MGI CONTROLS®
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INSTALLATION AND OPERATION MANUAL

ATM-1

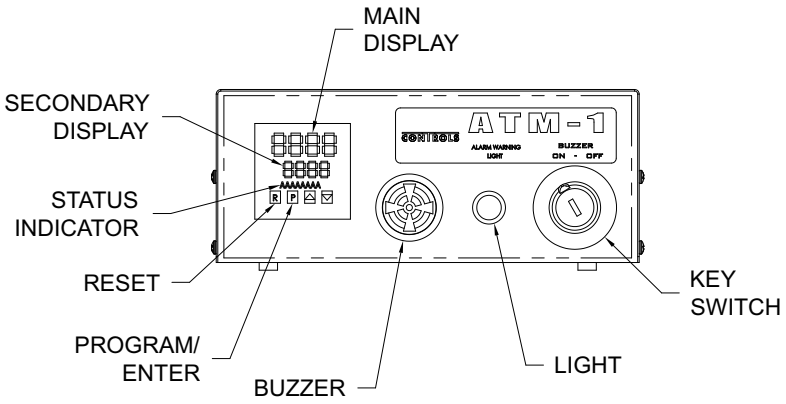
Automatic Temperature Monitoring
Alarm System

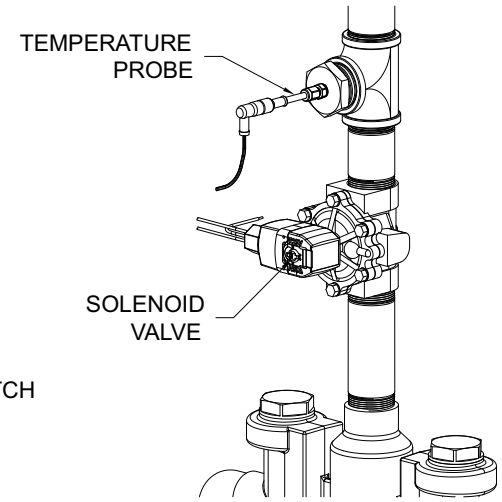
FOR TECHNICAL ASSISTANCE
1-(847)-604-4773

Federal Public Law 111-380 (No Lead)

NOTES TO THE INSTALLER:

1. **Please leave this documentation with the owner of the fixture when finished.**
2. **Please read this entire booklet before beginning the installation.**
3. **Check your installation for compliance with plumbing and other applicable codes.**





DESCRIPTION:

The **MGI CONTROLS**® **A**utomatic **T**emperature **M**onitor (ATM) is a microprocessor based controller ideal for sensing and alerting of abnormal temperature conditions. Target applications for this device are in health care and nursing facilities but can be used anywhere a temperature alarm is required.

The ATM is factory preset as a high temperature alarm adjustable between 60°F and 180°F. It also provides two levels of alarm modes. The first provides a visual indication that temperature is above the normal limit (but not yet considered unsafe). The second level alarm provides an additional audible ***BUZZER*** warning of a potentially unsafe condition. The ***BUZZER*** can be turned off with ***KEY SWITCH*** during troubleshooting but the key cannot be removed while "**OFF**". This prevents the audible BUZZER from being turned off with the key removed. When paired with the optional ***SOLENOID VALVE***, during the second alarm condition, the ATM will also shut down the flow of water to prevent distribution of potentially unsafe water.

The ATM's unique latching feature will remain in its alarmed state until the water temperature falls within acceptable limits (as defined by the installer/owner) and the ATM is manually reset. This feature gives facility owners piece of mind to know that nurses and attendants are always made aware that an abnormal condition did occur and warrants further investigation.

OPERATION:

When factory preset (consult factory for other configurations), the standard mode of operation/settings are as follows:

Alarm 1, ***A1***: 115°F (46°C)

Alarm 2, ***A2***/Limit set point: 125°F (52°C)

During normal operation, when the temperature is less than the alarm settings listed above, the display will indicate the temperature, the limit set point and an optional solenoid would be energized and allow the flow of water.

If the temperature increases to 115°F, the ATM ***STATUS INDICATOR*** will indicate ***A1*** and the ***RED ALARM WARNING LIGHT*** will illuminate. The flow of water will continue and the alarm indicators can only be reset when the temperature falls below the 115°F alarm setting.

If the temperature increases to 125°F, the ATM ***STATUS INDICATOR*** will indicate ***EX OUT A1 A2*** and the ***BUZZER*** will turn on. If the ATM is connected to an optional ***SOLENOID VALVE***, this will turn off and stop the flow of potentially dangerous water. This alarm state will continue and the alarm indicators can only be reset when the temperature falls below 125°F.

In the event of a power failure the ATM will turn off and de-energize the optional ***SOLENOID VALVE*** preventing the flow of unsensed water temperature. Furthermore, if the ***TEMPERATURE PROBE*** becomes disconnected for any reason or the probe's wires are severed, the ***BUZZER*** will sound and "***OPEN***" will flash on the ATM display.

INSTALLATION:

1. Using installer provided TEFLON tape assemble ***Tee***, ***bushing*** and ***probe compression fitting***. See ***Figure 1.***
2. Install optional **solenoid valve** and **tee assembly** after the mixing valve as shown. To minimize false alarms try to locate the probe at least 8 feet from the mixing valve. See ***Figures 2***.
3. Insert **probe** into **compression fitting** as far as it can go but do not let the end of the **probe** touch the **tee** body and tighten **compression fitting nut** . See ***Figure 2***.
4. Connect **probe** to **probe terminal cable**, ensuring that the **key wedge** lines up with the **groove** before engaging and tightening. See **Detail "A".**
5. Ground optional **solenoid valve** by securing **ground wire** per N.E.C. (National Electric Code) and make up **power connections**.
6. Secure **power leads** from ATM-1 box to **24 VAC transformer** with **screws**. Plug in **transformer** into 120VAC, 60Hz, 3 amp receptacle. See **Detail "B"**.

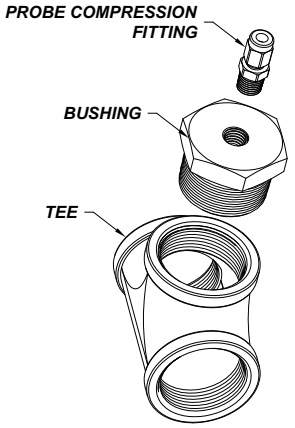


FIGURE 1

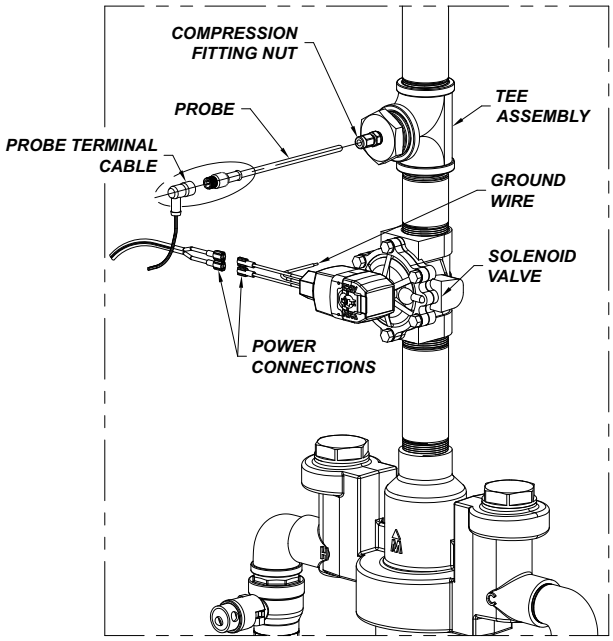
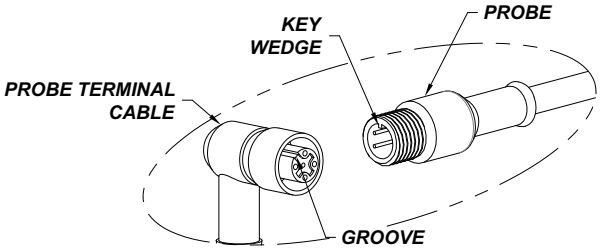


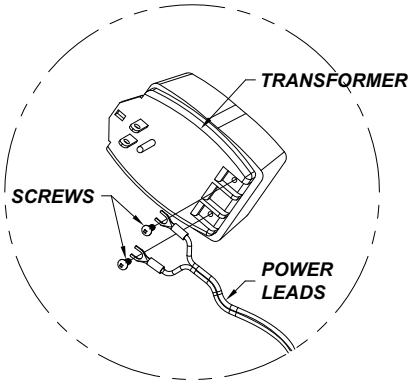
FIGURE 2



DETAIL "A"

IMPORTANT

Transformer must be plugged into a GFI protected circuit. Fixture must be earth grounded per N.E.C. or applicable codes.



DETAIL "B"

OPTIONAL WALL MOUNTING BRACKETS:

INSTALLATION:

1. Remove #6-32 screws from sides of ATM. See ***Figure 3.***
2. Secure wall mounting brackets to side of the ATM with screws. See ***Figures 4***.
3. With mounting brackets secured, use to locate and mark wall mounting points (Ø0.281 x 7/16" slots). See ***Figure 5***.
4. Install, installer provided wall anchors and secure ATM to wall with installer provided hardware.

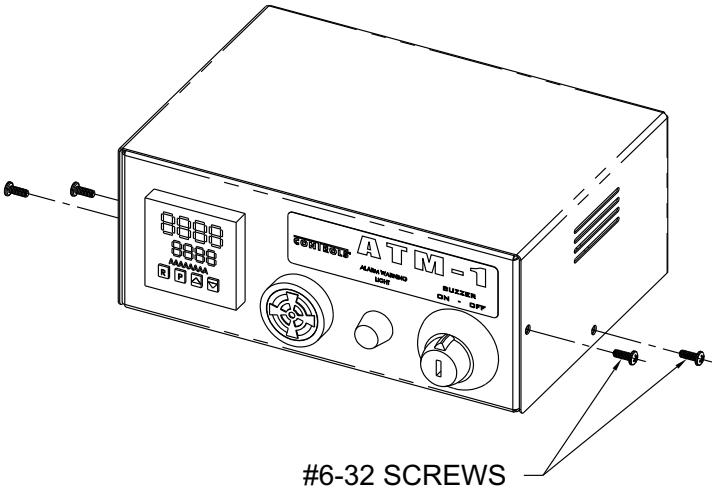


FIGURE 3

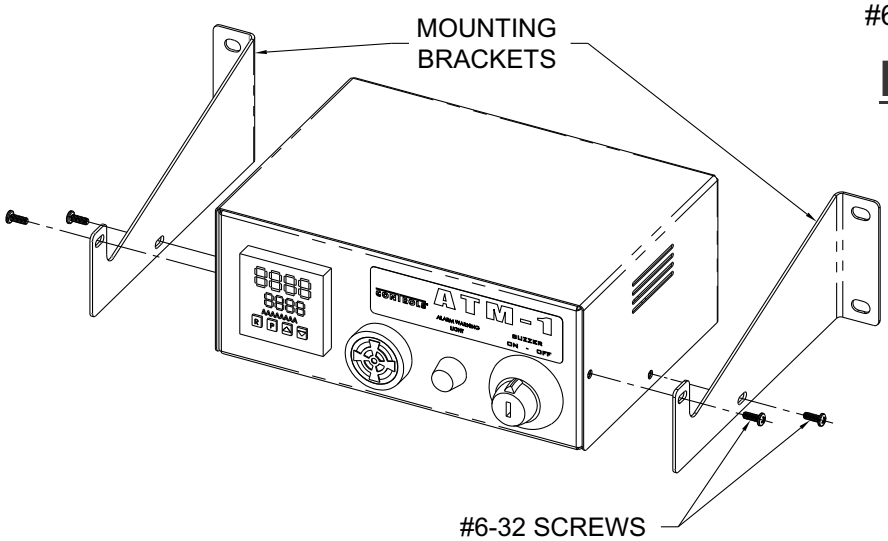


FIGURE 4

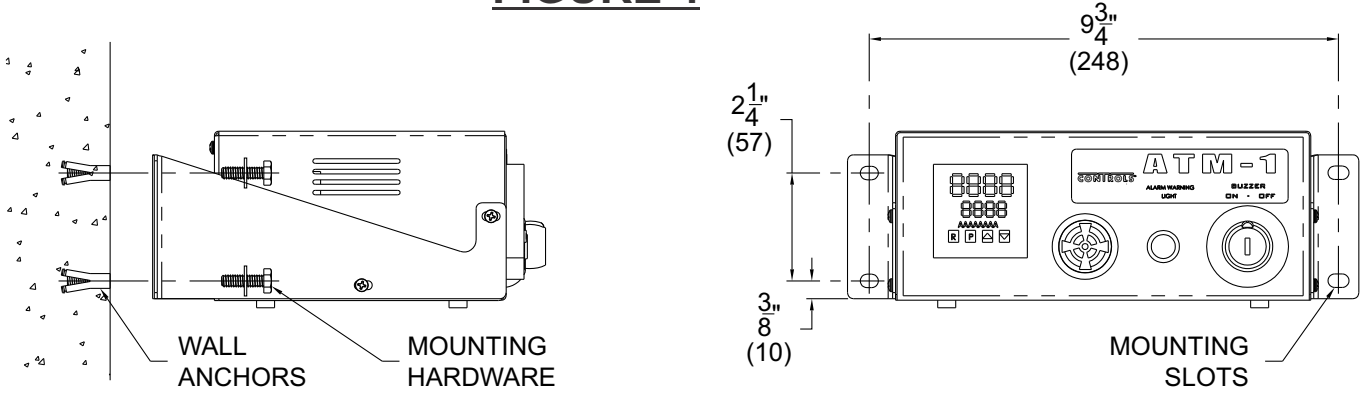


FIGURE 5

ALARM SETTINGS / QUICK START GUIDE:

The **ATM** is factory set to:

DISPLAY	PARAMETER	SETTING
PASS	PASSWORD	212
SP	SET POINT LIMIT	125
AL-1	ALARM 1 VALUE	115
AL-2	ALARM 2 VALUE	125

The user can change the setting by following the steps below.

WARNING:

These settings need to be reviewed and modified by the appropriate facility personnel who is responsible for selecting the alarm settings based on the application.

Other factory settings can be seen in the next section (factory preprogramming). To modify the alarm settings perform the following steps:

STEP 1. Press "***P***" button on the ATM and the display alternately flash ***PASS*** (Password) and 0 in Green. Press the "▲" button until the display reads ***PASS*** and ***212***.

STEP 2. Press "***P***" and the ATM display will continue to show the probe temperature in red and limit set-point (***SP***) and its corresponding value will alternately flash on the display in green. Press the "▲" and/or "▼" buttons accordingly to achieve the desired limit temperature set-point (this is the temperature that will turn the optional solenoid off).

Record the ***SP*** setting here: _____

STEP 3. Press "***P***" and the ATM display now flashes the ***AL-1*** and its corresponding value in green. Press the "▲" and/or "▼" buttons accordingly to achieve the desired ***AL-1*** temperature setting (this is the value that causes the warning light to turn on).

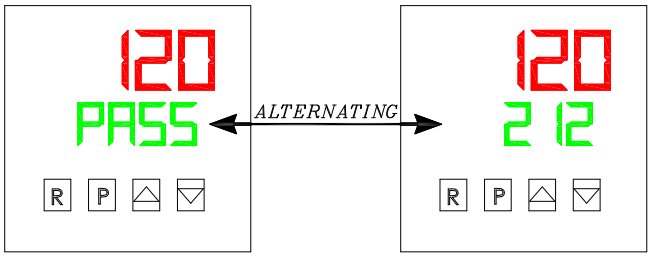
Record the ***AL-1*** setting here: _____

STEP 4. Press "***P***" and the ATM display now flashes the ***AL-2*** and its corresponding value in green. Press the "▲" and/or "▼" buttons accordingly to achieve the desired ***AL-2*** temperature setting (this should be the same as the ***SP*** value recorded above and operates the audible alarm).

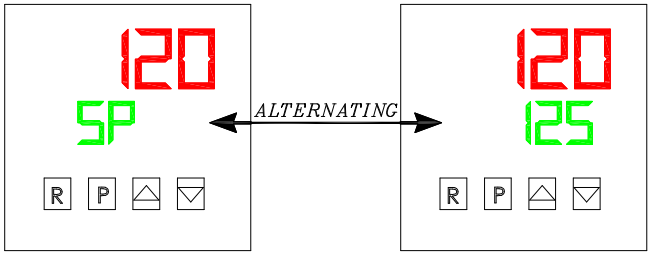
Record the ***AL-2*** setting here: _____

STEP 5. Press "***P***" to end programming and then the **ATM** display briefly displays "***End***" in green and then displays the newly programmed ***SP*** value.

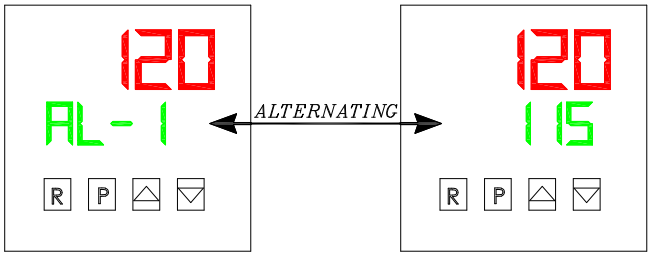
NOTE: Always verify the proper operation of the ATM after modifying any settings, set-points or alarms. This is outlined on page 7.



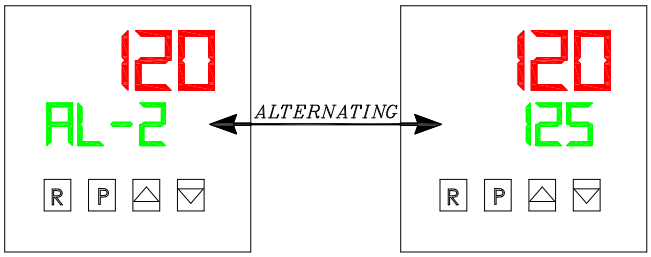
STEP 1



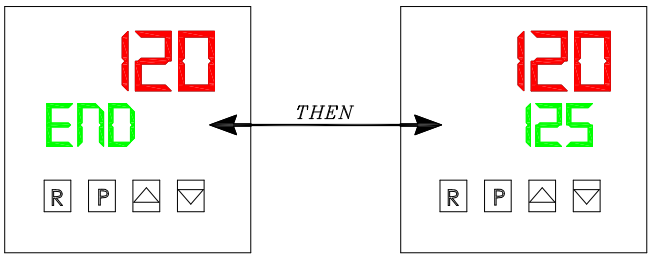
STEP 2



STEP 3



STEP 4



STEP 5

PROGRAMMING:

The ATM is factory preprogrammed and the steps to modify or verify these settings are outlined below.

STEP 1 Press "***P***" button on the ATM and the display alternately flashes ***PASS*** and ***0*** in green. Press the "▲" button until the display reads ***PASS*** and ***212***.

STEP 2 Press "***P***" (4) four more times to skip to the configuration modules. The display will now alternately flash "***CNFP***" and "***NO***". **NOTE:** If you press "***P***" again the display reads "***End***" (out of Programming).

NOTE: Use the "▲" & "▼" buttons to scroll through the configuration modules. Press "***P***" to enter the desired module and use the ▲ & ▼ to adjust the settings within the module. Each of the accessible modules and settings are described below and the settings within each module are listed with the appropriate factory default settings.

STEP 3 The 1st module is ***1-In*** (Inputs) The list of Sensor devices the ATM accepts; ***tYPE*** = ***tc-t***, Sensor Type, Type "T" Thermocouple ***SCAL*** = ***°F*** Temperature Scale - °F

⚠ ***WARNING:***
When switching from °F to °C (or vice-versa), the values of the alarms, warnings, set-points or temperature settings will not automatically change. All the temperature values must be re-entered based on the temperature scale that is selected.

dCPt = 0	Temperature Resolution
FLtr = 2	Digital Filter
SHFt =0	Calibration Adjustment
SPLO = 60	Lowest Alarm Setting
SPHI = 180	Highest Alarm Setting

STEP 4 The 2nd Module is ***2-OP*** (Output) – only HIGH or LOW trip activation is selectable. **CONTROLS**® DEFAULT ***High***

STEP 5 The 3rd Module is ***3-LC*** (Lockout) - Password, Alarm Access Level, Front Panel Reset.

PASS ***212 (Password)***
(* To select a new password pres the ▲ or ▼. Range 0 to 25.)

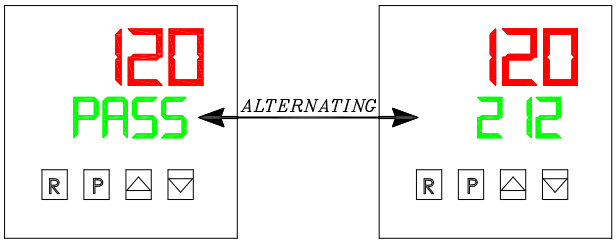
AL = ENT	Alarms Can Be Modified
FPrS = Yes	Front Panel Reset Button Enabled

STEP 6 The 4th Module is ***4-AL*** (Alarms)

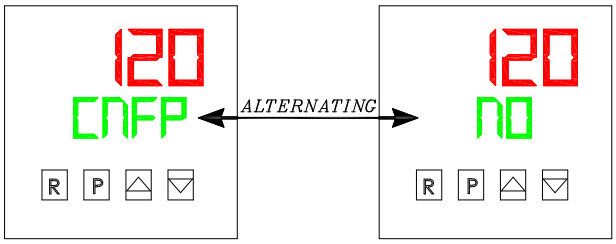
ACt 1 = A-HI	Alarm Action Mode - Absolute High
rSt 1 = LAtC	Alarm Reset Mode - Latching
Stb 1 = NO	Alarm Standby Function (Delay)
AL-1 = 115	Alarm 1 Value
ACt 2 = A-HI	Alarm Action Mode - Absolute High
rSt 2 = LAtC	Alarm Reset Mode - Latching
Stb 2 = NO	Alarm Standby Function (Delay)
AL-2 = 125	Alarm 2 * To Match ***SP*** Value
AHYS = 1	Alarm Hysteresis Value

NOTE: The Following Modules ***are not accessible. (5, 6, 7, & 8)***

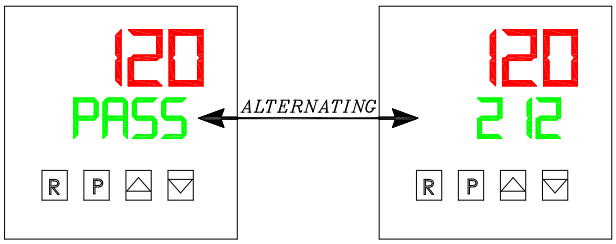
STEP 7 The 9th module is used to get the ATM reverted back to the original factory settings used for programming. This module should only be used if the ATM is not working properly or the program settings get corrupted. Set this value to "***66***", press "***P***" and the ATM will display "***rSEt***". Press "***P***" again to reset the ATM. The alarms will trip and all factory settings will be cleared. Press "***R***" to reset the alarms/indicators. Then go back through the programming and alarm setting sections to reprogram to factory defaults.



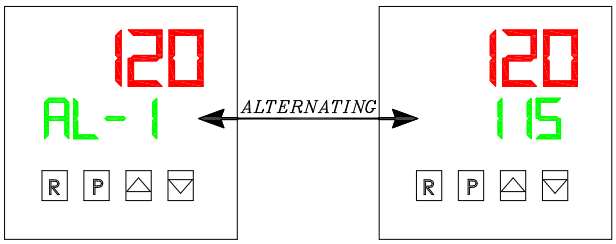
STEP 1



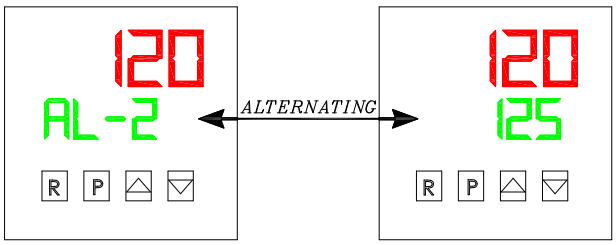
STEP 2



STEP 3



STEP 6



STEP 6

NOTE: Always verify the proper operation of the ATM after changing any settings, set points or alarms. This is outlined on page 7.

TESTING THE OPERATIONS/SETTINGS:

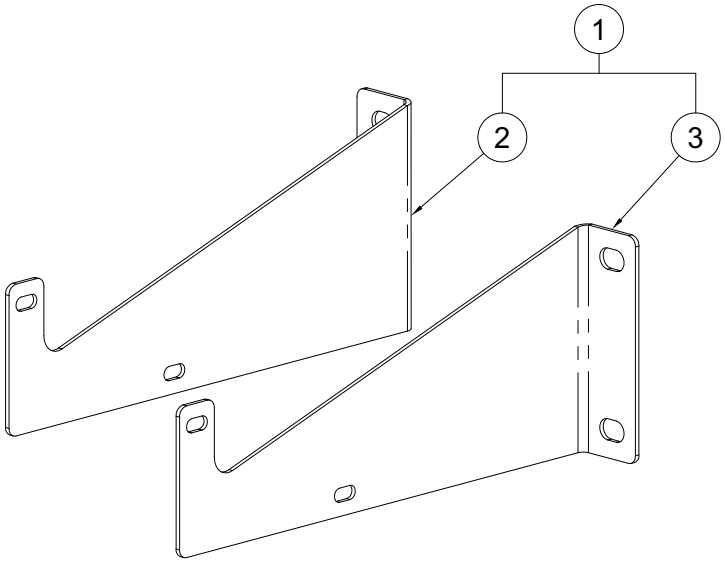
After installation and any reprogramming, the installer/programmer should always verify proper operation of the ATM. Additionally it is recommended that the ATM be periodically tested to verify proper operation. To verify proper operation and factory settings, get 3 glasses of water. The first one should be near room temperature, the second 116°F to 119°F, and the third one above 125°F. You should also get a separate thermometer to verify the ATM temperature display is accurate.

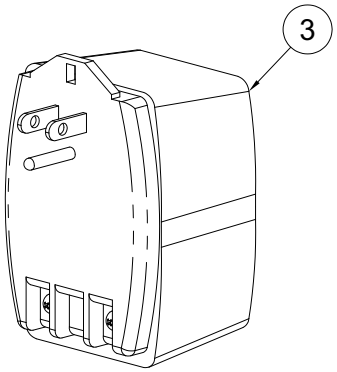
NOTE: You will be testing the audible alarm and it is loud. Have the key in the switch and have the audible alarm on.

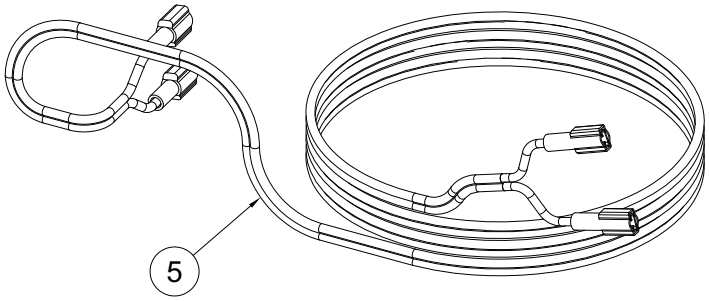
1. Remove probe from well if installed and place in the glass that is at room temperature.
2. Note the temperature is displayed and no alarms are present. If the optional solenoid is being used it would allow water to flow (energized/open).
3. Move the probe to the second glass. The ***A1*** and the red warning indicators should display.
4. Press and release the reset button and the alarm indicators should remain displayed, when released.
5. Move the probe back to the first glass and press the reset button after the temperature falls below 115°F. The alarm indicators should turn off.
6. Move the probe to the third glass. The ***A1*** and the red warning indicators should display first. As the temperature continues to climb above 125°F, the ***EX OUT A2*** indicators should light on the ATM display and the audile buzzer should sound. Turn the key to the off position to ensure it will silence the buzzer and verify the key cannot be removed while in this position. If the optional solenoid is being used it should de-energize and prevent the flow of water. Verify the flow of water to the fixtures is stopped.
7. Press and release the reset button and all the alarm indicators should remain displayed, when released. If the optional solenoid is being used it should remain closed.
8. Place the probe in the second glass and press the reset button after the temperature falls below 125°F.
   NOTE the ***A1*** and red warning indicators should remain light but all others turn off. The optional solenoid valve should energize and allow the flow of water to fixture.
9. Place the probe in first glass and press reset.
10. Turn key to the on position and insert probe back into the tee.
11. The ATM is now functional

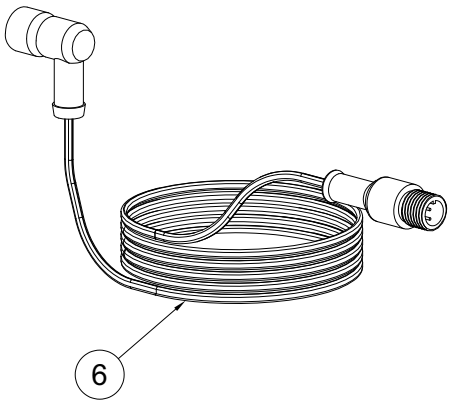
NOTE: The temperatures used in this example are based on the factory default settings. If you have changed the alarm settings as outline on page 5, then you will need to adjust the test temperatures listed above accordingly.

REPAIR PARTS









ITEM	PART NUMBER	DESCRIPTION	ITEM	PART NUMBER	DESCRIPTION
1	7815-142-001	WALL MOUNTING BRACKETS	4	0710-725-000	120V / 24V PLUG-IN TRANSFORMER
2	7815-142-199	LEFT SIDE WALL MOUNTING BRACKET	5	7815-143-002	SOLENOID EXTENSION CABLE, 10 FT LONG
3	7815-142-299	RIGHT SIDE WALL MOUNTING BRACKET	6	7815-121-000	THERMOCOUPLE EXTENSION CABLE, 10 FT LONG