

## ACS-4 AUXILIARY CONDENSATE SAFETY SWITCH 24VAC • 72" Leads

### DESCRIPTION

The Little Giant ACS-4 auxiliary condensate safety switch is designed to be installed in the condensate drain line of an air conditioning or refrigeration unit. When properly installed, the ACS-4 will turn off the air conditioning or refrigeration unit if the condensate level in the condensate drain line approaches overflow. The ACS-4 is comprised of a switch contained in a housing, and is supplied with two lead wires. The ACS-4 can be wired to open or close a circuit.

### EN INTRODUCTION

This instruction sheet provides you with the information required to safely own and operate your Little Giant product. Retain these instructions for future reference.

The Little Giant product you have purchased is of the highest quality workmanship and material, and has been engineered to give you long and reliable service. Little Giant products are carefully tested, inspected, and packaged to ensure safe delivery and operation. Please examine your unit carefully to ensure that no damage occurred during shipment. If damage has occurred, please contact the place of purchase. They will assist you in replacement or repair, if required.

**READ THESE INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING TO INSTALL, OPERATE, OR SERVICE YOUR LITTLE GIANT PRODUCT. KNOW THE PRODUCT'S APPLICATION, LIMITATIONS, AND POTENTIAL HAZARDS. PROTECT YOURSELF AND OTHERS BY OBSERVING ALL SAFETY INFORMATION. FAILURE TO COMPLY WITH THESE INSTRUCTIONS COULD RESULT IN PERSONAL INJURY AND/OR PROPERTY DAMAGE!**

### SAFETY GUIDELINES



Do not use with flammable or explosive fluids such as gasoline, fuel oil, kerosene, etc. Do not use in explosive atmospheres.

Switch should only be used with water.

Do not handle switch with wet hands or when standing on a wet or damp surface, or in water.

Disconnect all electrical service to the switch before working on or handling the unit.

Do not connect to voltage above 24VAC or amperage above 5.0 amps.

Do not operate unless completely assembled.

In any installation where property damage and/or personal injury might result from an inoperative switch due to power outages, or any other reason, a backup system(s) and/or alarm should be used.

**CAUTION: THIS SAFETY SWITCH WILL NOT DETECT CLOGS UPSTREAM FROM THE INSTALLATION POINT.**

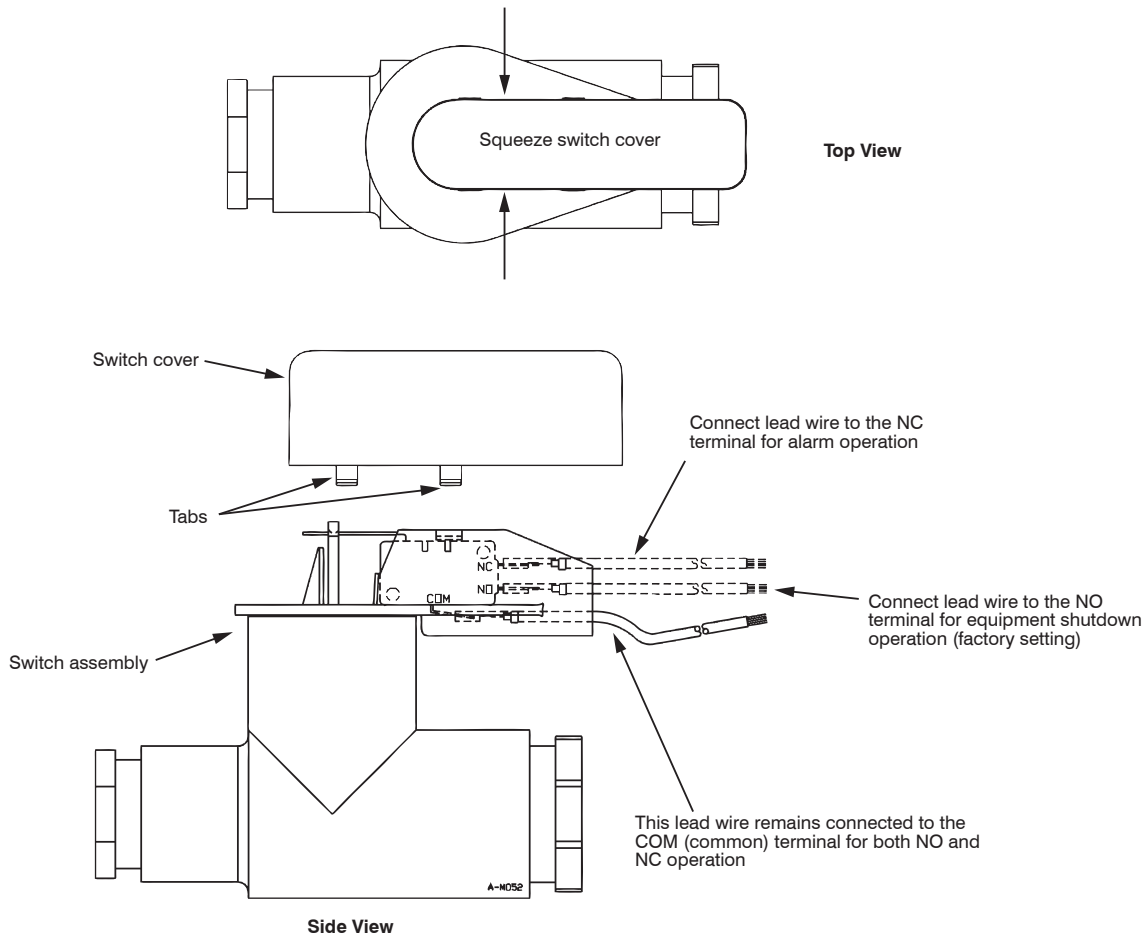


Figure 1

## INSTALLATION



All ACS-4 switches are factory-wired in a circuit-closed configuration. During normal operation the switch circuit is held closed by the weight of the float. When a downstream clog occurs, the float rises and opens (breaks) the electrical switch circuit to shut down the system.

1. Refer to the air conditioning or refrigeration unit's Operating Manual during installation of the ACS-4 safety switch.
2. Disconnect all power to the air conditioning or refrigeration unit, both main power and the low voltage thermostat circuit.
3. If an alarm circuit is required, change the switch lead wire to the configuration shown in Figure 1. To access the switch and lead wires, remove the switch cover by squeezing gently on both sides simultaneously at the tab locations (Figure 1), then lift from the switch assembly. Remove the lead wire from the center terminal and connect it to the upper terminal using needle-nosed pliers. Leave the COM (common) lead attached. This way, the switch is held open by the weight of the float during normal conditions, and when a downstream clog occurs, the float rises and closes the electrical circuit to activate the alarm. There is no need to remove the switch from the switch holder when changing the lead wire positions.
4. To confirm correct operation, plug drain line further down line from switch assembly. Fill drain pan with water to activate safety switch. Confirm that float can travel its full range with no obstructions.

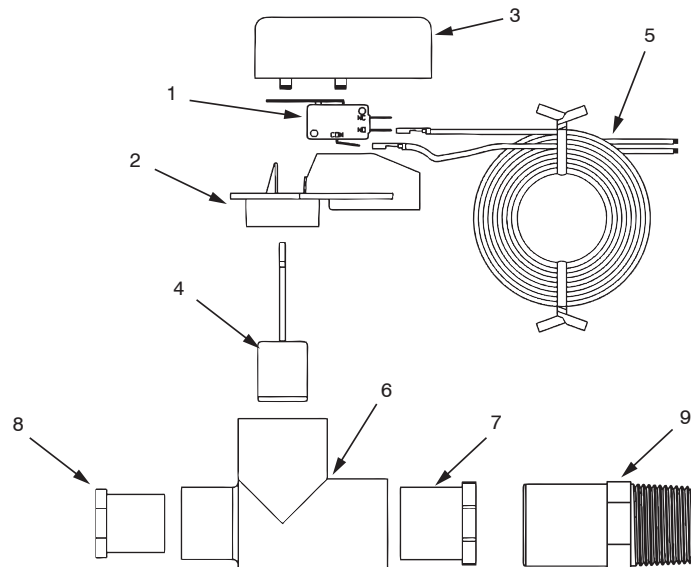
5. Place the "NOTICE" label included with the ACS-4 on the outside of the access panel in a visible location.

### HORIZONTAL INSTALLATION:

1. For plugged installation (see Figure 2 for item number and Figure 3 for installation):
  - a. Glue the PVC Tee (Item 6) to the drain pan outlet if the outlet is 1" PVC schedule 40 pipe. If it is 3/4" PVC schedule 40 pipe, use the reducer bushing (Item 7) included.
  - b. Firmly press the switch into the PVC Tee. DO NOT GLUE SWITCH ASSEMBLY INTO THE TEE. If the fit is not tight enough, pipe tape may be used.
  - c. Place the 3/4" PVC schedule 40 plug (Item 8) into the open end of the PVC Tee. Make sure this is watertight. Pipe tape or glue may be used.
  - d. Wire the float switch on the low voltage thermostat circuit according to the air conditioning or refrigeration unit's Operating Manual.
  - e. Test for water leaks, then test the switch by lifting the float while the unit is on. To access the float, lift up the switch assembly (Figure 7). If wired correctly, the unit will stop.
2. For inline installation (see Figure 2 for item number reference and Figure 4 for installation), leave out the 3/4" plug (Item 8) and assemble the PVC Tee to the drain line.

**NOTE:** If the assembly requires more than a 45° slope for draining, see VERTICAL INSTALLATION.

Figure 2



ITEM	PART NO.	DESCRIPTION	QTY.
1	950149	Switch, Snap Action	1
2	950151	Switch Holder	1
3	950152	Switch Cover	1
4	950153	Switch Float Assembly	1
5	951983	Lead Wire Assembly, 72"	1
6	929458	Tee, PVC, 1" x 3/4" x 1"	1
7	929456	Reducer Bushing, PVC, 3/4"	1
8	929457	Plug, PVC, 3/4"	1
9*	14940159	Adaptor, PVC, 3/4" SPG x 3/4" MNPT	1

\*Optional adapter for pans with 3/4" NPT

**VERTICAL INSTALLATION:**

1. For plugged installation (see Figure 2 for item number and Figure 5 for installation):
  - a. Remove the switch assembly (Figure 7) and place into the other 1" socket in the PVC Tee and rotate assembly 90°. Firmly press the switch into the PVC Tee. DO NOT GLUE SWITCH ASSEMBLY INTO TEE. If the fit is not tight enough, pipe tape may be used.
  - b. Place the 3/4" PVC schedule 40 plug (Item 8) into the open end of the PVC Tee. Make sure this is watertight. Pipe tape or glue may be used.
  - c. Wire the float switch on the low voltage thermostat circuit according to the air conditioning or refrigeration unit's Operating Manual.
  - d. Test for water leaks, then test the switch by lifting the float while the unit is on. To access the float, lift up the switch assembly (Figure 7). If wired correctly, the unit will stop.
2. For inline installation (see Figure 2 for item number reference and Figure 6 for installation), leave out the 3/4" plug (Item 8) and assemble PVC Tee to the drain line.

**ALARM CIRCUIT**

To use the switch assembly to activate an alarm circuit instead of shutting down the system:

1. Remove the switch cover (Figure 1) to access the lead wires.
2. Remove the lead wire from the center terminal and connect it to the upper terminal using needle-nosed pliers. Leave the COM (common) lead attached.

The circuit will now be held closed during normal operation.

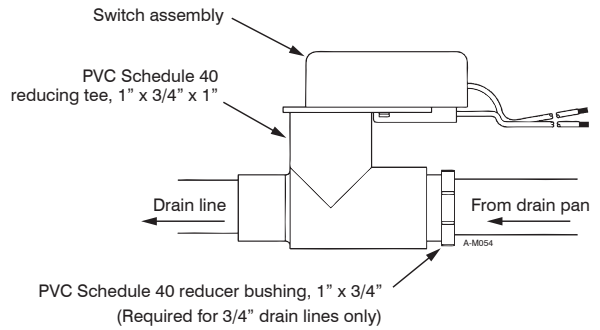
**OPERATION AND MAINTENANCE**



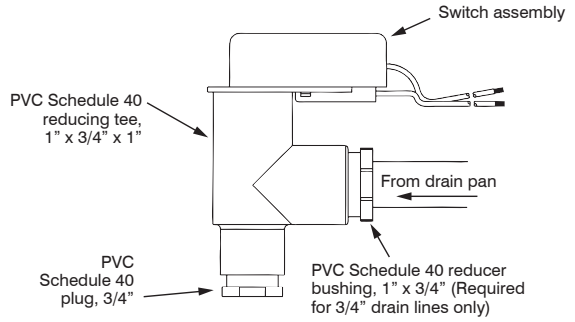
**CAUTION:** THIS SAFETY SWITCH WILL NOT DETECT CLOGS UPSTREAM FROM THE INSTALLATION POINT.

Clean the switch holder assembly at least every three months:

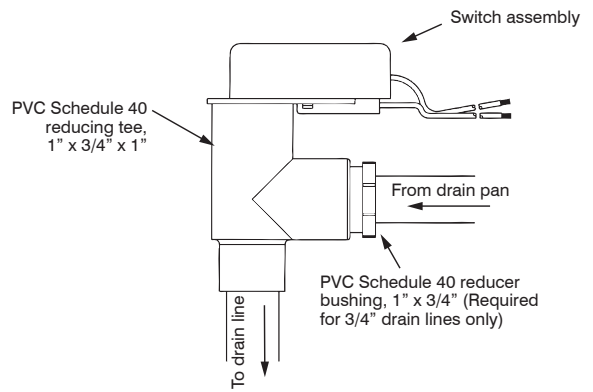
1. Shut down all power to the unit and remove the switch assembly (Figure 7) from the PVC Tee.
2. Clean the switch float and make sure that it moves freely.
3. Clean the drain line and make sure that it is free from obstructions.
4. Replace the switch holder assembly and reconnect power.



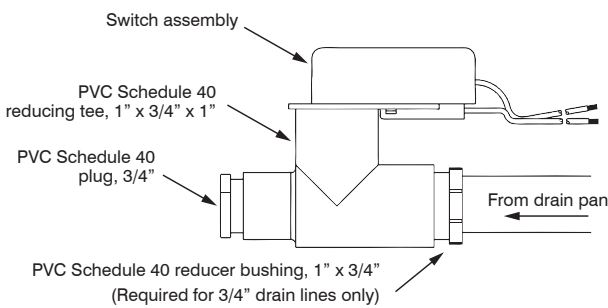
**Figure 4  
In-line Horizontal Installation**



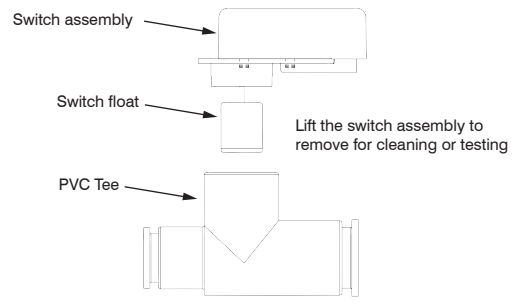
**Figure 5  
Plugged Vertical Installation**



**Figure 6  
In-line Vertical Installation**



**Figure 3  
Plugged Horizontal Installation**



**Figure 7  
Testing the Switch**

**LIMITED WARRANTY**

Your Little Giant product is guaranteed to be in perfect condition when it leaves our Factory. It is warranted against defective materials and workmanship for a period of 12 months from date of purchase by the user. Any product that should fail for either of the above two reasons and is still within the warranty period, will be repaired or replaced if returned prepaid to our Factory. For our customers in the CONTINENTAL UNITED STATES: Please return the defective unit, postage paid, to the factory at 301 North MacArthur Blvd., Oklahoma City, OK 73127-6616. All defective products returned under warranty will be fully inspected to determine "CAUSE OF FAILURE" before any warranty is approved. Little Giant will honor the warranty within the warranty time period specified on satisfactory written proof of purchase.

DISCLAIMER: Any oral statements about the product made by the seller, the manufacturer, the representatives or any other parties, do not constitute warranties, shall not be relied upon by the user, and are not part of the contract for sale. Seller's and manufacturer's only obligation, and buyer's only remedy, shall be the replacement and/or repair by the manufacturer of the product as described above. Neither seller nor the manufacturer shall be liable for any injury, loss or damage, direct, incidental or consequential (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss), arising out of the use or the inability to use the product, and the user agrees that no other remedy shall be available to it. Before using, the user shall determine the suitability of the product for his intended use, and user assumes all risk and liability whatsoever in connection therewith. THE WARRANTY AND REMEDY DESCRIBED IN THIS LIMITED WARRANTY IS AN EXCLUSIVE WARRANTY AND REMEDY AND IS IN LIEU OF ANY OTHER WARRANTY OR REMEDY, EXPRESSED OR IMPLIED, WHICH OTHER WARRANTIES AND REMEDIES ARE HEREBY EXPRESSLY EXCLUDED, INCLUDING, BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some States do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Warranty will be VOID if any of the following conditions are found:

1. Product connected to voltage other than indicated on name plate.
2. Product abuse by customer.
3. Product used in a corrosive environment.
4. Product was used other than intended as described in the introduction of this Installation Guide.

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For parts or repair, please contact. . . . . 1.888.572.9933  
 For technical assistance, please contact . . . . . 1.888.956.0000

[www.LittleGiantPump.com](http://www.LittleGiantPump.com)  
[CustomerService-WTS@fele.com](mailto:CustomerService-WTS@fele.com)

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