

# ALPHA

## BATTERY BACKUP SYSTEM

HEAVY DUTY  
12 VOLT DC  
BATTERY BACKUP SYSTEM

### INSTALLATION AND OPERATING INSTRUCTIONS



MODEL# PZM-ALPHA-1

Thank you for choosing the SumpTek Alpha Battery Backup System. In a few easy steps your system will be operational and ready for use. **Read and save these instructions.** This manual contains important information about your system. Failure to follow safety instructions and warnings could result in injury or death. Read all the instructions before installing or using the system. Always disconnect batteries and AC power source before storing, handling, or making adjustments.

### CAUTION

**⚠ DANGER :** Water and electricity can be dangerous if certain precautions are not adhered to. This pump is designed to operate safely in a water environment; however, improper use and/or installation can result in personal harm from electrical shock. Please pay attention to the following warnings.

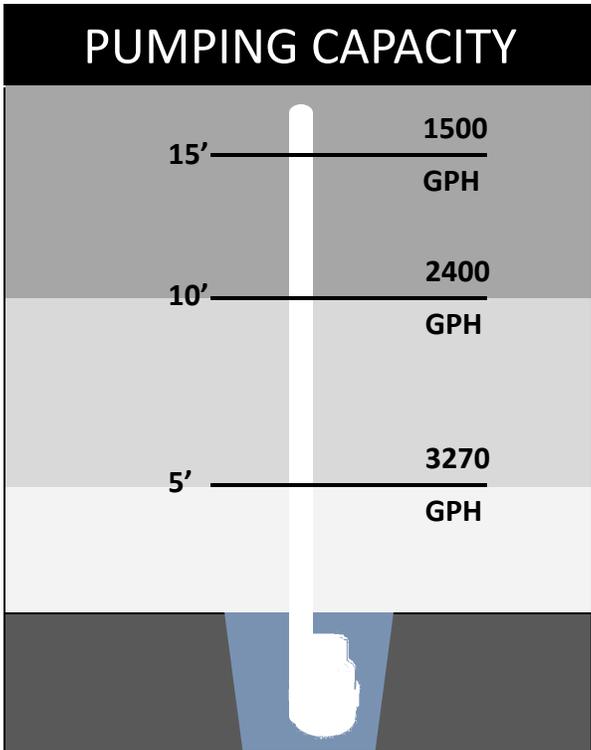
**⚠ WARNING:** Never touch any electrical device, including this pump, when it is touching water, in water, or even in a moist environment. Always unplug (disconnect the electricity) when working on or installing the unit.

**⚠ WARNING** Always unplug the main pump when installing or servicing the backup pump or float switch to avoid electric shock.

**⚠ WARNING** Do not use in pits handling raw sewage, salt water or other hazardous materials.

**⚠ WARNING** Do not use an extension cord. The electrical outlet should be within the length of the pumps power cord, and at least 4 feet above the floor.

**NOTE:** Do not use in raw sewage, sanitary, chemical or saltwater applications.



For Technical Assistance Call:  
**1-800-407-2076** between 8am to 5pm CST

## BATTERY PRECAUTIONS

Use extreme caution when installing, servicing and disposing of batteries. All performance testing on this battery backup system was done with a 120AH maintenance free battery (Group 27), using any battery with a lower rating will decrease both runtime and pumping performance.

**⚠ CAUTION:** Do not dispose of batteries in a fire. The batteries may explode. **CAUTION:** Do not open or mutilate the batteries. Released electrolyte is harmful to the skin and eyes. It may be toxic.

**⚠ CAUTION:** A battery can present a risk of electrical shock and high short circuit current. The following precautions should be observed when working on batteries.

1. Remove watches, rings, or other metal objects.
2. Use tools with insulated handles.
3. Do not lay tools or metal objects on top of batteries.
4. Wear safety goggles and a face shield.

**⚠ CAUTION:** If electrolyte contacts the skin, wash it off immediately. If electrolyte contacts the eyes, flush thoroughly and immediately with water. Seek medical attention. Spilled electrolyte should be washed down with a suitable acid neutralizing agent.

**⚠ CAUTION:** Lead acid batteries can present a risk of fire:

1. Do not smoke when near batteries
2. Do not cause flame or spark in battery area.
3. Discharge static electricity from body before touching batteries by first touching a grounded metal surface.
4. See battery manufacturers' installation manual for additional installation maintenance, and safety instructions.

## INSTALLATION

Follow these step by step instructions to install the Alpha Battery Backup System. If you have any question or need assistance please call 1-800-407-2076.

### TOOLS NEEDED:

- Pipe wrench
- Flat head screw driver
- Hand saw
- Tape measure

### MATERIALS NEEDED:

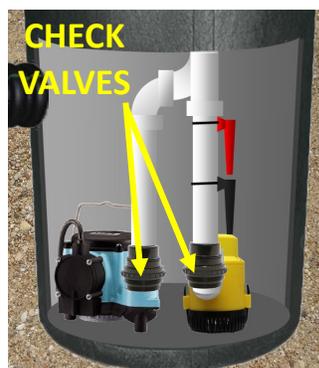
- 1.5" Inch Check valve
- Appropriate PVC fittings
- PVC primer and glue

### PUMP INSTALLATION:

**⚠ CAUTION:** Make sure the pump is disconnected from any power source prior to installation.

1. Find a suitable position for the pump that is away from other equipment that can obstruct its operation such as the primary pump, switch or even the drain tile.
2. When sharing the same discharge pipe you must use a separate dedicated check valves with each pump to prevent the water from cycling back into the pit as shown in (Figure A) below
3. Using PVC piping and check valve connect the pump to the existing or a dedicated discharge pipe as shown in (Figure B).

**FIGURE A:**  
SINGLE DISCHARGE



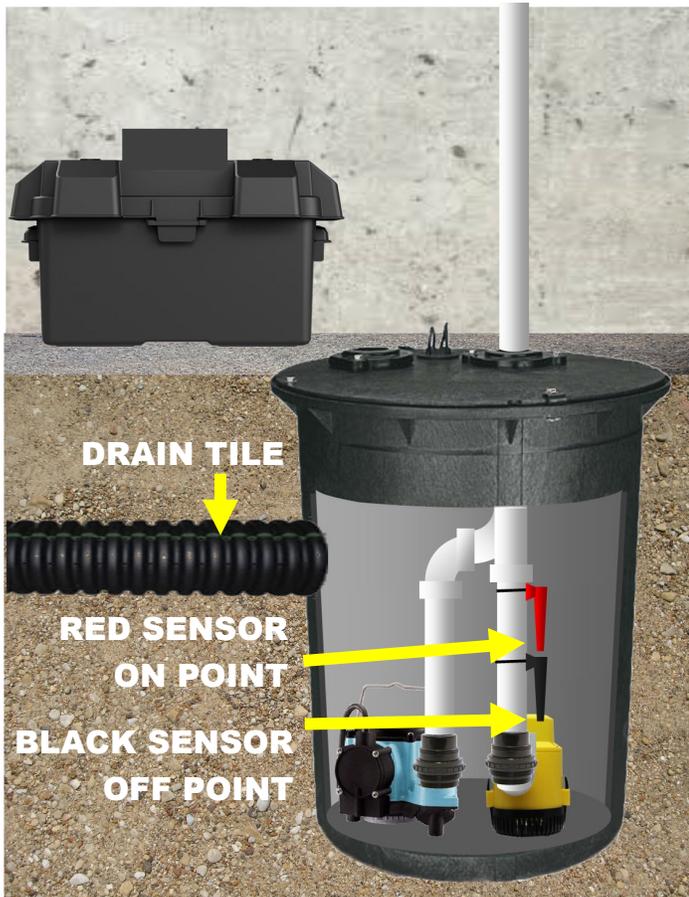
**FIGURE B:**  
DEDICATED DISCHARGE



## SENSOR INSTALLATION

**IMPORTANT:** The sensors will turn the pump ON and OFF once the water reaches the metal tip on the **bottom** of the sensor. Keep this in mind when you are positioning the sensors onto the discharge pipe.

1. Using the zip tie strap connect the red ON sensor to the discharge pipe at the height where you want the pump to turn ON. **NOTE:** *The bottom of the sensors should be below the drain tile and away from the incoming water to avoid false triggering of the system as shown in the figure below.*
2. Using the zip tie strap connect the black OFF sensor to the discharge pipe at the height where you want the pump to turn OFF.



**NOTE:** Basins with high mineral content or water softener discharger may require additional bracket kit for sensors (Part# STBRKT3)

**NOTE:** *Do not completely tighten zip tie strap until you have an exact position and mark the pipe for future reference. When replacing use 10" zip ties.*

## CONTROLLER INSTALLATION

1. Pull the battery cables through the large circle opening on the face of the battery box
2. Align the predrilled holes on the controller to the holes on the battery box.
3. Push the bolts through the controller holes into the battery box holes and tighten wing nuts.
4. Make sure the controller is securely fastened to the battery box

### CONNECTING THE BATTERY:

1. Follow all safety instructions and precautions in both this manual and per the battery manufacture.
2. Place the battery into the battery box with the posts facing the front of the box.
3. Connect the black negative (-) ring terminal to the negative (-) post on the battery.
4. Connect the red positive (+) ring terminal to the positive (+) post on the battery.
5. Fasten securely using an insulated wrench
6. The system should now come on

### CONNECTING THE COMPONENTS:

**PUMP:** Connect the pump cables by sliding the larger positive (+) terminal onto the larger positive (+) pump receptacle on controller. Slide the smaller negative (-) terminal onto the smaller negative (-) pump receptacle on the controller.

**SENSORS:** Connect the RED sensor into the Top Sensor (ON) receptacle and the BLACK sensor into the Bottom Sensor (OFF) receptacle on the left side of controller.

**CHARGER:** Connect the charger unit into the AC Power receptacle on the left side of the controller and then into the wall.

## OPERATION

### WHEN THE SYSTEM OPERATES:

In any event that your primary sump pump can not operate due to failure or loss of power the Alpha Battery Backup System will operate using battery power to prevent flood damage.

### HOW THE SYSTEM OPERATES:

Once the water reaches the top RED sensor the pump will turn ON and pump down until it reaches the bottom BLACK sensor and shut OFF. This is known as the pump cycle. If the bottom sensor fails, the top sensor will operate the pump in 12 second cycles.

## COMMON ALARMS

### PUMP IS RUNNING

When the pump operates you will hear an audible alarm. Check the system to make sure it is operational and in good working order. If the power is on, check your primary pump, outlet and breaker for failure. To silence the alarm simply press the silence button one time until you see the screen flash (do not hold the button down). This will silence the alarm for a period of 24hrs.

### AC POWER FAILURE:

In the event of a power failure the unit will wait 15 minutes after it detects loss of power to sound an alarm. This will avoid nuisance alarms when the power turns off only for a few seconds or minutes. If the system detects water during the 15 minute period an alarm will sound to indicate the pump is running.

Once power is restored the unit will begin to charge the battery and then go back to stand-by mode.

### IMPORTANT NOTE:

*For every different alert the alarm will sound, even if you pressed the silence button. The system only alerts when it recognizes potential threats that may lead to flooding.*

## EMERGENCY ALARMS

### LOW BATTERY:

When the system has been running for an extended period of time the battery will drain down. Once it reaches 11.2V an alarm will sound and "Low Battery" will appear on the LCD screen. The pump will still operate but take caution and be prepared with an alternate source of power such as another fully charged battery or a generator to plug your primary pump into.

### CRITICAL BATTERY VOLTAGE:

If your system sounds an alarm for critical battery voltage, the battery is critically low and the system is about to stop pumping.

### HIGHWATER ALARM:

If the pump is running continuously and the storm water is not dropping below the red sensor after 30 seconds the system will sound an alarm and the LCD screen will display High Water. **This may result in flooding.**

### BLOWN FUSE:

Although it is not common a blown fuse will prevent the system from operating. Replace the fuse with another 20A fuse as soon as possible. Check the pump and battery connections.

## TESTING

### SELF TESTING:

Once a week the system will run a diagnostic test of the entire system. During the self test the pump will run for a period of 10 seconds to ensure proper operation. If there is an issue detected during the self test an alarm will sound and a message will be displayed on the LCD screen to indicate the type of failure.

### MANUAL TESTING:

To manually test your system simply hold down the Alarm Silence/Test Button for 10 seconds. The LCD screen will flash and indicate system testing. Once the diagnostic test is complete the LCD will display System OK or indicate failure if present.

# SILENCING & TESTING

<b>Silencing the alarm</b>	To silence the alarm press the alarm silence/test button once and do not hold. This will deactivate the alarm for a period of 24hrs.
<b>Manually testing the system</b>	Hold the Alarm Silence/Test button down for 10 seconds, the system will start a diagnostic test and run the pump for 10 seconds
<b>Manually testing the auxiliary contact</b>	Hold the Alarm Silence/Test button down for 15 seconds, the unit will send a alarm signal to the auxiliary contact. <b>Note:</b> This will activate any alarm/dialer that you have connected to the system.

# DISPLAY MESSAGES

## INFORMATIONAL MESSAGES

<b>System OK</b>	Displayed when no alarms are active and the system is not running	System is working properly
<b>Pump Running</b>	Displays when the pump is on and the system has been activated	System is working properly
<b>AC Power Failure</b>	Displayed when the system loses AC power	If power in the house is on, check that the unit is plugged in or the GFI/breaker has

## ALARM MESSAGES

<b>Reverse Polarity</b>	Battery RED/BLACK leads are reversed	Connect leads to correct terminals
<b>AC Power Failure</b>	Displayed when the system loses AC power	If power in the house is on, check that the unit is plugged in or the GFI/breaker has not been tripped
<b>Highwater</b>	System has failed or is not keeping up with the incoming water	Check display for additional message like low battery or pump not running
<b>Blown Fuse</b>	Pump fuse on controller has blown	Replace with another 20Amp fuse
<b>Power OK Sys ON</b>	AC Power is on but system is running	Check your primary pump for failure
<b>Pump Failure</b>	System is ok but pump isn't running	Check pump connections or inspect pump
<b>Battery Low</b>	Battery voltage has dropped below 11.4V	Normal during extended loss of power
<b>Battery Critical</b>	Battery voltage has dropped below 10.2V	Replace battery if power remains out
<b>Auto Test Fail</b>	System did not pass auto test	Check display for additional messages and/or call for service
<b>Sensor Failure</b>	Sensor is not getting a signal from the controller	Check the metal tip on the bottom of the sensors for obstructions

# WARRANTY



## MODEL# PZM-ALPHA-1

Kasco the parent company of the Sumptek brand warrants that the pumps its manufactures are free from all factory defects in material and workmanship for a period of 3 years from the date of purchase. The date of purchase shall be determined by a dated sales receipt noting the model and serial number of the pump. The dated sales receipt must accompany the returned pump if the date of return is more than 3 years from the "CODE" (date of manufacture) number noted on the pump name plate.

The manufacturer's obligation under this Warranty shall be limited to the repair or replacement of any parts found by the manufacturer to be defective, provided the part or assembly is returned freight prepaid to the manufacturer or authorized service center, and provided that none of the following warranty-voiding characteristics are evident:

The manufacturer shall not be liable under this Warranty if the product has not been properly installed; if it has been disassembled, modified, abused or tampered with; if the electrical cord has been cut or spliced; if the pump discharge has been reduced in size; if the pump has been used in water temperatures above the advertised rating; if the pump has been used in water containing sand, lime, cement, gravel or other abrasives; if the product has been used to pump chemicals or hydrocarbons; if a non-submersible motor has been subjected to excessive moisture; or if the label bearing the serial and code number has been removed.

Kasco shall not be liable for any loss, damage or expenses resulting from installation or use of its products, or for consequential damages, including costs of removal, reinstallation or transportation.

**There is no other express warranty. All implied warranties, including those of merchantability and fitness for a particular purpose, are limited to three years from the date of purchase. This Warranty contains the exclusive remedy of the purchaser, and, where permitted, liability for consequential or incidental damages under any and all warranties are excluded.**

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