

SAFE-T-SWITCH®

US Patent No.: 6,442,955

MODEL SS2

LOW VOLTAGE CONDENSATE OVERFLOW SHUT-OFF SWITCH

INSTALLATION INSTRUCTIONS

NOTICE: FAILURE TO READ AND COMPLY WITH ALL WARNINGS, CAUTIONS AND INSTRUCTIONS PRIOR TO STARTING INSTALLATION MAY CAUSE PERSONAL INJURY AND/OR PROPERTY DAMAGE AND VOID WARRANTEE.

▲ WARNING This device must be installed in strict accordance with manufacturer's instructions and all applicable plumbing, drainage and electrical codes to ensure proper operation.

▲ WARNING Electric shock hazard – Disconnect power supply before installation to avoid injury and/or equipment damage. For use in Class 2 circuits only - Do not use on circuits exceeding 24 volts.

CAUTION: This device will not detect clogs occurring upstream from installation point.

CAUTION: If not present, it is recommended that a 24-volt fuse and a time delay be installed to protect the 24-volt circuit and to avoid rapid cycling of equipment prior to installing this product.

CAUTION: In any installation where personal injury or property damage may result from an inoperable switch due to power interruptions, a backup system and/or alarm should be installed.

CAUTION: This device is intended for use in water only. Do not use in the presence of caustic or flammable liquids or vapors.

CAUTION: Refer to the appropriate HVAC equipment operating manual prior to installing this product.

AUXILIARY DRAIN OUTLET INSTALLATION:

1. Disconnect power to unit at main panel and glue ¾" stub onto auxiliary drain outlet adapter on the equipment supplied pan (secondary outlet of primary drain pan).
2. Ensure switch/plug assembly is inserted into 1-inch inlet of PVC elbow so that float stem is at (inside) bottom of elbow. Float stem can be adjusted by threading it out of plug assembly. DO NOT GLUE.
3. Plumb ¾-inch inlet of PVC elbow to stub as close to drain outlet as possible with wires up. Position switch level with or below outlet. Switch may be angled up to 20 degrees by rotating on stub.
4. Wire switch as instructed under Wiring, below.
5. Test switch: Remove switch/plug assembly from elbow and lift float with unit on. Unit should stop running when float is raised.
6. Test switch sensitivity: Plug drain downstream from installation point and run unit to fill pan. Confirm that float rises and unit stops before the pan overflows and check for plumbing leaks.
7. Place warning sticker on air handler or condenser unit.

INLINE INSTALLATION FOR (WALL) UNITS WITH VERTICAL PAN OUTLETS (See Fig. 1):

It is recommended that this device be installed on the primary drain line between the pan outlet and P-Trap on wall units with vertical pan outlets (i.e.: First Company; Janitrol) to prevent the unit from switching off in the event condensate drips directly from the coil into the auxiliary pan outlet when the coil becomes dirty.

1. Disconnect power to unit at main panel and glue 5" stub down from primary pan outlet.
2. Glue ¾-inch slip Tee (not included) to bottom of stub with Tee stem horizontal and plumb.
3. Glue ¾" stub into horizontal outlet of Tee ensuring it is plumb.
4. Ensure switch/plug assembly is inserted into 1-inch inlet of PVC elbow so that float stem is at (inside) bottom of PVC switch elbow. Float stem can be adjusted by threading it out of plug assembly. DO NOT GLUE.
5. Place switch with wire leads up onto horizontal stub ensuring watertight seal. Switch may be angled up to 20 degrees by rotating on stub. DO NOT GLUE.

6. Glue drain line with P-Trap onto remaining outlet of Tee.
7. Wire switch as directed under Wiring, below.
8. Test switch by lifting float with unit on. If wired correctly, unit will stop running.
9. Test switch sensitivity: Plug drain downstream from installation point and run unit to fill pan. Confirm that float rises and unit stops before the pan overflows and check for plumbing leaks.
10. Place warning sticker on air handler or condenser unit.

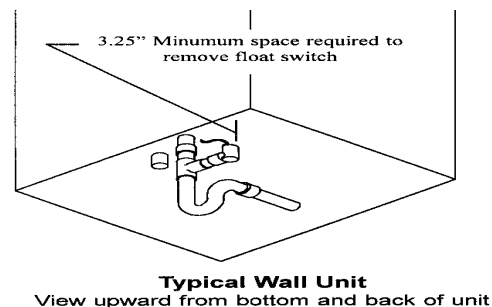
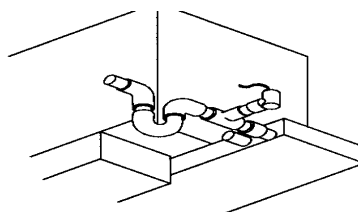
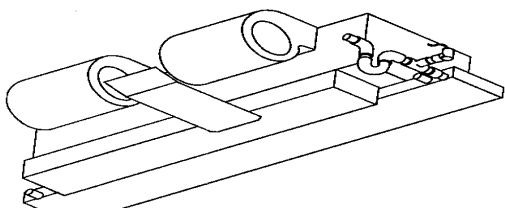


Figure 1: Vertical Pan Outlet Installation

INLINE INSTALLATION FOR HORIZONTAL CEILING (“PANCAKE”) UNITS (See Fig. 3):

Primary drain (inline) installation is also recommended on First Company horizontal ceiling (“pancake”) units as some flooding may occur if installed on auxiliary outlets due to the proximity of the outlet to the top of the pan.

1. Glue 3/4-inch stub to primary pan outlet.
2. Glue 3/4-inch Tee onto stub with Tee stem positioned horizontally away from unit and plumb.
3. Complete steps 3 through 11 under Inline Installation for Wall Units, above.



WIRING:

1. **WARNING: Disconnect power to unit at main panel prior to performing electrical work.**
2. If not present, it is recommended that an inline fuse to protect 24-volt circuit be installed.
3. Locate 24-volt thermostat cable entering air handler unit. Incorporate switch in circuit by disconnecting red or yellow wire and connect to switch lead using wire nut. Reconnect other switch lead to air handler terminal.

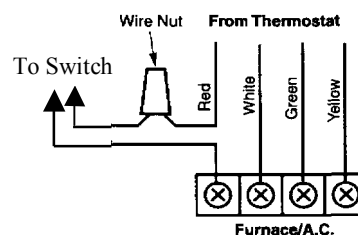


Figure 4: Wiring Diagram for unit shutdown.

ALARM CIRCUIT (OPTIONAL):

This device is designed for use with the Safe-T-Gard® Condensate Overflow Alarm.

OPERATION AND MAINTENANCE:

It is recommended that the switch/cap assembly be removed and cleaned every three months with **Nu Line®** A/C Condensate Drain Cleaner:

1. Shut power to unit at main panel and lift switch/cap assembly out of Tee.
2. Clean switch, float, stem and inside surface of PVC elbow.
3. Replace switch/cap assembly.