by this Warranty?

This warranty does not cover the cost or value of damaged property, including expressly any property that has been affected by water overflow, seepage or flooding. If GLENTRONICS, INC. determines that a product is deemed defective under this warranty agreement, it will repair or replace the PRODUCT ONLY. GLENTRONICS, INC. will not cover the cost to reinstall the product, nor will GLENTRONICS, INC. pay the cost of having a plumber or contractor repair or replace the product.

GLENTRONICS, INC. will not repair or replace a product that was installed incorrectly. A product shall be considered "installed incorrectly" when it deviates in any way from the instructions described in this manual.

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.

### How to Obtain Warranty Service

Within thirty (30) days of the product's defective performance, 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. Products not received by GLENTRONICS, INC. at the address indicated below within thirty (30) days of the product's defective performance will not be considered for warranty service. Products received after one (1) year from the date of purchase, fall outside of the timeframe for warranty service and will not be eligible for warranty service. The product must be returned to GLENTRONICS, INC. for inspection in order to be considered for warranty service. If the product is not returned to GLENTRONICS, INC. or the product is inspected by any person, plumber, contractor or business other than GLENTRONICS, INC., this warranty shall no longer be valid. Prior to defective operation, 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 installer's invoice must be retained as evidence of the date of purchase and to establish warranty eligibility.

### Where are Products Sent for Warranty Service?

Glentronics, Inc., 645 Heathrow Drive, Lincolnshire, IL 60069

### How Can I Obtain More Information?

By calling 800-991-0466.

## Troubleshooting Guide (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
	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 float switch
Pump starts and stops too frequently	Float switch mounted too low	Raise float switch
	Water flowing back from pipe	Install or replace check valve
	Malfunctioning float switch	Replace float switch with new float switch
Pump will not shut off	Clogged or frozen discharge	Clear blockage or thaw frozen line
	Blocked intake strainer	Clear debris from intake strainer
	One or both of the floats is obstructed and cannot drop down	Clear debris from inside the float cage (Loosen nut on top of float, then remove c-clip on bottom of float. Remove debris. Tighten nut on top of float, then replace c-clip on bottom of float.) When reassembling the float, the magnetic strip on the inside of the float should be facing down.
	Defective float switch	Replace float switch with new float switch
	Check valve installed with no air bleed hole in pipe or pump	An air bleed hole of 1/8" (3.2 mm) needs to be drilled in the discharge pipe below the check valve and pit cover
Insufficient or no water volume	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.
	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	An air bleed hole of 1/8" (3.2 mm) needs to be drilled in the discharge pipe below the check valve and pit cover
Abnormal sound or vibration	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
	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

\*Consult a licensed electrician.

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