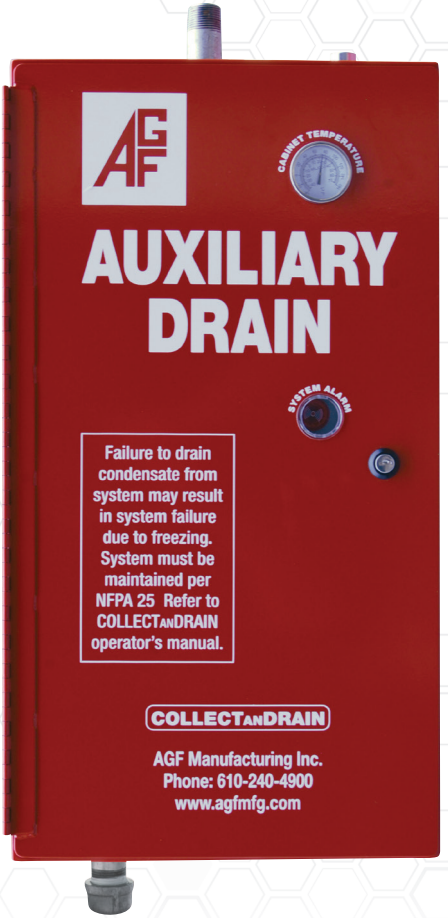
COLLECTANDRAIN®

Model 5400



Owner's Manual

for Models with Serial Number 5400-1000 and Higher

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INST-5400 · 11/21

COLLECTANDRAIN®

Model 5400

Auxiliary Drain with Freeze Protection

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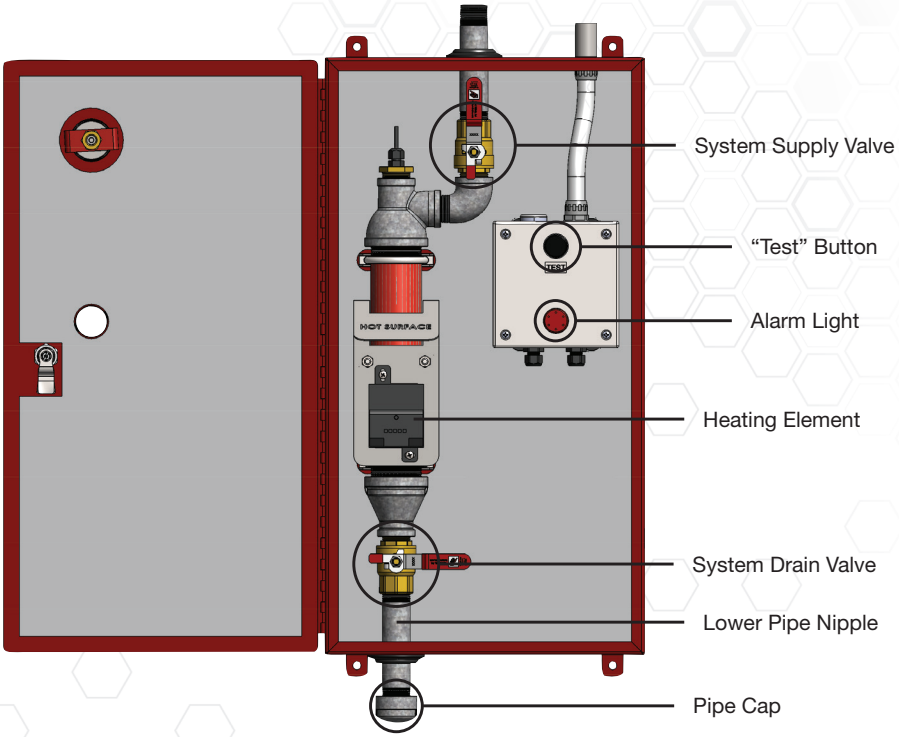


Model 5400 COLLECTANDRAIN®

The COLLECTANDRAIN® Model 5400 is an auxiliary drain (drum drip, condesation collection assembly) with a float switch and alarm housed in a heated and insulated cabinet. The M5400 is designed for installation on dry pipe sprinkler systems where freezing or below freezing temperatures result in the failure of typical auxiliary drains. The M5400 maintains a comfortable temperature above freezing while minimizing power consumption.

CAUTION: The heater and its deflector bracket may be hot. Use care when accessing the main cabinet for any reason.

INSTALLATION INSTRUCTIONS

Unpacking:

1. Unpack the COLLECTANDRAIN® M5400 unit and carefully inspect for any damages from shipping.
2. Verify box contents:
   - COLLECTANDRAIN® M5400 unit
   - Four (4) Rubber Mounting Washers
   - Two (2) Door Keys
   - Electrical Wiring Schematic
   - M5400 System Drawing

Sprinkler System Preparation:

If installing in a new system, proceed to Mounting Instructions below, otherwise continue with Preparation Instructions.

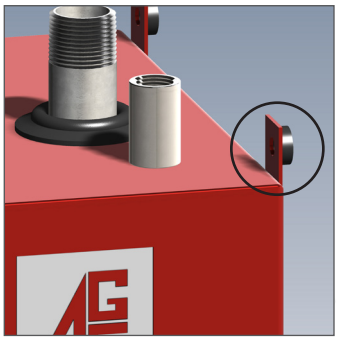
If adding additional installations, see NFPA 13 Chapters 24 and 26, and NFPA 25 Chapter 14.

1. Isolate the zone where the COLLECTANDRAIN® will be installed.
2. Relieve air pressure from the branch line.
3. Remove the existing auxiliary drain.

Mounting:

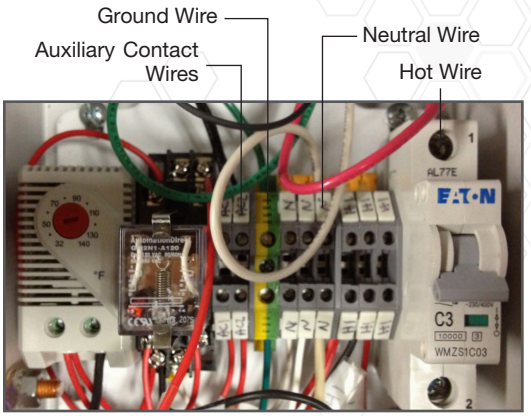
Use the four mounting tabs (3/8" holes x 4) to install the M5400A to a wall or other secure structure. If wall is uneven, use bushings or stand-offs to prevent cabinet from bending when mounted.

1. Place the rubber washers behind the mounting tabs to hold the M5400 off of the wall. Select fasteners suitable for attachment and capable of supporting the 55 lb. weight of the M5400.
2. Connect to the 1" NPT Supply Pipe in accordance with NFPA 13 (8.16.2.5 and 8.16.2.5.3) in regards to low-point drain installations.
3. Confirm that the Supply Valve (upper valve) is in the open position (vertical) and ready to collect condensation, the Drain Valve (lower valve) is in the closed position (horizontal), and the pipe cap is tight.

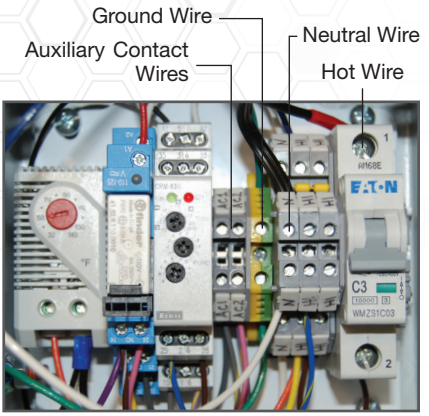


Wiring:

The M5400 is protected internally by a 3A circuit breaker and requires 120VAC power source to function. Ensure the breaker in the main panel is sized appropriately. Refer to the image below that coincides with your model.



M5400A



M5400H

1. Run conduit to the ½" connection on the top of the unit.
2. Open the door using the supplied keys.
3. Loosen the four screws on the front of the M5400 Alarm Panel Box and carefully remove the door.
4. Run a single set of appropriately sized power wires into the Alarm Panel (Refer to the electrical schematic as necessary).

NOTE: Use dedicated junction boxes (not provided) to make wire connections when installing more than one M5400 on a circuit.

5. Connect the 120VAC Hot Wire to the circuit breaker.
6. Connect the 120VAC Neutral Wire to one of the neutral terminals.
7. Connect the ground wire to the green/yellow ground terminal.

The M5400 can be connected to a Remote Panel. This is accomplished through a set of N.O. (close on alarm) auxiliary contacts.

1. Run two additional wires into the M5400 Alarm Panel.

NOTE: If required, an additional port and knockout are provided in the panel and cabinet for low voltage wire. Ensure installer-provided items are liquid tight.

2. Connect one wire to the AC1 (auxiliary contact) Terminal.
3. Connect the other wire to the AC2 (auxiliary contact) Terminal.
4. Connect these wires to the appropriate place in the Remote Panel.

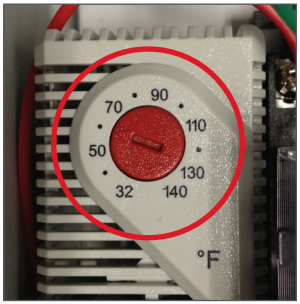
Verify Correct Operation:

If you are installing the standard Model 5400 please Verify Correct Operation using section labeled M5400A below. If you are installing a Model 5400 with the optional Heater Operation Trouble (HOT) Monitor Timer please Verify Correct Operation using section labeled M5400H below. If "A" or "H" are not specifically identified refer to images on pg. 5 for proper verification.

M5400A

1. Apply power to the M5400A and verify that correct voltage is present.
2. Turn on the circuit breaker inside of the M5400A alarm panel.
3. Push and Hold the "TEST" button on the front of the alarm panel for five seconds to verify that the alarm horn sounds and the alarm light pulses.
4. Turn the red Thermostat Set-Point Dial clockwise until the heater turns on.
5. Reset the red Thermostat Set-Point Dial to the factory default of 60° F.

NOTE: It is the owner's responsibility to set the thermostat based upon the climate conditions of the installed location. The default setting of 60° F (the dot between 50 & 70) is adequate for outside temperatures down to 0° F. If operating below this temperature, the set-point should be increased. Consult AGF for set-point guidelines.

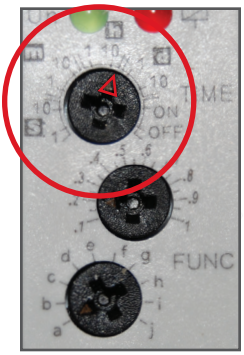


6. Install the M5400A Alarm Panel Cover and tighten the four screws securely.
7. Close and lock the door using the supplied keys.

NOTE: If installation was to an existing system, return the system back to normal operating conditions. If installation was to a new system, activate system for normal operating conditions.

M5400H

1. Apply power to the M5400H and verify that correct voltage is present.
2. Turn on the circuit breaker inside of the alarm panel.
3. Push and Hold the "TEST" button on the front of the alarm panel for five seconds to verify that the alarm horn sounds and the alarm light pulses.
4. Turn the top dial of the Timer counter-clockwise from the **10h** to the **10s** band. The leg of the cross with the arrow (highlighted in red) points to the band.



5. Rotate the red Thermostat Set-Point Dial clockwise until the heater turns on.

NOTE: The alarm will sound about 2 seconds after the heater turns on.

6. Reset the red Thermostat Set-Point Dial to the factory default of 60°F and reset the top dial of the Timer to the **10h** band.

NOTE: The Top Dial is a maximum time setting and not the Timer's delay setting. The Middle Dial controls the exact amount of delay for the timer. The factory default is 2 hours.

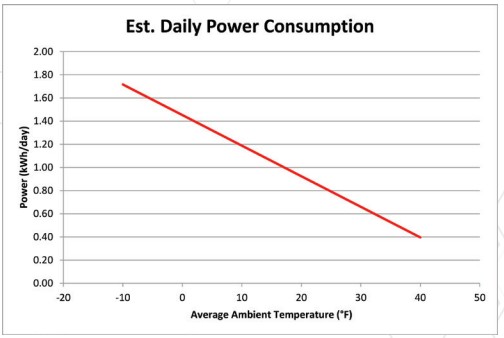
7. See steps 6 and 7 under Model 5400A (pg 6).

OPERATING INSTRUCTIONS

The M5400 is equipped with a 150W heater controlled by a user-set thermostat. The factory default setting of 60º F is suitable for conditions down to 0º F. Consult with AGF for recommended settings if operating the M5400 in areas below 0º F. The thermostat controls the heater operation to within approximately ± 10º F of the set-point (i.e. Set-Point=60º F: ON @ 50º F—OFF @ 70º F).

NOTE: AGF does not recommend setting the thermostat below 60º F.

Power Consumption of the M5400 is based on a number of factors including ambient temperature, humidity, installation location and exposure to sunlight. The following graph shows an estimation of the daily energy consumption verses ambient temperature when the set-point is 60º F.



The M5400 features a thermometer on the cabinet for measuring the ambient temperature inside the unit. This thermometer is for checking the operating status of the heater.

The M5400 also features a Float-Style Level Switch for monitoring the collected condensate. This switch is tied back to the integrated NEMA 4 Alarm Panel. When enough condensate has accumulated, the Level Switch is activated triggering the alarm horn to sound and pulse the red light mounted on the M5400 alarm panel. The alarm horn and light indicates that the M5400 needs to be emptied. An

auxiliary contact is also triggered and is capable of being wired back to a central control panel for remote indication. The Level Alarm is automatically reset when the water level is drained below the switch.

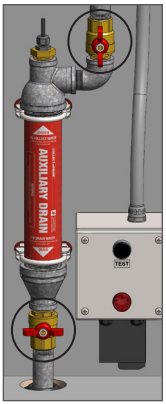
The M5400 is equipped with a "TEST" button to confirm that the water alarm panel is functioning properly. When pressed, the Test Button causes the local alarm horn and light as well as the remote indication to be triggered.

The M5400H is equipped with a Heater Timer which monitors the performance of the heater. In the event the cabinet door has been left open or the heater is not keeping up with the temperature demand, the system will activate the audible and visual alarm and, if wired, signal the Remote Panel.

To Collect Condensate per NFPA 25 A.13.4.3.3.3:

CAUTION: Valves may be hot. Use care when operating.

1. Open the cabinet door using the supplied keys.
2. Close the Drain Valve (lower valve).
3. Install the 1" Pipe Cap onto the drain pipe at the bottom of the cabinet.
4. Open the Supply Valve (upper valve).
5. Close and lock cabinet door using the supplied keys.



COLLECT

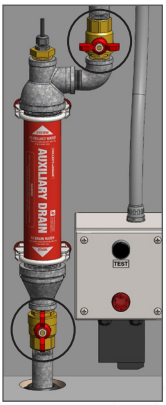
To Drain Condensate per NFPA 25 A.13.4.3.3.3:

CAUTION: Valves may be hot. Use care when operating.

1. Open the cabinet door using the supplied keys.
2. Close the Supply Valve (upper valve).
3. Remove the 1" Pipe Cap from the drain pipe at the bottom of the cabinet.

NOTE: Use a second wrench on the drain pipe to prevent it and other plumbing from unthreading.

4. Open the Drain Valve (lower valve) and drain the accumulated water.
5. Once the water has been drained, close the Drain Valve (lower valve).
6. Open the Supply Valve (upper valve) and allow time for any additional water to accumulate.
7. Repeat the process until all of the accumulated water has been drained.
8. Once all water has been drained, follow the "COLLECT" procedure above.



DRAIN

MAINTENANCE INSTRUCTIONS

Maintenance is the cornerstone to keeping any system operating correctly and efficiently. It is the building owner's responsibility to ensure that the M5400 has been drained of condensation and that the heater and alarm are working properly. Failure to drain condensation from the system, or conduct regularly scheduled testing and maintenance could result in system failure due to freezing. System must be maintained per NFPA 25 4.6, 4.6A, and 4.1.

It is *especially important* that functional testing of the heater be performed before the start of the winter season or when temperatures begin to approach freezing conditions.

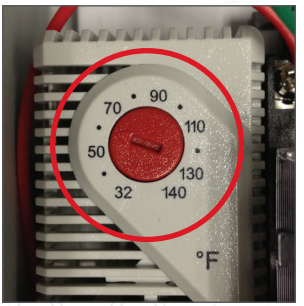
Verify alarm operation:

1. Push and Hold the "TEST" button on the Alarm Panel for five seconds to verify that the alarm horn sounds and the alarm light pulses.

MODEL 5400A

Verify heater operation:

CAUTION: Always take the necessary precautions when entering the alarm panel when 120V power is present.



1. Loosen the four screws on the front of the M5400A Alarm Panel Box and carefully remove the cover.
2. Take note of the current thermostat set-point.
   Thermostat Set-Point: _____
3. Turn the red Thermostat Set-Point dial clockwise until the heater turns on.
4. Reset the red Thermostat Set-Point dial to the previous setting.
5. Install the M5400A Alarm Panel Cover and tighten the four screws securely.

MODEL 5400H

Verify heater and Hot Monitor Timer operation:

CAUTION: Always take the necessary precautions when entering the alarm panel when 120V power is present.

1. Loosen the four screws on the front of the M5400H Alarm Panel Box and carefully remove the cover.
2. Take note of the current thermostat set-point.
   Thermostat Set-Point: _____

3. Note the current time band (top dial).
   Time Band: _____
   The leg of the cross with the arrow points to the band.
4. Turn the top dial to the **10s** band.
5. Turn the red Thermostat Set-Point dial clockwise until the heater turns on.

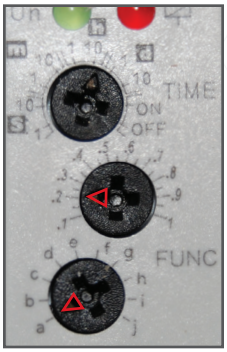
NOTE: The alarm will sound a few seconds after the heater turns on.

6. Reset the red Thermostat Set-Point dial to the previous setting.
7. Reset the time band (top dial) to the previous setting.
8. Install the Alarm Panel Cover and tighten the four screws securely.

Change Timer Setting (M5400H Only):

NOTE: It is the owner's responsibility to set the timer based upon the climate conditions of the installed location. The default setting of 2 hours is adequate for outside temperatures down to 0° F.

1. Disconnect electrical power to the M5400H.
2. Loosen the four screws on the front of the M5400H Alarm Panel box and carefully remove the cover.
3. Turn the Middle Dial to the desired number of hours. The leg of the cross with the arrow (highlighted in red) indicates the setting.



NOTE: Unless you're testing the system, changing the top dial time band from **10h** is not recommended. The bottom function dial should never be changed from the **"a"** setting.

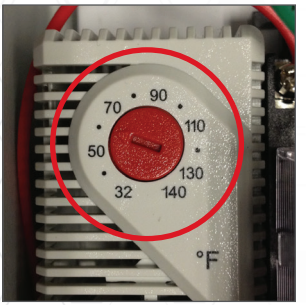
4. Take note of the new Timer set-point.
   Timer Set-Point: _____
5. Install the M5400H Alarm Panel Cover and tighten the four screws securely.
6. Apply power to the M5400H.
7. Verify that the unit has power by pressing and holding the "TEST" button.

Change Thermostat Setting:

NOTE: It is the owner's responsibility to set the thermostat based upon the climate conditions of the installed location. The default setting of 60° F is adequate for outside temperatures down to 0° F. If operating below this temperature, the set-point should be increased. Consult AGF for set-point guidelines.

1. Disconnect electrical power to the M5400.

2. Loosen the four screws on the front of the M5400 Alarm Panel box and carefully remove the cover.
3. Turn the red Thermostat Set-Point Dial clockwise or counterclockwise to the desired setting.
4. Take note of the new thermostat set-point.
   Thermostat Set-Point: _____
5. Install the M5400 Alarm Panel Cover and tighten the four screws securely.
6. Apply power to the M5400.
7. Verify that the unit has power by pressing and holding the “TEST” button.



MAINTENANCE LOG

Initials	Maintenance Description	Date

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