AGF Manufacturing Inc.

COLLECTanDRAIN®

Model 5150ALBV

Owner’s Manual

Water Detector Alarm for Dry Pipe and Pre-Action Fire Sprinkler Systems
COLLECTanDRAIN™ Model 5150ALBV
Water Detector Alarm for
Dry Pipe and Pre-Action Fire Sprinkler Systems

Minimum Volume (1 oz.)

Maximum Volume (2 oz.)

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Failure to drain condensate from system may result in system failure due to freezing. System must be maintained per NFPA 25.

**Model 5150ALBV Installation Instructions**

The Model 5150ALBV is intended for applications where there is a desire for a small amount of condensation to accumulate prior to the system going into alarm. The Model 5150ALBV custom tee was specifically designed to provide the end user with two distinct volume accumulation options before alarm activation. When the 5150 tee is installed with the branch at the bottom, the minimum collection position, the assembly will accumulate approximately 1 oz. (30 ml) of liquid before activation. When the 5150 tee is installed with the branch at the top, the maximum collection position, the assembly will accumulate approximately 2 oz. (60 ml) of liquid before activation.

**NOTE:** Even small volumes of accumulated condensation can result in a system failure. It is the responsibility of the end user to remove accumulated condensation from the system prior to the system being exposed to freezing conditions. The installer and end user assume the risk and liability of a freeze and break if too much condensation is collected for the local weather conditions because of the tee’s orientation. The Model 5150ALBV is intended for applications where there is a desire to be notified of the presence of any accumulated condensation.

**Retro-fitting onto an Existing Auxiliary Drain**

1. Isolate the auxiliary drain by closing the supply valve (upper) to prevent a loss of system air pressure.

2. Remove the drain plug or cap, if present, and open the drain valve (lower) to empty any accumulated condensation from the auxiliary drain. Then, remove the drain valve from the auxiliary drain.

3. A. If you are left with a 1” female NPT apply PTFE tape or appropriate sealant to both ends of the included nipple and hand-tighten one end into the auxiliary drain assembly.

B. If you are left with a 1” male NPT clean off the threads and apply PTFE tape or appropriate sealant to the exposed threads.
4. Determine desired collection volume and hand-tighten the Model 5150 Tee onto the 1” male NPT.

- Branch of 5150 tee at the bottom allows for 1 oz. of accumulation.
- Branch of 5150 tee at the top allows for 2 oz. of accumulation

![Diagram of Minimum Volume Installation and Maximum Volume Installation]

5. Apply PTFE tape or appropriate sealant to the male threads of the 1” ball valve and thread it into the bottom of the Model 5150 Tee.

6. Tighten the assembly with a wrench so that the branch of the 5150 Tee will accomodate the installation of the alarm enclosure and so that the handle of the ball valve is easily accessible.

**NOTE:** If the rear of the auxiliary drain is close to a wall or other obstruction you may leave the branch of the 5150 Tee facing out to allow the alarm enclosure to be easily threaded into the tee prior to final positioning.

7. Apply PTFE tape or appropriate sealant to the exposed threads of the alarm enclosure’s brass nipple taking care to not get sealant or other foreign matter on the water sensing probe.

8. Using a ¾” open end wrench on the hex adapter of the alarm enclosure, tighten the alarm’s nipple into the branch of the 5150 Tee.

**NOTE: DO NOT TURN ENCLOSURE BY GRABBING THE ENCLOSURE BOX, A WRENCH ON THE HEX ADAPTER MUST BE USED.**

Ensure that access is available to the wiring knockout if system is to be hardwired (top knockout is prefered position) and that enough space is available to remove the front cover of the alarm enclosure. The LED and speaker should also be visible when finished. If necessary, tighten the 5150 Tee into its final position after the alarm enclosure has been installed.

9. Apply PTFE tape to the included 1” drain plug and thread it into the outlet of the drain valve. Confirm that the new drain valve (lower) is closed and the plug is tight.
10. Refer to Model 5150ALBV Wiring and Operating Instructions in the following section to provide the required power for alarm activation.

11. After required power is supplied to the alarm enclosure return system back to normal operating condition by opening the supply valve (upper). The auxiliary drain is now ready to collect condensation and the alarm is ready to notify when condensation has accumulated to its desired volume.

**Model 5150ALBV Wiring & Operating Instructions**

Power is supplied to the Model 5150ALBV by a 9V Battery (default), by installing a 12-24VDC external hardwire (The 5100ALBV can draw up to 100 mA during operation. Ensure the power supply is sized appropriately for this and any other loads on the same circuit) or optional 110V Plug-In (See Page 6).

**Battery Operation:**

1. Remove four screws on the alarm box and take off the cover.
2. For battery operation, check to make sure the Voltage Jumper is on the front two pins as shown in Image 1 (Fig. A).
3. Install a 9V battery as shown in Image 2.
   Note: When the battery begins to run low the alarm will chirp and flash a yellow LED.
4. Place 9V battery under the circuitboard as shown in Image 3.
5. Install cover with the four screws.
6. Depress Test Button to confirm alarm.
External Hardwire Operation:

1. Remove four screws on the alarm box and take off the cover.

2. For external power operation, place the **Voltage Jumper** on the rear two pins as shown in Image 4 (Fig. B).

3. While supporting the bottom of the alarm enclosure, remove the knockout using a slotted screwdriver and a hammer (Place a clean rag underneath the knockout to prevent debris from falling onto the circuit board).

4. Install ½” liquid-tight conduit fitting or cord grip into the knockout opening and run the external power source into the alarm housing as shown in Image 5.

5. Connect external power source to V+ and V- terminals as shown in Image 6 (Fig. B). Ensure DC is from a clean power supply and not full-wave rectified without a capacitor.

6. Install cover with the four screws.

7. Depress Test Button to confirm alarm.

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**Temperature Sensing Function**

When the Temperature Sensing Function is enabled and water is present in the auxiliary drain the Model 5150ALBV will not activate the audible and visual alerts if the ambient temperature is above 45° F. When water is present and the ambient temperature falls below 45° F, the Model 5150ALBV will activate the audible and visual alerts. The Temperature Sensing Function helps extend battery life and eliminates unwanted alarm conditions when the threat of freezing is not present. **By default the Temperature Sensing Function is not enabled when shipped, meaning the alarm senses water regardless of ambient temperature.** See page 7 for Setup Instructions.
Temperature Sensing Function Setup:

1. Remove four screws on the alarm box and take off the cover.

2. Remove Temperature Jumper from both pins and reinstall on one pin only as shown in Image 7 (Fig. C).

3. Install cover with the four screws.

Remote Notification Function

The Model 5150ALBV Water Detection Alarm also features a Remote Notification Function. This function allows you to connect the unit directly to the Fire Control Panel or BSM so when water is detected in the auxiliary drain you will be notified remotely.

Remote Operation Setup:

1. Remove four screws on the alarm box and take off the cover.

2. Connect wiring to the Common Terminal and either the N.O. or N.C. terminal as shown in Image 8 (Fig. D). Contact is rated for 2.0A @ 30VDC.

3. Install cover with the four screws.

Note: Please call 610-240-4900 for instructions on how to locally silence the audible alert if directly wired to a Fire Control Panel or BMS.
Freeze Protection

The Model 5400A goes beyond the prevention features of the Model 5100A and 5200A by providing a temperature controlled environment to deter system failures due to freezing condensation. The heated and insulated cabinet contains an auxiliary drain with a float switch to monitor condensation levels. When condensation reaches a level where maintenance is needed the float switch activates an audible alarm and an LED warning light. The Model 5400A also features Fire Control Panel notification capabilities. Visit www.testandrain.com for more information.