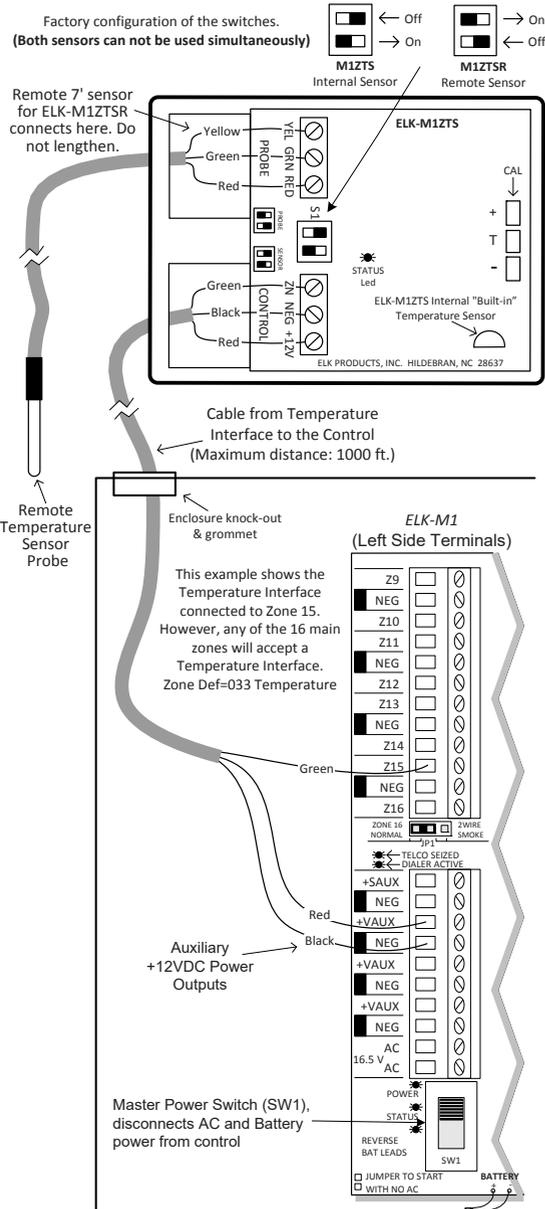


## INSTALLATION OF ZONE TEMPERATURE SENSOR

1. Remove the cover from the Interface.
2. Mount the base using #6 sheet metal screws.  
NOTE: The Interface is not weatherproof. If mounted outdoors, use a weather resistant box. For freezer monitoring or extreme conditions, the M1ZTSR with 7' Sensor Probe is best as it allows the interface to be mounted away from the sensor (indoors) in a more suitable environment.
3. Turn the Control Panel power OFF.
4. Run a four conductor cable (max. 1000 ft.) from the Interface to the Control. Connect the wires per diagram steps below:
  - Connect a Green wire from terminal ZN on the interface to any unused Zone input terminal on the main M1 (Z1-Z16) or M1EZ8 (Z1-Z8) circuit board. Do not use any EOL resistors on this zone.
  - Connect a Red wire from terminal +12V on the Interface to Aux. +12 Volt DC terminal on control.
  - Connect a Black wire from terminal NEG on the interface to NEG terminal on control.
5. After all connections are complete, place the cover on the interface and turn the Control Panel power ON. See next page for operation instructions.

**ELK-M1ZTS Temperature Sensor / Interface**  
(shown with cover removed)



## Zone Temperature Sensor / Interface

- ELK-M1ZTS v2 (Internal Sensor)
- ELK-M1ZTSR v2 (Remote 7' Sensor)

### APPLICATION:

This temperature interface with an ELK-M1 or M1EZ8 Control can monitor temperatures up to 1000 feet away, with results/actions programmed using ElkRP rules. Available in two versions, M1ZTS uses a temperature sensor built into a decorative housing, model M1ZTSR comes with a stainless remote temperature sensor probe on a seven foot cord.

### FEATURES:

- Measures Temperature from: -50 to +140 F.
- Operates on any ELK-M1 or M1EZ8 main on-board Zones.
  - M1 supports up to 16 Interfaces on Zones 1-16,
  - M1EZ8 supports up to 8 Interfaces on Zones 1-8.
- Interface may be placed up to 1000 feet away.
- Communicates to Control using 3 Wires.
- Suitable for Indoor/Outdoor use in a Covered Environment.

## Zone Temperature Sensor/Interface

- ELK-M1ZTS v2 (Internal Built-in Sensor) 7 62158 55031 7

- ELK-M1ZTSR v2 (Remote 7 foot Sensor) 7 62158 55032 4

### SPECIFICATIONS:

- Operating Voltage: 12 Volts D.C.
- Current Draw: 10mA
- Housing Dimensions: 3.5" x 2.5" x 0.875"

#### \*\* IMPORTANT NOTE \*\*

The M1ZTS model is factory configured to read the internal built-in temperature sensor. The M1ZTSR model is factory configured to read the external temperature sensor attached at the external screw terminals. Elk does not recommend converting one model to the other. If this is attempted, then it may be necessary to field re-calibrate with factory advice and guidance. It is not possible to use the internal and the external sensors at the same time.

Features or Specifications subject to change without notice.

### Instructions Printed On Inside

**ELK** 828-397-4200 Voice  
www.elkproducts.com  
email: info@elkproducts.com  
PRODUCTS PO Box 100 • Hildebran, NC 28637 • USA

### Temperature Zone Definition:

1. Select the zone that is to be connected to the Interface. ONLY ZONES 1 THRU 16 ON THE ELK-M1 OR ZONES 1 THRU 8 ON THE M1EZ8 MAY BE USED WITH THE ZONE TEMPERATURE SENSORS.
2. Program the definition of this zone to: 33 -Temperature Zone.
3. Under the Zone Definitions menu enable the "Fast Loop Response" option ONLY. Disable all other options. **VERY IMPORTANT: A zone defined as Temperature MUST also be enabled for Fast Loop Response with the response time set to 200ms or less.**
4. Under the Global Definitions menu and go to the "Zones" tab and verify the "Fast Loop Response" option to be 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 Control. Updates are transmitted every 17 seconds. *The Control 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.

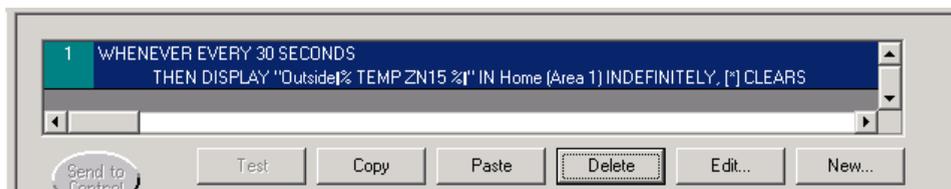
**Using a Temperature Sensor in a Rule:** This ELK-RP Whenever/And/Then Rule example turns on Output 3 for 10 minutes whenever the temperature exceeds 90 degrees.

1. Open the account in ELK-RP. Click on the Automation tab, the Rules tab, and then on New.
2. Click Whenever, then point to Time Occurrence, then click Every X Seconds, in the block beside the words Fixed Value, type in 30 and click OK. \*\*
3. Click And, followed by Temperature which is located near the bottom of the drop down list.
4. 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.
5. 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 Whenever, 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 Control 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.