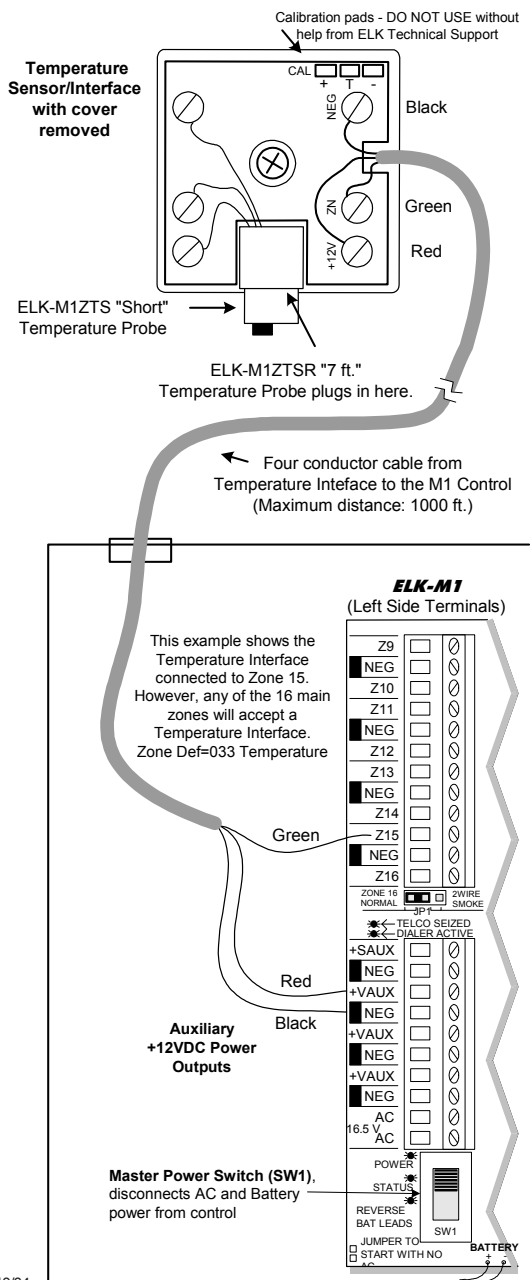


INSTALLATION OF M1ZTS or ZTSR

1. Remove the cover from the base of the Interface.
2. Mount the base using a #6 x 3/4" sheet metal screw through hole in center of circuit board.
NOTE: The Interface is not weatherproof. If mounted outdoors, it should be placed under a roof or deck overhang or in a weather resistant box. For freezer monitoring or extreme conditions the model with 7 ft. Probe model (M1ZTSR) is the best choice. This allows the interface to be mounted away from the sensor (indoors) or in a more suitable environment.
3. Turn the M1 Master Power Switch Off.
4. Run a four conductor cable (max. of 1000 ft.) from the Interface to the M1 Control. Connect the wires per and diagram steps below:
 - Connect a Green wire from terminal ZN on the interface to any unused Zone input terminal on the main M1 board (Z1-Z16). No EOL resistor needed.
 - Connect a Red wire from terminal +12V on the Interface to one of the Aux. +12 Volt DC terminals on the M1.
 - Connect a Black wire from terminal NEG on the interface to one of the NEG terminals on the M1.
5. After all connections are complete, place the cover on the interface and turn the M1 power On.



Zone Temperature Sensor/Interface

- ☐ ELK-M1ZTS (Short Probe)
- ☐ ELK-M1ZTSR (7 ft. Probe)

APPLICATION:

Allows the M1 to monitor remote temperatures. Rules are used to activate outputs, dial phone numbers, deliver voice alerts, etc. A sensor can be interfaced to any of the 16 zones on the M1 Control. Available with short or long (7 ft.) Probe.

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Zone Temperature Sensor/Interface

- ☐ ELK-M1ZTS (Short Probe)



- ☐ ELK-M1ZTSR (7 ft Probe)



FEATURES:

- Measures Temperature From: -50 to +140 F
- Communicates to M1 Control Over 3 Wires
- Operates On Any Main Board Zone (1-16)
- Up to 16 Interfaces Allowed per M1 Control
- Interface May be Placed Up To 1000 ft From M1
- Suitable for Indoor/Outdoor Use in a Covered Environment
- Available with Short Probe (M1ZTS) or with 7 ft. Probe (ELK-M1ZTSR)

SPECIFICATIONS:

- Operating Voltage: 12 Volts D.C.
- Current Draw: 10mA
- Housing Dimensions: 2.375" x 1.25" x 1"

** IMPORTANT NOTE **

For full compatibility with the ELK-M1ZTS or ELK-M1ZTSR the M1 Control must have firmware version 4.2.5 or higher and the Elk-RP Software must be version 1.4.1 or higher. Earlier version firmware/software may appear to work but will not produce accurate readings.

ELK
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Instructions Printed On Inside

Temperature Zone Definition: Define the Zone that is connected to the Interface as follows:

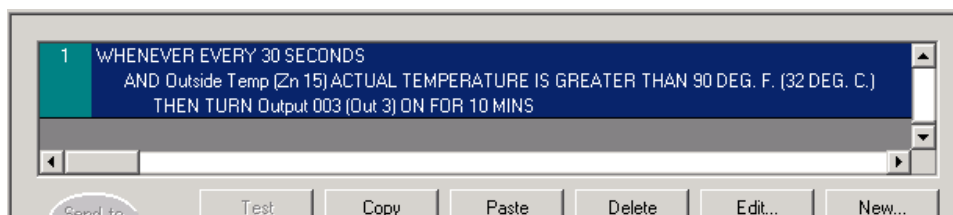
1. Access the Zone Definitions menu from the Keypad Installer Programming or the ELK-RP Software.
2. Select the zone that is connected to the Interface.
3. Program the definition of this zone to: 33 -Temperature Zone.
4. Scroll down in the Zone Definitions menu to the "Fast Loop Response" option. Enable this option by programming it to Yes. **VERY IMPORTANT: A zone defined as Temperature MUST also be enabled for Fast Loop Response with the response time set to 200ms or less.**
5. Access the Global Definitions menu and scroll down to the "Fast Loop Response" option. Verify or program the value to 200ms or less. The factory default is 040 ms., requiring no change.

View Temperature: It takes ~30 seconds after power up for the Temperature Interface to stabilize and transmit a reading to the M1 Control. Updates are transmitted every 17 seconds. *The M1 stores each temperature reading but discards rapidly changing readings as follows: If a reading is more than 20 degrees higher or 9 degrees lower than the last reading, it will be regarded as a possible error and discarded.* If the control is turned off or reset it takes ~30 seconds to display the temperature.

1. To view temperature from the keypad, press the ELK key (enter code if prompted), then press the RIGHT arrow key to select the View/Control Automation menu.
2. Press the 4 key (or scroll up) to display: 4-Temperature Sensor, then press the RIGHT arrow key.
3. The first temperature zone will be displayed with its Name, Zone Number, and reading.
4. Additional Temperature zones (if any) may be displayed by entering their 3 digit number OR by scrolling with the UP or DOWN arrow keys. To exit from this menu press the * key.

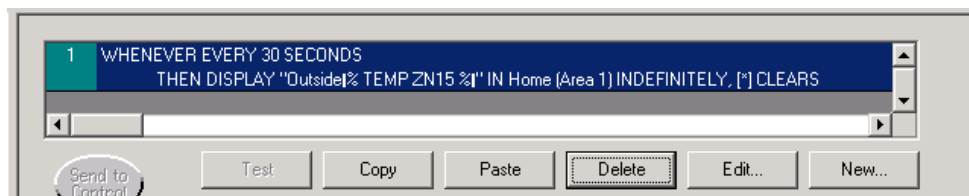
Using a Temperature Sensor in a Rule: This ELK-RP Whenever/And/Then Rule example turns on Output 3 for 10 minutes whenever the temperature exceeds 90 degrees.

1. Open the account in ELK-RP. Click on the Automation tab, the Rules tab, and then on New.
2. Click Trigger, then point to Time Occurrence, then Every X Seconds, and then click to select. **
3. In the block beside the words Fixed Value, type in 30 and click OK.
4. Click And, followed by Temperature which is located near the bottom of the drop down list.
5. Highlight the temperature sensor zone (by name), click the Greater than button, and change the temperature selection number to 90. Make sure the button beside F is selected, and click OK.
6. Click Then, followed by Turn Output On/Off. Highlight Output 3 (use the scroll down arrow), make sure the button beside Turn on is selected, then select the box labeled For. Highlight the hrs:mins:secs window and enter 00:10:00 (10 minutes). Click OK. Double check everything and click Done. The Rule should resemble the example below.



Temperature Text String Displayed on a Keypad

1. From the Automation tab click Texts, then click New. In the text string box type the word **Outside**.
2. Click the down arrow on the Insert box. Select Temperature Sensor Reading from the list, then click the down arrow on the next box. Select the temperature sensor zone by name. Click OK. The text block should resemble: **Outside|% TEMP ZN15 %|** This causes the current temperature to display.
3. Click the Rules tab followed by New to write a rule for sending this text string to a keypad.
4. Click Trigger, followed by Time Occurrence, and Every X Seconds. Enter a value of 30 In the block beside the words Fixed Value, then click OK. **
5. Click Then, followed by Send Text to Keypad. Make sure the button Display the following message is selected, then choose the text **Outside|% TEMP ZN15 %|** using the drop down box and arrow.
6. Select Area must match where the keypad is located. Three (3) other options determine whether the text message: may be Cleared with the * key, will Display for a time period, or will Beep Keypad when the message displays. Select any options and click OK. Double check everything and click Done.



** Numerous triggers may be used for a temperature type rule, i.e., time occurrence, arming of the security system, opening of a zone, etc. However, the M1 does not allow a temperature reading to be used as a trigger. This helps prevent a false activation "runaway" that could occur simple because the temperature has fluctuated by a degree or fraction of a degree. Instead, the AND command is used to compare or "test" a temperature sensor reading against a target value, each time the trigger occurs. The target value is programmable and the compare options are "Equal to, Not equal to, Less than, and Greater than". The "Equal to" is not recommended as a compare option because it may be impossible for a temperature reading to be exactly at the target value when the trigger occurs.