



Agri-Alert 128 Touch

Models:
ALERT SYSTEM
890-00583

User Guide

895-00677
Version 01

AgriAlert

A BRAND OF
GSI GROUP



895-00677

All information, illustrations, photos, and specifications in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.

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NOTES

1 General Overview

Topics Covered in this Chapter

-
- System Overview
- What to Look for When you Receive Your System
- Terms of Use
- Telecommunication Information
- General Safety Precautions and Usage

Manufacturer

GSI Electronics

5200 Armand Frappier

Saint-Hubert, Qc

Canada

J3Z 1G5



Warranty is void if this product is used in a manner not specified by the manufacturer. Every effort has been made to ensure that this manual is complete, accurate and up to date. The information contained in this manual is subject to change without notice.

System Overview

The Agri-Alert system is a complete alert detection and management system for agricultural applications. It can handle up to 128 alarm inputs spread over several buildings.

Main Unit	Main controller with touchscreen, 8 basic zones, two relays and one microphone. The main system also has a phone card installed to call out.
TP-800	Remote expansion module that allows the addition of eight zones and a programmable output to the system
KP-400	Remote keypad displaying data from the main system with four dry contacts used for intrusion or temperature zones and one programmable output
KPB-400	Tightly sealed keypad displaying the main system's data remotely
WM3000	One-way wireless transmitter and receiver equipped with a dry contact
Wireless module	Module allowing wireless communication between the main alert system and its modules

What to Look for When you Receive Your System

Inspecting your system and making sure you have received all parts helps avoid many hassles.

Shipment contents

- one main unit
- one battery box
- one phone card (installed in main unit)
- one lead-acid battery
- one user manual and one installation manual

Damage inspection

Your system and its components were carefully inspected both electrically and mechanically before shipment. After unpacking all items, check for any obvious signs of physical damage that may have occurred during transit. Report any damage to the shipping agent immediately. Save the original box for possible future shipment.

Returning the unit for repair

If you must return the system for repair, carefully package the system in its original box or an equivalent, and follow these instructions:

1. Call the customer service department to get a Return Material Authorization (RMA) number. Have on hand the system's serial number and date code found on the system's main board.
2. Indicate clearly that the box is to be given to the repair department and attach a copy of the RMA number on the shipping label.
3. Complete and include the Service Form located at the back of this manual.

Contact information

If you experience trouble with your system, or to get repair or warranty information, please contact GSI Electronics Inc. at 1-877-926-2777 or by e-mail at mtl_techsupport@gsiag.com.

Terms of Use

Read and follow all installation, operation, and maintenance information carefully before using the product. Refer to the user documentation for complete product specifications. If the product is used in a manner not specified, the protection provided by the product warranty will be void.

Using the product according to your function

A responsible body is an individual or group responsible for the use and maintenance of equipment, for ensuring that the equipment is operated within its specifications and operating limits, and for ensuring that operators are adequately trained.

Operators use the product for its intended function.

Maintenance personnel perform routine procedures on the product to keep it operating properly

Service personnel are trained to work on live circuits, perform safe installations, and repair products. Only properly trained service personnel may perform installation and service procedures.

General safety usage

Follow the guidelines given below for safe usage of the product:

- Installation must only be performed by qualified service personnel
- Comply with local and national safety codes
- Repairs must only be performed by qualified service personnel
- When replacing the fuses, use only the same type and same rating as specified
- Make sure the unit is disconnected from AC power and from the battery
- Do not try to operate the system if it is damaged. Disconnect the power from the unit and call your local service representative
- Do not operate while condensation is present
- Use of the system in a manner not specified by these instructions may impair the safety protection provided by the system. Do not operate the system outside its rated supply voltages or environmental range
- Failure to read the installation and user manuals or to comply with the warnings and references contained herein can result in serious bodily injury or controller damage
- Do not insert metal objects into the connectors
- Use the system only as specified, or the protection supplied by the product can be compromised
- Carefully read all instructions
- Do not use the system if it does not operate correctly
- The enclosures must be closed and locked before you operate the product
- Use only specified replacement parts

Telecommunication Information

Industry Canada information

This product meets the applicable Industry Canada technical specifications. / Le présent matériel est conforme aux spécifications techniques applicables d'Industrie Canada.

The Ringer Equivalence Number (REN) is an indication of the maximum number of devices allowed to be connected to a telephone interface. The termination of an interface may consist of any combination of devices subject only to the requirement that the sum of the RENs of all the devices not exceed five. / L'indice d'équivalence de la sonnerie (IES) sert à indiquer le nombre maximal de terminaux qui peuvent être raccordés à une interface téléphonique. La terminaison d'une interface peut consister en une combinaison quelconque de dispositifs, à la seule condition que la somme d'indices d'équivalence de la sonnerie de tous les dispositifs n'excède pas cinq.

This product has a Ringer Equivalence Number of 0.1. Ce produit a un indice d'équivalence de la sonnerie de 0.1.

IC number: IC:11880A-PCB402RP002

FCC compliance statements

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On this equipment (phone card, model : PCB402 (300-00319)) inside the AA128 Touch enclosure is a label that contains, among other information, a product identifier in the format US:AAAEQ##TXXXX. If requested, this number must be provided to the telephone company.

ACTA number: US:32ZCN01BGSIE0001 REN: 0.1B

It is designed to be connected to a compatible modular (USOC Jack Type : RJ11) jack that is also compliant. See installation instructions for details.

A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. A compliant telephone cord and modular plug is not provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. See installation instructions for details.

The REN is used to determine the number of devices that may be connected to a telephone line. Excessive RENs on a telephone line may result in the devices not ringing in response to an incoming call. In most but not all areas, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company. For products approved after July 23, 2001, the REN for this product is part of the product identifier that has the format US:AAAEQ##TXXXX. The digits represented by ## are the REN without a decimal point (e.g., 01B is a REN of 0.1B). For earlier products, the REN is separately shown on the label.

If this equipment (phone card, model : PCB402 (300-00319)) causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

If trouble is experienced with this equipment (phone card, model : PCB402 (300-00319)), for repair or warranty information, please contact GSI Electronics Inc. at 1-877-926-2777. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved. This product is not intended to be repaired. A troubleshooting guide is available in the troubleshooting section of this manual.

Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission or corporation commission for information.

If your barn has specially wired alarm equipment connected to the telephone line, ensure the installation of the AA128 Touch through the phone card, model : PCB402 (300-00319), does not disable your alarm equipment. If you have questions about what will disable alarm equipment, consult your telephone company or a qualified installer.

OEM devices

The phone card, model : PCB402 (300-00319) is intended to use only with the AA128 Touch.



Do not use the phone card model PCB402 (300-00319) with any products other than GSI Electronics Inc. products.

Automatic Dialers

Proceed as follows when programming emergency numbers and making test calls to emergency numbers:

- Remain on the line and briefly explain the reason for the call to the dispatcher.
- Program emergency numbers and make test calls in the early morning or late evenings not to interfere in times where the volume of calls is higher.

Electrical safety advisory

Parties responsible for equipment requiring AC power should consider including an advisory notice in their customer information suggesting the customer use a surge arrestor. Telephone companies report that electrical surges, typically lightning transients, are very destructive to customer terminal equipment connected to AC power sources. This has been identified as a major nationwide problem.

Alarm dialing equipment

Notice for Equipment Utilizing A Functionally Equivalent Arrangement to Provide Line Seize Capability



Verification of Line Seize capability should be made immediately after installation, and periodically thereafter, in order to ensure that this equipment can initiate a call even when the telephone is connected to the same line is in use.



To ensure proper operation, this equipment must be installed according to the enclosed installation instructions. To verify that the equipment is operating properly and can successfully report an alarm, this equipment must be tested immediately after installation, and periodically thereafter, according to the enclosed test instructions.

Notice for Equipment with Line Seize Capability using an RJ31X or RJ38X Jack



In order for "alarm dialing equipment" to be able to seize the phone line to report an alarm or other event when other customer equipment (telephone, answering system, computer modem, etc.) connected to the same line is in use, "alarm dialing equipment" must be connected to a properly installed RJ31X jack. The RJ31X jack must be connected in series with, and ahead of, all other equipment attached to the same phone line. If you have any questions concerning these instructions, you should consult your telephone company or a qualified installer about installing the necessary jack and alarm dialing equipment for you.

General Safety Precautions and Usage

Safety symbols

	Warning. Read the following text carefully; it contains important information which, if ignored, may cause the controller to operate improperly
	High Voltage. Hazard of electrical shock. Read the message and follow the instructions carefully
	Direct current (DC)
	Alternating current (AC)
	Protective Earth Ground Terminal, Primarily used for protective earth terminals. Terminal connected to conductive parts of a device for the purpose of safety and is intended to be connected to an external system for protective grounding
	Functional Ground Terminal Primarily used for functional earth terminals which are generally associated with test and measurement circuits. These terminals are not for safety earthing purposes but provide an earth reference point.

Safety messages



Turn off the main electrical disconnect switch prior to servicing any of the system modules. Failure to do so might lead to serious injury or death.

Always use extreme caution when measuring voltage or performing procedures that require a module to be powered on.

IMPORTANT: Ensure all your settings are properly configured. Improper configuration of your settings may generate false alerts or fail to generate an alert.

Electrostatic discharge prevention

Electrostatic discharge (ESD) can damage equipment and impair electrical circuitry. ESD damage occurs when electronic components are improperly handled and can result in complete or intermittent failures.

Always follow ESD-prevention procedures when you remove and replace components. Ensure that the chassis is electrically connected to earth ground. Wear an ESD-preventive wrist strap, ensuring that it makes good skin contact. Connect the grounding clip to an unpainted surface of the chassis frame to safely ground unwanted ESD voltages. To guard against ESD damage and shocks, the wrist strap and cord must operate properly. If no wrist strap is available, ground yourself by touching the metal part of the chassis.

For safety, periodically check the resistance value of the antistatic strap, which should be between 1 and 10 megohm (Mohm).

Information for the safe use of the battery

Follow these guidelines concerning the battery:

- Do not store the sealed lead acid battery near heat or fire
- Do not store in sunlight
- Only remove the sealed lead acid battery from the equipment when not in use
- Fully charge the sealed lead acid battery before storing it for an extended period
- After extended periods of storage, it may be necessary to charge and discharge the sealed lead acid battery several times to obtain maximum performance
- Keep the sealed lead acid battery out of the reach of children and animals
- Seek medical advice if a battery or part of it has been swallowed

The batteries are supplied by B&B Battery. The models are BC7-12 and BP7-12. These batteries are certified and complied to these standards :

- UL1989
- IEC 61056
- JIS C8702
- GB/T 19639

Safely disposing of the battery

NOTICE

Do not dispose of the battery as unsorted municipal waste.



Go to B&B Battery's website for recycling information. Dispose in discharged condition and cover the battery terminals with an isolation tape.

You may ship your sealed lead acid batteries to B&B Battery, freight prepaid (you pay the freight). B&B Battery will gladly recycle the sealed lead acid batteries for you. Call our customer service prior to shipping your batteries to us: 1-323-278-1900 (North America and South America) or email us at sales@bbbattery.com for details and further arrangement for your recycling needs.

NOTES

2 Getting Started

Topics Covered in this Chapter

- Navigation Through the User Interface
- Accessing Help on the User Interface
- Modifying Parameter Values

Navigation Through the User Interface

Understanding the logic behind navigating through the user interface is useful in optimizing the use of your system. The Agri-Alert 128 Touch's user interface is intuitive with menus no more than two levels deep.

The main page

The main page is the first page you see when the system is powered on. This is where you see the status of your activated zones and monitor the zones. The color coding lets you know if the zone is normal (green), or the zone is in an alert state (red), if it is bypassed (yellow), or if it is in a trouble state (orange).

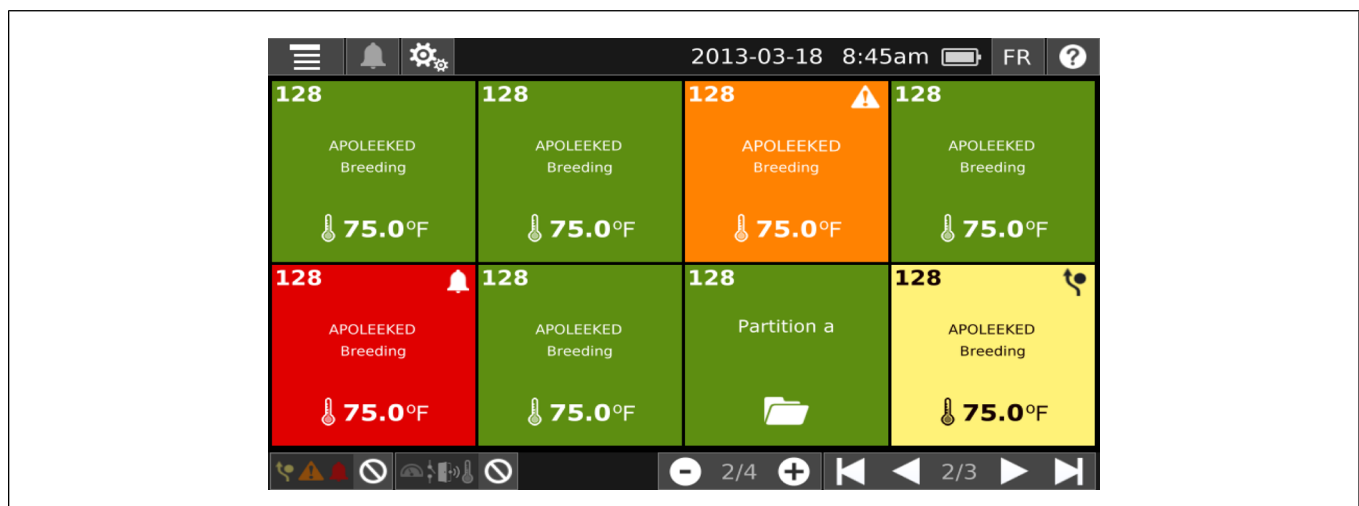
The main page also allows you to change the view of your zones by zooming in or zooming out by using the + or - sign.

The main page also gives you access to the menu bar on the top left which opens up a drop down menu to access the menus.

At any time when on the main page, you can press on a zone tile to access the information on the zone and to configure the zone.

The buttons at the bottom left allow you to filter the zones that are displayed on the main screen by either zone status or by zone type.

Figure 2-1 View of the main page



The menu button

The menu button on the main screen allows you to access and modify general information about your system. The following table describes the options available through the menu button on the main screen.

Figure 2-2 Options in menu bar

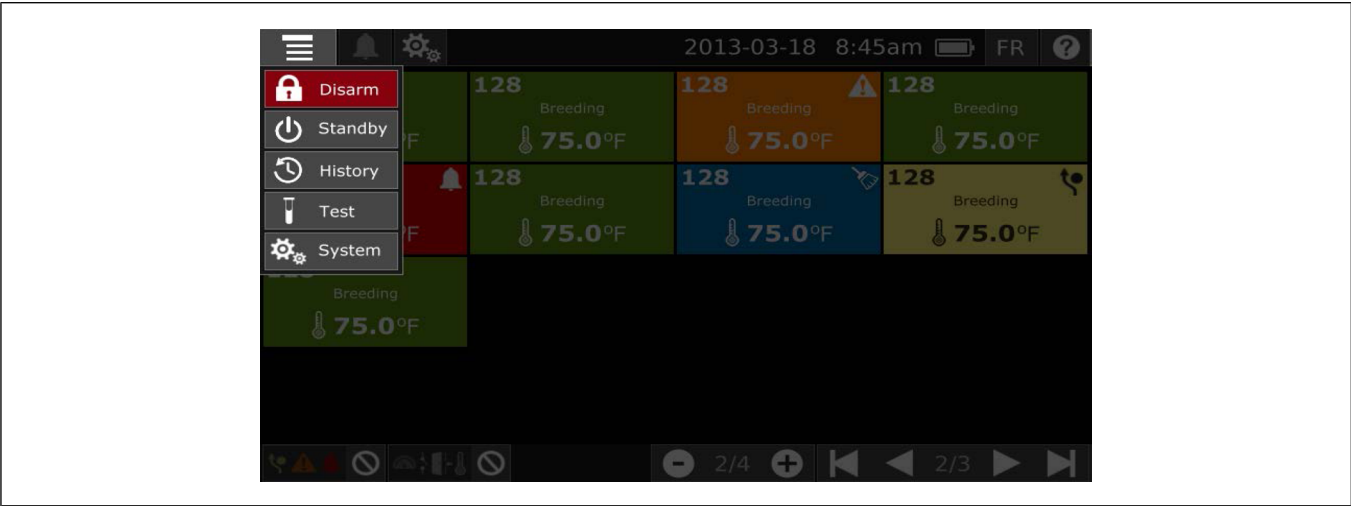


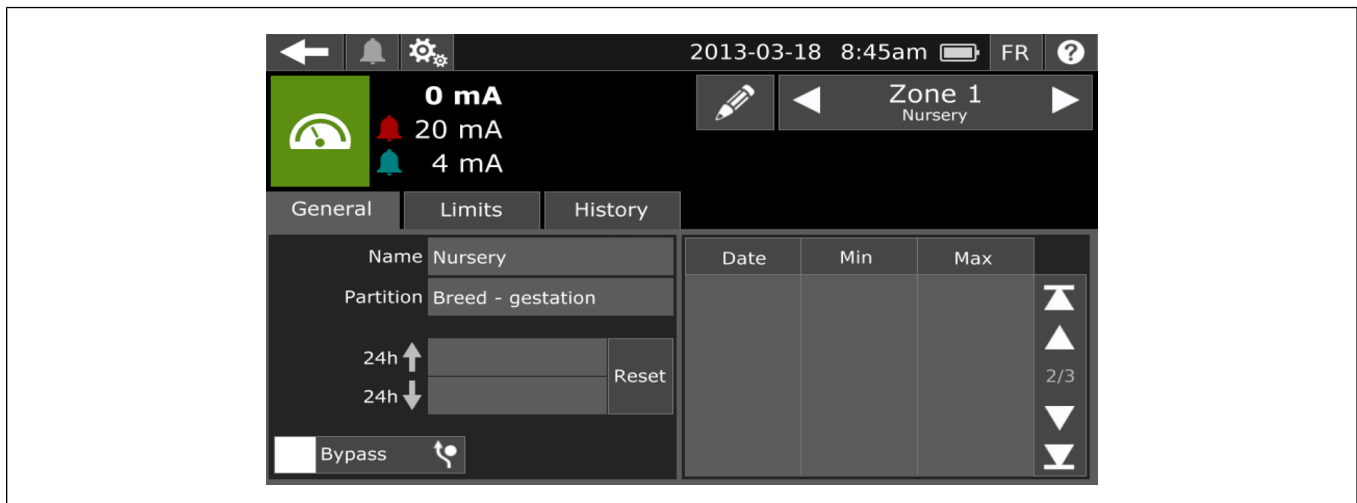
Table 2-1 Description of the options in the menu button

Options	Description
Arm/Disarm	Menu allowing you to arm and disarm your system. This function is exclusive to the intrusion zone
Standby	Menu allowing to put the system on standby
History	Menu allowing you to see alarms and events
Test	Menu allowing you to run tests on the system and the touch screen to check that it is working correctly
System	Menu allowing you to modify general settings such as language, time and date, and units of measure

The viewing and editing windows

Whether configuring a zone tile, entering contact information or viewing diagnostics, you find the same information and the same layout throughout the user interface.

Figure 2-3 Typical status and edit window



NOTE: If you are viewing or editing a zone and an alert is set off in another zone, A popup message alerts you. The information you were entering is not lost even if you choose to acknowledge the alert.

Accessing Help on the User Interface

If you are unsure of the meaning of a parameter or the meaning of an icon on the user interface, two help menus are available. The general help can be accessed through any screen. More specific help is also available if you are looking for information on a specific parameter.

1. Click on the question mark  to access help.
 - Click on the general help to get general information on the meaning of terms and icons
 - Click on the specific help to have the question marks displayed next to the fields where help is available.
2. Click on the question mark of your choice.

A help bubble is displayed containing information explaining the parameter.

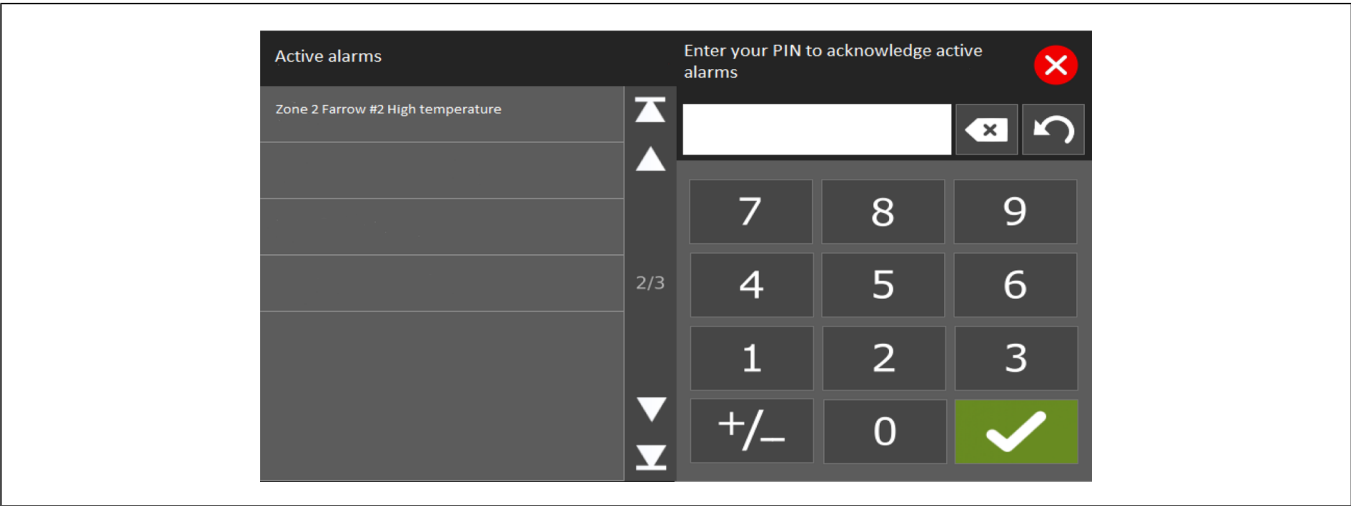
Modifying Parameter Values

Modifying parameter values, whether it be in the zone configuration or in the system configuration is done in the same intuitive way

1. Click on the wanted menu path to modify the desired parameter.
2. Click on the pencil icon to change into edit mode.
3. Click on the white space next to the field you want to modify.

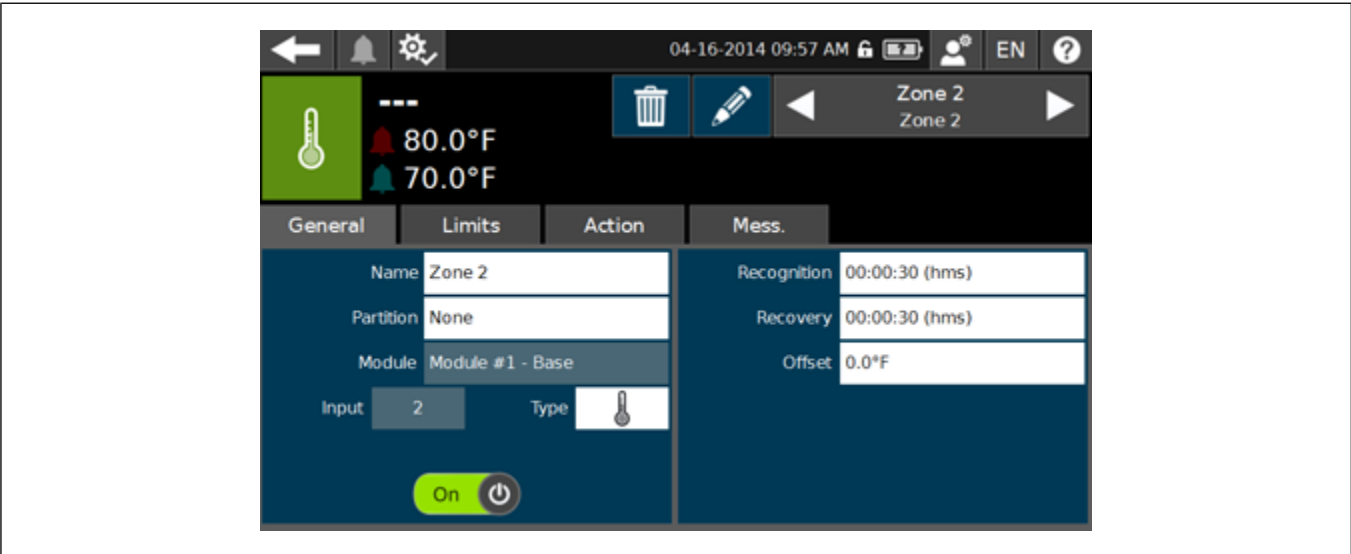
A numeric or alphanumeric keypad is displayed depending on the parameter value you are modifying.

Figure 2-4 Numeric keypad



4. Click on the  to cancel your entry, or click on the  to save your entry.
The modified value is displayed in the white space next to the parameter.

Figure 2-5 Example of a typical edit screen



3 Basic Operations

Topics Covered in this Chapter

- Logging In
- Switching Into Edit Mode
- Acknowledging an Alert On-site or on the Phone
- Setting the Date and Time Parameters
- Bypassing a Zone
- Deleting Groups of Information
- Selecting the Language Displayed on the User Interface
- Arming and Disarming Intruder Zones
- Viewing Alert History
- Selecting the Temperature Scale
- Deleting Groups of Information
- Call Sequence: How it Works

Logging In

When trying to modify certain parameters, the system prompts you to enter either a master or an installer password to have access to modify the parameter.

1. When prompted, click on the login icon .
2. Enter the password requested.

Once you are logged on, the icon changes to .

NOTE: *After 10 minutes of inactivity on the touchscreen, you are automatically logged off and must log in again to modify certain parameters.*

Switching Into Edit Mode

Some information and tabs are available for viewing in status mode, and others are displayed when switching to edit mode.

1. Follow the menu path of your choice.
2. Click on the pencil icon  to change into edit mode.

All tabs containing parameters that can be edited are displayed.

Acknowledging an Alert On-site or on the Phone

As soon as an alert is set off, the screen displays a popup prompting you to acknowledge the alert. If nobody is on site to acknowledge the alert, the dial out sequence begins after the set amount of time.

Acknowledging the alarm puts a stop to the notification process and you can take action to get the zone back into a normal condition.

- When on-site, proceed as follows:
 1. Either from a module connected to the system or on the system's user interface, enter your password when prompted.
 2. Find the source of the problem and take action to return the zone into a normal state.
- When notified by phone, text, or e-mail, proceed as follows:
 1. Enter your four digit password when asked by the system.
 2. Contact someone on-site or take action to return the zone into a normal state.

NOTE: *If you receive a message from the system on your phone, you can call the system and follow the instructions to acknowledge the alert.*

Setting the Date and Time Parameters

1. Click on **Menu**→**System**→**Settings**→**Time and units** .
2. Set the time and date and choose the desired format for display.

Bypassing a Zone

Bypassing a zone allows you to keep the zone enabled, but not monitored by the system for a period of time. The zone keeps its configuration, but no alerts are set off by the system for bypassed zones.

1. Click on the zone you would like to bypass on the zone monitoring screen (main page).
2. Click on the **Bypass** button .

The zone tile turns yellow and the minimum and maximum thresholds are no longer displayed.

3. To return to monitoring mode, click on the **Bypass** button.

The zone tile turns green and the minimum and maximum thresholds are displayed.

Deleting Groups of Information

Keeping accurate information such as contacts, contact groups, temperature curves and zones ensures no false alerts are generated and the correct people are informed when an alert does occur. When information is no longer valid, you can erase a group of information at the same time.

Before You Begin

IMPORTANT: *The following steps delete the entire displayed page including information in all tabs.*

1. Navigate to the page where you would like to delete the information.
2. Click on the garbage icon .

A message prompting you to confirm you want to delete all information on the page is displayed.

Selecting the Language Displayed on the User Interface

Selecting the proper language allows you to navigate with confidence through the user interface.

1. Click on the square showing two letters representing a language  on the user interface.
2. Select the language in which you want the information displayed.

Arming and Disarming Intruder Zones

1. From the main screen, click on the drop down menu button.
2. Click on the arm or disarm button.

The intrusion zones that are in a trouble or alert state are displayed. Intrusion zones must be in a normal state to be armed.

3. Enter your four digit pin number using the keypad on the right hand side.

Viewing Alert History

The system records the date, time, alert threshold at the time of the alert, and name of the person that acknowledged the alert for all alerts. The alert history of each zone is displayed individually on the zone page.

1. From the main page, click on the zone you would like to view.
2. Click on the **History** tab.

The complete alert history for the zone is displayed

3. Use the arrows on the right to scroll down if needed.

Selecting the Temperature Scale

1. Click on **Menu**→**System**→**Settings**→**Time and units** .
2. Select the desired temperature scale next to **T units**.

Deleting Groups of Information

Keeping accurate information such as contacts, contact groups, temperature curves and zones ensures no false alerts are generated and the correct people are informed when an alert does occur. When information is no longer valid, you can erase a group of information at the same time.

Before You Begin

IMPORTANT: *The following steps delete the entire displayed page including information in all tabs.*

1. Navigate to the page where you would like to delete the information.
2. Click on the garbage icon .

A message prompting you to confirm you want to delete all information on the page is displayed.

Call Sequence: How it Works

Different parameters are set during configuration to indicated the call sequence performed by the system when an alarm is present. The system behaves a certain way according to the set parameters.

The call sequence represents the telephone numbers that are called in a specified order when an alert or trouble is detected by the system. The system can either deliver a voice message, send an e-mail, text message or a pager message. The dialout sequence is interrupted when you acknowledge the alert or trouble. If you do not acknowledge the alert or trouble, the system continues its dial out sequence until all numbers have been dialed. If at the end of a call sequence the alert or trouble is still not acknowledged, the system begins the call sequence as many times as specified by the **number of call repetition** entered in the **System** menu.

If the system reaches a busy line during the call sequence, the phone number is placed at the end of the sequence. If the **Busy Line Tries** parameter is greater than zero, the system re-dials the previously busy numbers after all other numbers are called. The busy numbers are called as many times as indicated in the **Busy Line Tries** parameter.

Once the call sequence is finished, and the alert or trouble is still not acknowledged, the call sequence is repeated. The call sequence is repeated until the **Number of Call Repetitions** set in the **System** menu is reached.

If new alerts are detected during a call sequence, the entire call sequence restarts. If phone groups are activated, the system uses the same call sequence procedure but only selects the phone numbers included in the phone group

4 Information Creation and Management

Topics Covered in this Chapter

- Access Levels
- Assigning a Contact an Access Level
- Creating and Managing Contacts
- Creating and Managing Contact Groups
- Creating and Managing Partitions
- Creating and Managing Temperature Curves
- Managing Software Versions
- Managing the Power Source
- Viewing the History of Contact Actions

Access Levels

Access levels are assigned to contacts. The levels limit the type of actions that can be performed by the contact.

Access Level	Rights with the access level
User	The contact can acknowledge alarms and view system information
Master	The contact can edit certain configuration parameters and parameters for every-day usage
Installer	The contact has full access and can modify any parameter

Assigning a Contact an Access Level

In order for you to control the actions that are performed by your contacts, you can set four different levels of access according to the contact's function on site.

1. Click on **Menu**→**System**→**Contacts**.
2. In edit mode, under the **Security** tab, click on the edit field next to the **Access level** button.
3. Enter the desired access level and enter a password.

Creating and Managing Contacts

Contacting the correct people and using the correct means of communication during an alert can help protect your animals and premises.

1. Click on **Menu→System→Contacts**.
2. In edit mode, under the **General** tab, enter the contact name and populate the fields
3. Once you complete a contact, use the navigation buttons on the top right to navigate through the existing contacts, to create new contacts, or to delete existing contacts.

Creating and Managing Contact Groups

Creating contact groups allows the correct people to be contacted when an alert is present depending on the type of alert, the time at which it occurs, or even the day of the week on which the alert is set off.

Before You Begin

NOTE: *Contacts must be created before contact groups can be created.*

NOTE: *Contact groups must be created before they can be assigned to a zone.*

1. Click on **Menu→System→Groups**.
2. In edit mode, under the **General** tab, enter the group name.
3. Click on **Test report** if you would like the group to receive a test report.
4. Enter the information of week day, week night and weekend start times.
5. Complete the **Day**, **Night**, and **Weekend** tabs with the contacts to be alerted during each time period set.
6. Once you complete a contact group, use the navigation buttons on the top right to navigate through the existing contact groups, to create new contact groups, or to delete existing contact groups.

Creating and Managing Partitions

Creating partitions allows you to group zones together and monitor them as a group. The partition can be bypassed as a group or placed in clean mode as a group. Zones in the same partition are usually located in the same building or have a common factor linking them together. Partitions are displayed as a group on the main screen.

1. Click on **Menu→System→Partition**.
2. Click on the pencil icon  and populate the fields.

NOTE: *The list of zones assigned to the partition are displayed on the right hand side. Zones must be assigned to a partition when configuring a zone for it to be displayed here.*

3. Once you are done creating a partition, navigate using the arrow keys on the top left to create other partitions, modify existing partitions or view existing partitions.

Creating and Managing Temperature Curves

Temperature curves ensure the optimal temperature with relation to the age and maturation of your animals. Setting the correct curve points is beneficial for productivity.

1. Click on **Menu**→**System**→**Curves**.
2. In edit mode, under the **General** tab, populate the fields keeping in mind the correlation between day number and temperature.
3. Once you are done creating the first curve, use the navigation buttons to navigate through existing curves, to create a new curve, or to delete an existing curve.

Tip

Use the **Copy** and **Paste** buttons to create your curves or assign zones to curves rapidly.

After You Finish

When you are done creating your curves and assigning them to zones in edit mode, you can view the zones assigned to a curve by clicking on the **Zone** tab.

Managing Software Versions

Every now and then a new software version is released with updates on features. Making sure the software version is up to date ensures you have access to the latest features.

1. Insert the USB stick into the USB port of the main system.
2. Click on **Menu**→**System**→**Settings**→**Software Info** to view the current software, firmware, and hardware information.
3. Under the **File** tab, click on the **Export** button to export your current data onto a USB stick or select **Import** to import information from the USB stick.
4. Wait for a message indicating the process is complete.

Managing the Power Source

There are different actions that can be set up for the system to manage the amount of power it draws for its power source during certain events.

1. Click on **Menu**→**System**→**Settings**→**Power Settings**.
2. In edit mode, under the **General** tab, select the options for saving power when the power source is the battery.
3. Set the recognition time and the recovery time in the power failure options.

Viewing the History of Contact Actions

To closely monitor the alert and trouble history, the actions, accompanied by dates and times at which they occurred are logged in each contact's history.

1. Click on **Menu**→**System**→**Contacts**.
2. Look under the **History** tab for a list of all actions performed by the contact.
3. Use the arrows to scroll down if need be.

NOTES

5 Zone Configuration

Topics Covered in this Chapter

- Zone Types
- Zone Configuration Settings

Zone Types

A zone is an input configured to respond to the type of sensor connected to a module. Different types of sensors can be connected to the system to monitor different alert types.

Table 5-1 List of the different zone types

Zone Type	Description
Indoor temperature	Used to monitor indoor temperatures. An alert is activated when the temperature reaches a high or low temperature threshold or varies outside a set temperature value from a temperature maturation curve.
Outdoor temperature	Used exclusively with an outdoor temperature probe. This zone is normally used to provide data used with the Outdoor Temperature Compensation feature. No more than one zone can be configured with this type.
Dry contact	Used to detect an open or closed circuit and some types of sensors.
Intrusion detection	Used to detect intrusion through normally open (NO) or normally closed (NC) circuits. This zone type cannot be assigned to a partition and cannot have either a recognition time or a recovery time.
4 – 20 mA input	Assigned to an input providing a 4 to 20 mA signal. A variety of sensors provide this kind of input.
0 – 5 V input	Used with sensors that provide a DC input between 0 and 5 volts.

Zone Configuration Settings

Before a zone can be monitored, it must be assigned to an input and the zone must be properly configured. There are many zone settings available for each zone type. Some settings are common to all zone types while others are specific to one zone type.

Table 5-2 List of the zone settings for each zone type

Setting	Indoor Temp.	Outdoor Temp.	Dry Contact	Intrusion Detection	4 - 20 mA Input	0 - 5 VDC Input
Zone Text Label	X	X	X	X	X	X
Partition Selection	X		X		X	X
Module Selection	X	X	X	X	X	X
Input Selection	X	X	X	X	X	X
Zone Type	X	X	X	X	X	X

Chapter 5: Zone Configuration

Table 5-2 List of the zone settings for each zone type (cont'd.)

Setting	Indoor Temp.	Outdoor Temp.	Dry Contact	Intrusion Detection	4 - 20 mA Input	0 - 5 VDC Input
Alert Recognition Time	X		X		X	X
Alert Recovery Time	X		X		X	X
Temperature Offset	X	X				
Temperature Probe Calibration offset	X	X				
Output Activation on Alert or Trouble	X	X (only trouble)	X	?	X	X
Alert Phone Call	X	X	X	X	X	X
Alert E-mail	X	X	X	X	X	X
Alert Texting (SMS)	X	X	X	X	X	X
Alert Siren	X	X	X	X	X	X
Internal Speaker	X	X	X	X	X	X
Zone Audio Label	X		X	X	X	X
Temperature Setpoint	X					
Temperature Maturation Curve	X					
Outdoor Temperature Compensation	X					
Cal. Zero (Zero calibration)					X	X
Cal. Span (Calibration span)					X	X

NOTE: All fields marked with an * on the user interface must be populated.

6 Configuring a Temperature Zone

Topics Covered in this Chapter

- Naming the Zone with a Text Label
- Selecting a Partition
- Selecting a Module
- Selecting an Input
- Selecting a Zone Type
- Setting the Alert Recognition Time
- Setting the Alert Recovery Time
- Activating the Temperature Curve
- Setting the High and Low Temperature Thresholds
- Setting the Critical Temperature Threshold
- Setting the Outdoor Temperature Compensation
- How it Works: Outdoor Temperature Compensation
- Activating a device in the Event of an Alert or Trouble
- Receiving a Phone Call When an Alert is Active
- Receiving an E-mail When an Alert is Active
- Enabling the Siren
- Enabling the Internal Speaker
- Recording the Zone Audio Label
- Resetting the Daily Minimum and Maximum
- Calibrating the Temperature Probe

Naming the Zone with a Text Label

The zone text label is a name you give to a zone to facilitate its identification. In addition to the zone number, the text label appears everywhere where the zone is identified in writing on the user interface.

1. In edit mode, under the **General** tab of the zone you are configuring, click on the edit field next to the **Name** button.
2. Type in the zone label of your choice.

NOTE: *The field is limited to 32 characters.*

Selecting a Partition

Partitions are used to group zones that are located in the same area or that are logically connected together. This can represent entire buildings or portions of a building. If you select the same partition in the zones belonging to a specific area, monitoring is done with one partition instead of several zones. Zones in a partition can also be bypassed and activated collectively.

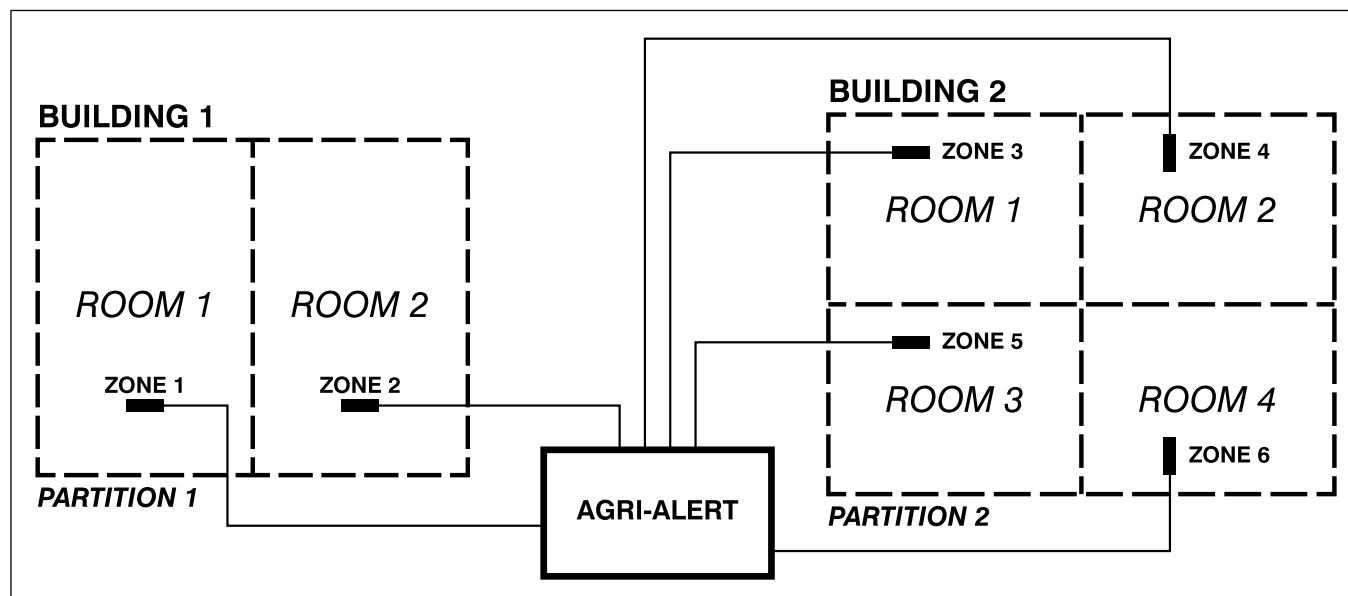
What You Should Know

NOTE: *In order to be available for assignment, a partition must be created.*

Chapter 6: Configuring a Temperature Zone

1. In edit mode, Under the **General** tab, click on the edit field next to **Partition**.
2. Click in the circle to the left of the partition of your choice.

Figure 6-1 Example of a partition



Selecting a Module

By selecting a module you link the zone to the area you want to monitor.

1. In edit mode, under the **General** tab, click on the **Module** edit field to display the selection box.
2. Select a module from the list.

NOTE: Only the modules that are connected to the system and that are initialized in the system are available for selection.

Selecting an Input

1. In edit mode, under the **General** tab, click on the **Input** edit field to display the selection box.
2. Select the input from the list.

Selecting a Zone Type

Selecting a zone type allows the system to properly interpret the data received from the selected input

What You Should Know

IMPORTANT: The selected zone type must correspond to the type of sensor associated with the input you selected.

1. In edit mode, under the **General** tab, click on the **Type** edit field to display the selection box.
2. Select a zone type from the list. Once a zone type has been selected, the configuration page displays the appropriate settings.

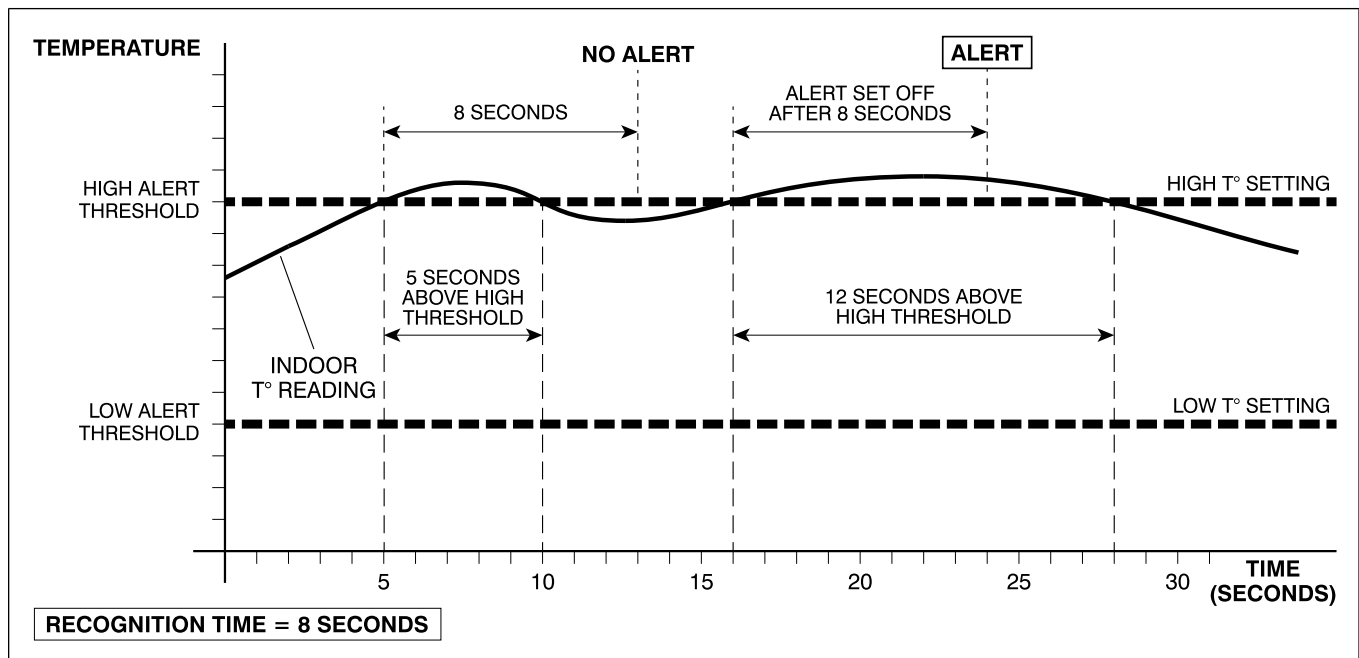
NOTE: The outdoor temperature zone type is not available if it has already been assigned to a zone.

Setting the Alert Recognition Time

The alert recognition time is used to calculate the set period of time before an alert condition is recognized and an alert set off. The zone must continuously be in an alert condition for a specific period of time before an alert is recognized and set off.

1. In edit mode, under the **General** tab of the zone you are configuring, click on the edit field next to the **Recognition** button.
2. Set the alert recognition time.

Figure 6-2 Graph displaying an example of an alert with an 8 second recognition time

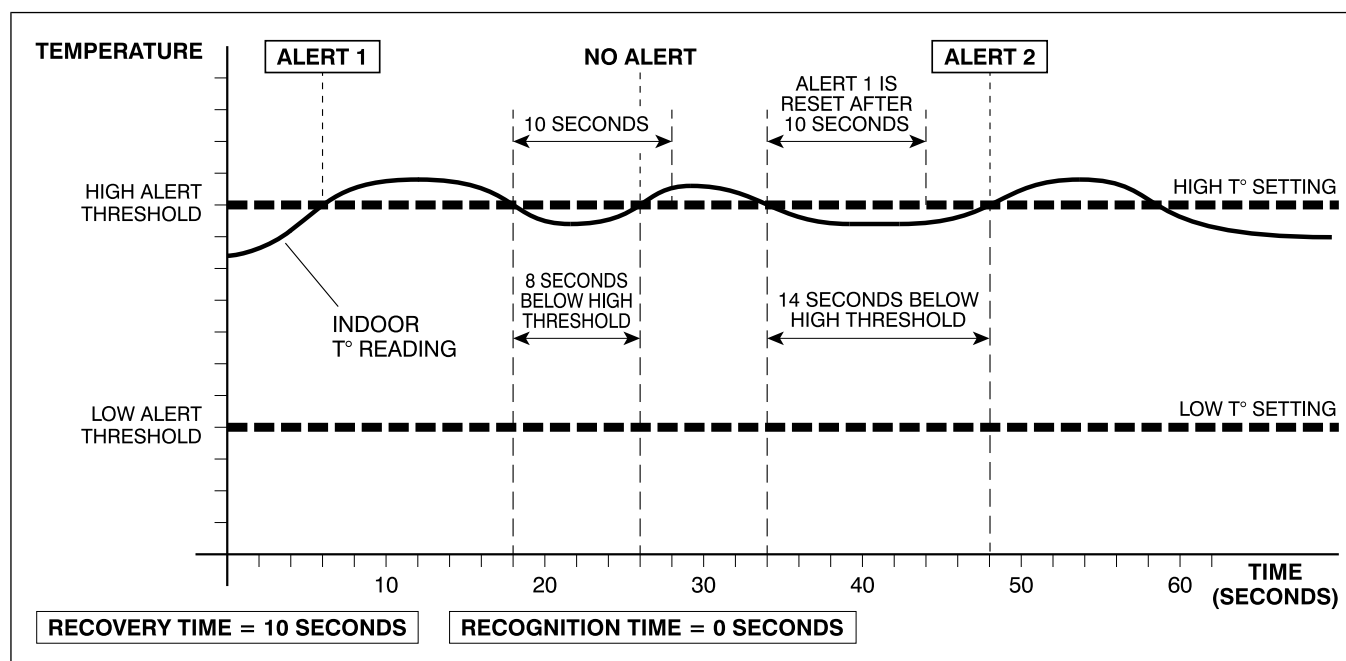


Setting the Alert Recovery Time

The alert recovery time is a set amount of time that a zone must remain within its normal range following an alert before a new alert can be set off.

1. In edit mode, under the **General** tab of the zone you are configuring, click on the edit field next to the **Recovery** button.
2. Set the alert recovery time.

Figure 6-3 Graph showing a zone in an alert state followed by a 10 second recovery time



Activating the Temperature Curve

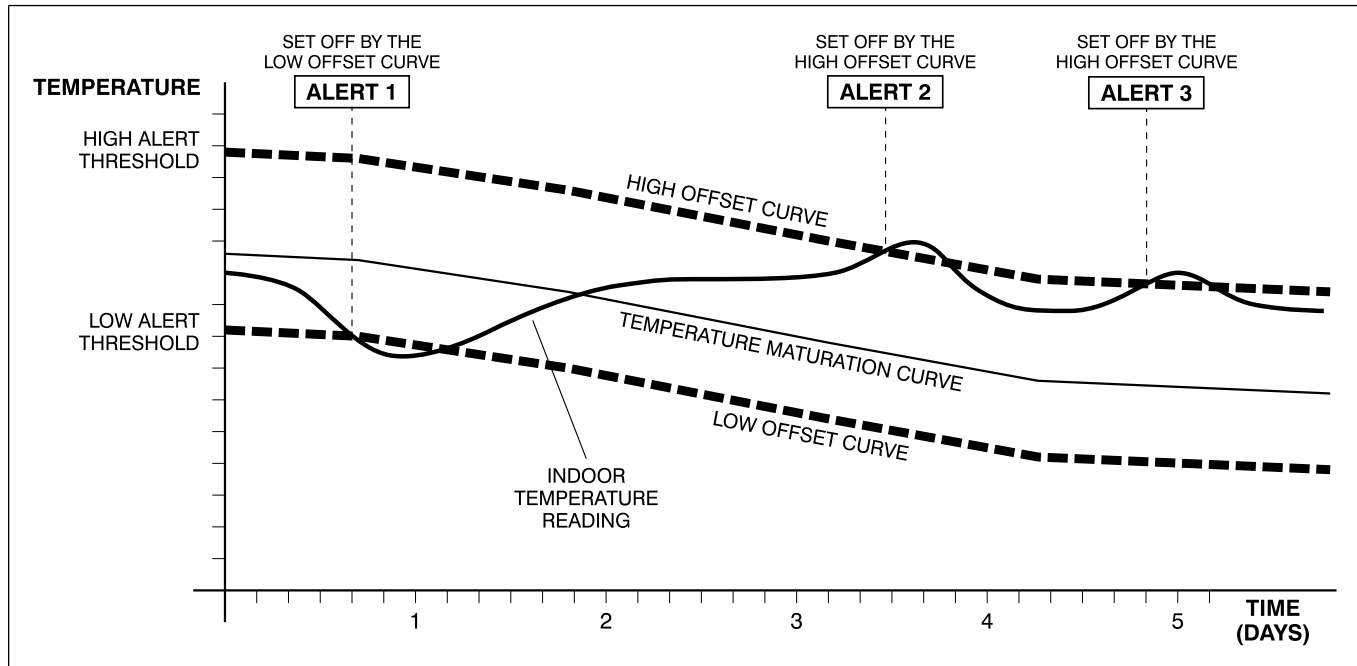
The temperature maturation curve allows you to monitor a temperature zone where the temperature is expected to gradually decrease over a period of days.

1. In edit mode, under the **Limits** tab, click on the **T° curve** button.

NOTE: The temperature maturation curve is only available in temperature zones.

2. If you want a temperature maturation curve different than **Default**, press on the curve selection button to display the selection list
3. Click on the circle to the left of the desired temperature maturation curve.
4. Click on the edit field next to the **High Offset** to display the input keypad and enter the high offset value.
5. Click on the edit field next to the **Low Offset** to display the input keypad and enter the low offset value.
6. If you want an age value different than **1**, select the **Age (days)** field to display the input keypad.
7. Select the starting day for your temperature maturation curve.

Figure 6-4 Graph showing an example of a maturation curve



Setting the High and Low Temperature Thresholds

In a temperature zone, an alert is set off when the temperature is below or above the given temperature threshold.

What You Should Know

NOTE: The temperature maturation curve must be disabled in order for the system to use the high and low temperature thresholds.

1. In edit mode, under the **Limits** tab, click on the edit field next to the red bell.
2. Enter the high limit threshold using the keypad.
3. Click on the edit field next to the blue bell.
4. Enter the low limit threshold using the key pad.

Setting the Critical Temperature Threshold

At anytime, whether or not you are using the outdoor temperature compensation, if the temperature reaches the critical threshold, an alert is set off.

1. In edit mode, under the **Limits** tab, click on the edit field next to the **Critical T** button.
2. Use the keypad to enter the critical temperature.

Setting the Outdoor Temperature Compensation

During hot and cold weather periods, it is difficult to maintain a cool or warm indoor temperature. The outdoor temperature compensation lets the system take into account the outside temperature before setting off unnecessary alerts.

1. In edit mode, under the **Limits** tab, click on the box next to **External temperature compensation**.

The LED lights when the outdoor temperature compensation is enabled.

2. Click on the **Ext. offset** edit field to display the keypad. Enter the desired value.

3. Click on the **Critical** field to display the input keypad. Enter the desired value.

How it Works: Outdoor Temperature Compensation

The outdoor temperature compensation uses the outdoor temperature as a guide to raise the high alert threshold to avoid too many unnecessary alerts during hot weather periods. A maximum critical temperature is set as a protective measure.

During hot weather periods, it might be difficult or impossible to maintain cool indoor temperatures. The outdoor temperature compensation feature allows you to raise the indoor temperature high alert threshold to avoid an unnecessary high number of alerts.

In general, the indoor temperature is greater than the outdoor temperature by a certain number of degrees, this is the **Ext. offset** setting. The **Ext. offset** is added to the outdoor temperature reading to produce the high temperature limit. An alert is set off only when the indoor temperature rises above the high temperature limit. The **Ext. offset** value can be modified.

In addition, there is a critical temperature setting (**Critical**) that limits the high alert threshold to a maximum temperature. An alert is always set off when the zone temperature goes above the critical temperature, whatever the outdoor temperature.

Table 6-1 Controls for the outdoor temperature compensation feature

Description	Default Value
The outdoor temperature reading is given by an outdoor probe.	Reading
The outdoor offset is added to the outdoor temperature reading to produce the high temperature limit.	5 °F (2.8 °C)
The high temperature limit is calculated by adding the Ext. offset value to the outdoor temperature reading. Above this temperature, an alert is set off.	Calculated value
The critical temperature setting is the maximum allowable indoor temperature. An alert is always set off above this temperature setting.	95 °C (35 °C)
The check box allows to activates and deactivates the outdoor temperature compensation feature.	A checked box indicates the outdoor compensation feature is activated

The two figures below are very similar. Both show the implementation of the outdoor temperature compensation feature, one with the high-low temperature feature and the other with the temperature maturation curve feature.

An indoor temperature reading curve is added to show when alerts are set off. The low alert threshold (thickest bottom line) is not influenced by the outdoor temperature compensation feature settings.

Observe the influence of the outdoor temperature (outdoor temperature offset curve) on the high alert threshold (thickest top line). Also note that the high alert threshold will not go higher than the critical temperature setting.

Figure 6-5 Graph combining the high-low temperature and the outdoor temperature compensation features

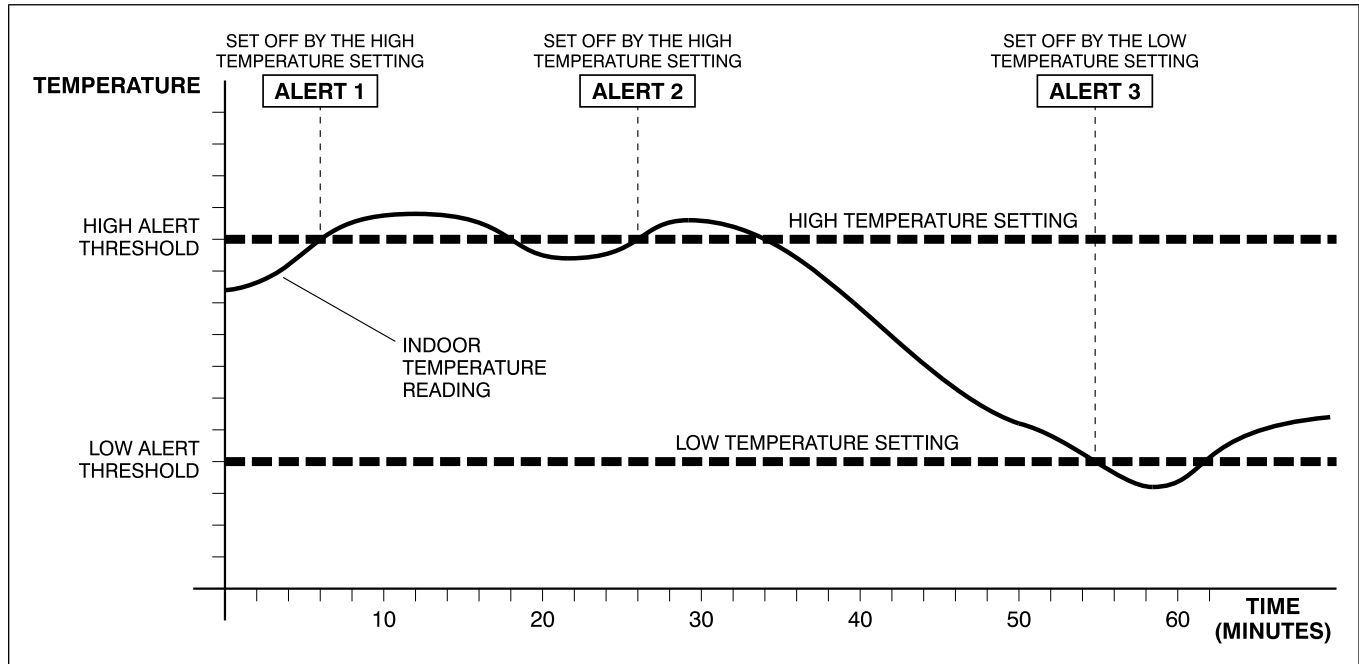
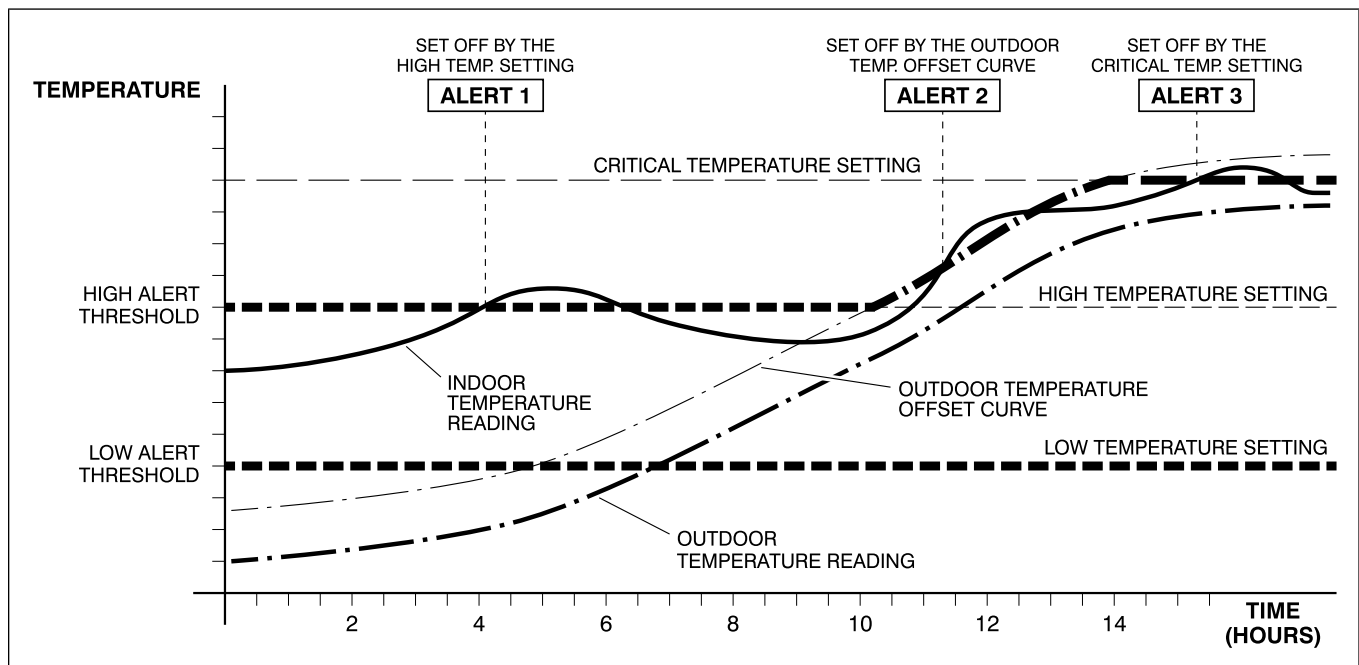


Figure 6-6 Graph combining the temperature maturation curve and the outdoor temperature compensation features



Activating a device in the Event of an Alert or Trouble

A device, such as a fan or a heater, can be turned on or off when an alert condition or trouble is detected in a zone. To do so, a programmable output must be activated in the zone.

1. In edit mode, under the **Action** tab, click on the edit field next to the event type you want the device's output linked to.

A list of available outputs is displayed.

NOTE: *Only the previously configured outputs are displayed.*

2. Click in the box to the left of the chosen output.

Receiving a Phone Call When an Alert is Active

In the event of an alert in a zone, the system calls the phone numbers selected to inform key people of the alert state.

What You Should Know

NOTE: *The phone numbers and phone groups must first be entered in the system menu.*

1. In edit mode, under the **Action** tab of the zone you are configuring, click on the edit field next to the telephone icon .
2. Click in the box to the left the contact person or group you would like to be notified in the event of an alert in the given zone.

After You Finish

Make sure to record the message you want your system to play when calling.

Receiving an E-mail When an Alert is Active

When an alert is present in a zone, the system sends the assigned contact group an e-mail to inform them of the situation. Receiving an e-mail when an alert is activated allows you to be alerted even when you are on the phone or out of the country.

Before You Begin

NOTE: *E-mail addresses must first be entered in the **Menu**→**System**→**Contacts** to be available for selection.*

1. In edit mode, under the **Action** tab of the zone you are configuring, click on the edit field next to the e-mail icon .
2. Choose the e-mail addresses to contact from the list.

Enabling the Siren

If you install a siren, you can choose to make it sound or not when an alert is set off in a zone.

Before You Begin

NOTE: *A siren must be installed and connected to your system for this feature to work.*

In edit mode, under the **Action** tab of the zone you are configuring, click on the edit field next to siren icon .

A check mark indicates the siren is enabled.

Enabling the Internal Speaker

The internal speaker allows you to hear the alert messages from the system when you are near the main system.

In edit mode, under the **Action** tab of the zone you are configuring, click on the edit field next to the speaker icon .

A check mark indicates the internal speaker is enabled.

Recording the Zone Audio Label

The audio label is the name the system repeats to identify the zone when calling because an alert is set off in the zone.

1. In edit mode, under the **Mess.** tab of the zone you are configuring, click on the record icon .

NOTE: *The time remaining to record the audio label starts counting down once you press the record button.*

Tip

For consistency, use the same words as you used when giving the **Name** in the zone's **General** tab.

2. State the zone audio label clearly.

NOTE: *The recording stops when it has reached the allowed time of 8 seconds.*

3. Click on the play icon  to listen to the recording.
4. If the recording is not satisfactory, press the garbage icon  to delete the recording and start over.
5. Repeat steps 2 through 5 to record the zone audio label in another language.

Resetting the Daily Minimum and Maximum

The system monitors and constantly updates the minimum and maximum values reached within a 24 hour period. The time of the recorded minimum and maximum values is displayed. After 24 hours, the values are reset and the monitoring starts anew.

In status mode, under the **General** tab in the zone you are configuring, click on the **Reset min/max**.

The information beside the **Max 24h** and **Min 24h** buttons is reset.

Calibrating the Temperature Probe

Although temperature probes are manufactured with high accuracy, some probes might show slight measurement variations. The probe calibration allows you to compensate for such a variation by up to $\pm 10^{\circ}\text{F}$ ($\pm 5.5^{\circ}\text{C}$) with an accuracy of one tenth of a degree

1. In edit mode, under the **Calibration** tab, click on the edit field next to the **Offset** button to display the keypad.
2. Enter the impedance offset in ohms.
3. Enter the temperature offset and the low and high trouble impedances.

NOTE: *Enter value from left to right and always enter a decimal value. For example, a value of 1°F requires you to enter 10 to obtain 1.0°F .*

Use the +/- button to change between a positive and a negative value.

For example, if a probe shows a measurement difference of $+ 1.3^{\circ}\text{F}$ from the actual temperature, you must enter $- 1.3^{\circ}\text{F}$ to calibrate the probe.

7 Configuring a 4 - 20mA Zone Type

Topics Covered in this Chapter

- Naming the Zone with a Text Label
- Selecting a Partition
- Selecting a Module
- Selecting an Input
- Selecting a Zone Type
- Setting the Alert Recognition Time
- Setting the Alert Recovery Time
- Resetting the Daily Minimum and Maximum
- Selecting the Unit of Measure
- Entering the Minimum and Maximum Values for an Input
- Activating a device in the Event of an Alert or Trouble
- Receiving a Phone Call When an Alert is Active
- Receiving an E-mail When an Alert is Active
- Enabling the Siren
- Enabling the Internal Speaker
- Recording the Zone Audio Label
- Calibrating the Sensor Outputs
- Setting the Calibration Zero and Calibration Span
- How it Works: Calibration Zero and Calibration Span
- Viewing Zone Calibration

Naming the Zone with a Text Label

The zone text label is a name you give to a zone to facilitate its identification. In addition to the zone number, the text label appears everywhere where the zone is identified in writing on the user interface.

1. In edit mode, under the **General** tab of the zone you are configuring, click on the edit field next to the **Name** button.
2. Type in the zone label of your choice.

NOTE: *The field is limited to 32 characters.*

Selecting a Partition

Partitions are used to group zones that are located in the same area or that are logically connected together. This can represent entire buildings or portions of a building. If you select the same partition in the zones belonging to a specific area, monitoring is done with one partition instead of several zones. Zones in a partition can also be bypassed and activated collectively.

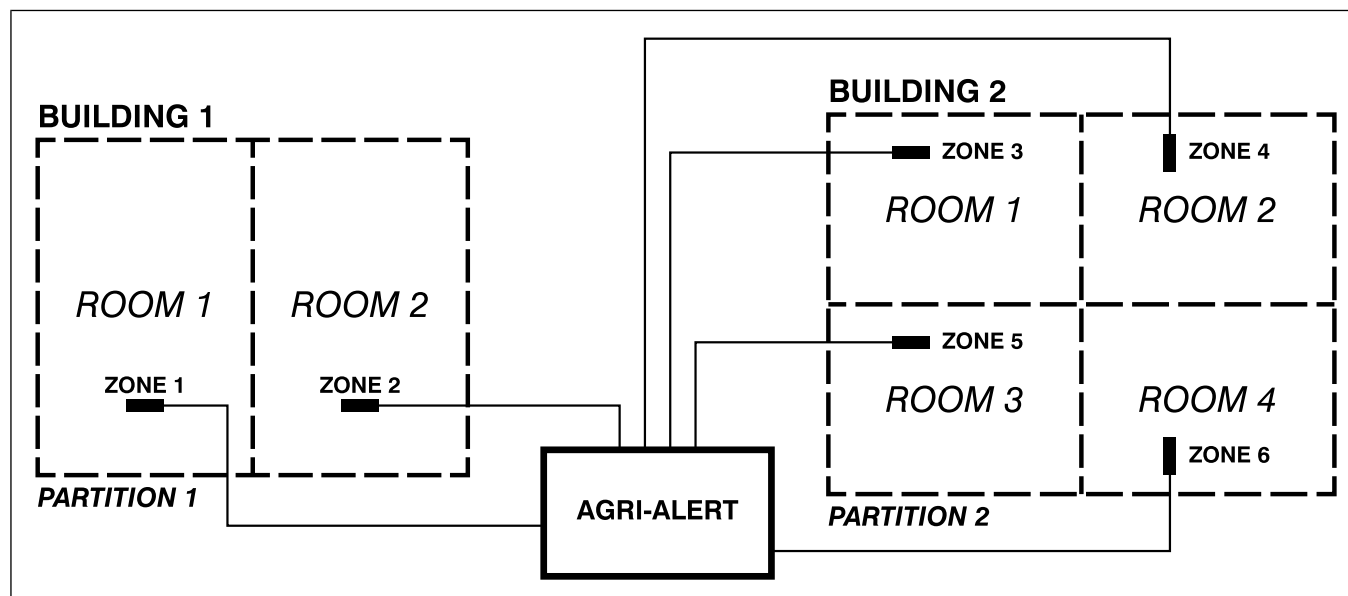
What You Should Know

NOTE: *In order to be available for assignment, a partition must be created.*

Chapter 7: Configuring a 4 - 20mA Zone Type

1. In edit mode, Under the **General** tab, click on the edit field next to **Partition**.
2. Click in the circle to the left of the partition of your choice.

Figure 7-1 Example of a partition



Selecting a Module

By selecting a module you link the zone to the area you want to monitor.

1. In edit mode, under the **General** tab, click on the **Module** edit field to display the selection box.
2. Select a module from the list.

NOTE: Only the modules that are connected to the system and that are initialized in the system are available for selection.

Selecting an Input

1. In edit mode, under the **General** tab, click on the **Input** edit field to display the selection box.
2. Select the input from the list.

Selecting a Zone Type

Selecting a zone type allows the system to properly interpret the data received from the selected input

What You Should Know

IMPORTANT: The selected zone type must correspond to the type of sensor associated with the input you selected.

1. In edit mode, under the **General** tab, click on the **Type** edit field to display the selection box.
2. Select a zone type from the list. Once a zone type has been selected, the configuration page displays the appropriate settings.

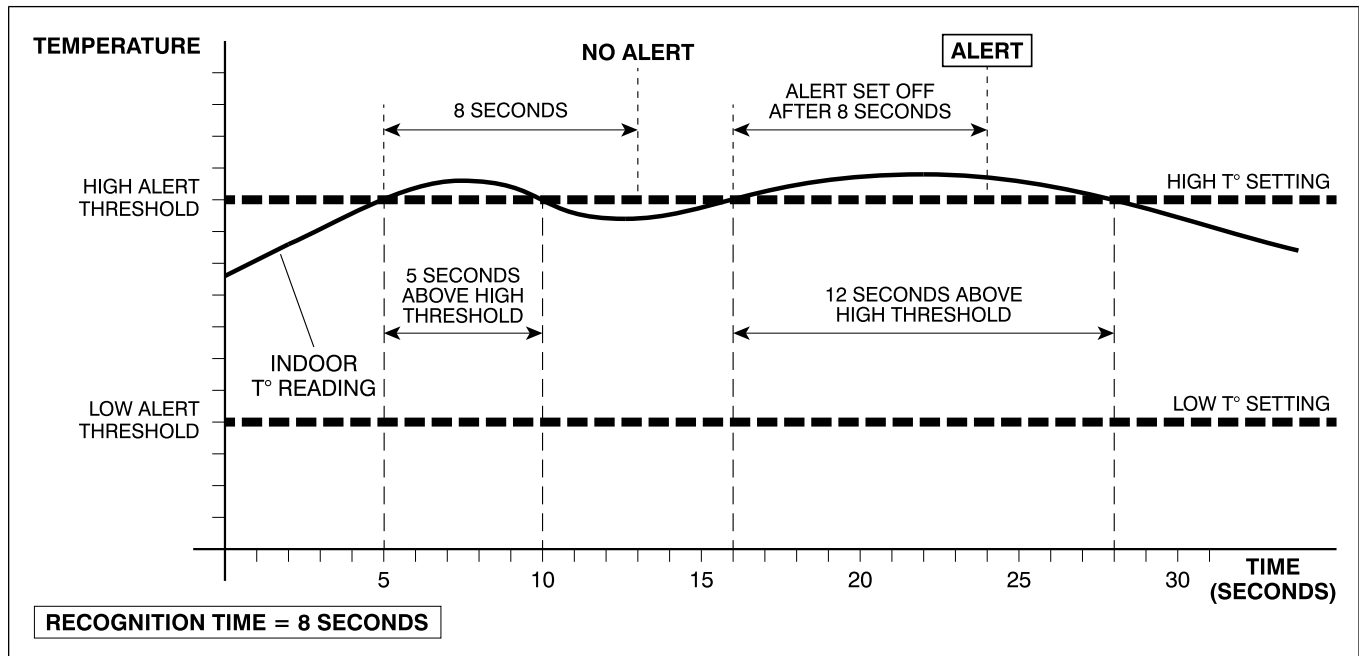
NOTE: The outdoor temperature zone type is not available if it has already been assigned to a zone.

Setting the Alert Recognition Time

The alert recognition time is used to calculate the set period of time before an alert condition is recognized and an alert set off. The zone must continuously be in an alert condition for a specific period of time before an alert is recognized and set off.

1. In edit mode, under the **General** tab of the zone you are configuring, click on the edit field next to the **Recognition** button.
2. Set the alert recognition time.

Figure 7-2 Graph displaying an example of an alert with an 8 second recognition time

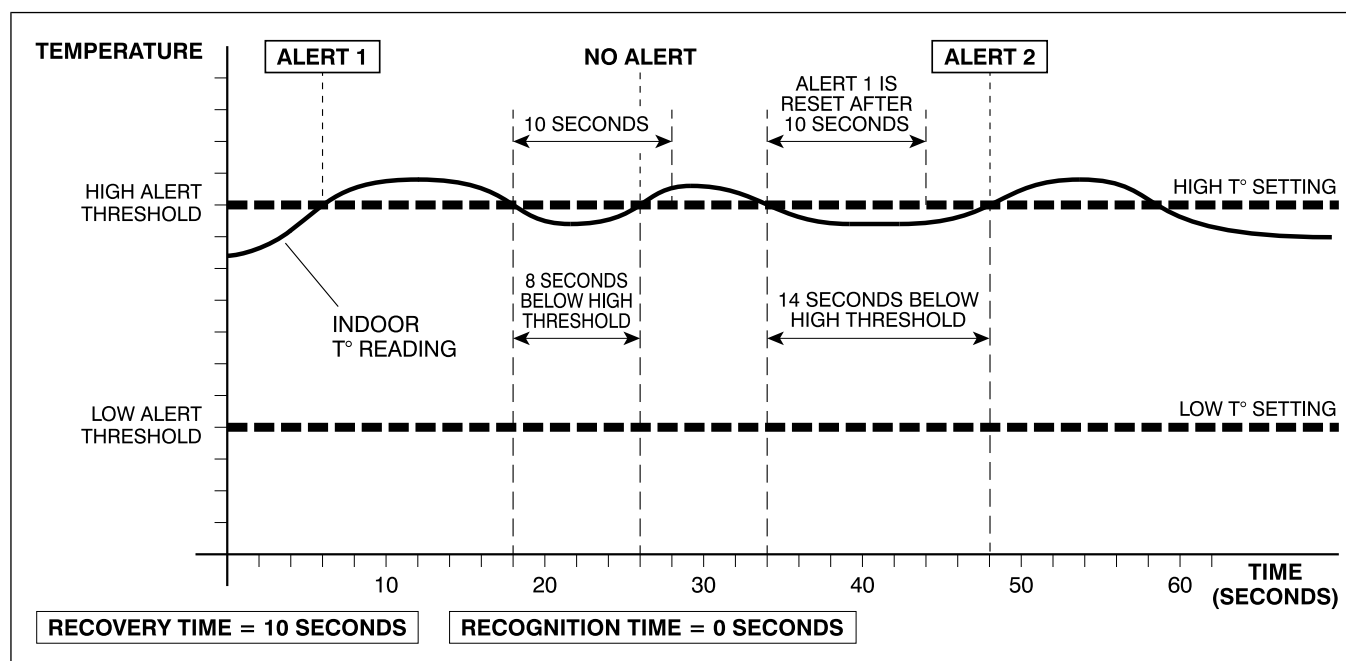


Setting the Alert Recovery Time

The alert recovery time is a set amount of time that a zone must remain within its normal range following an alert before a new alert can be set off.

1. In edit mode, under the **General** tab of the zone you are configuring, click on the edit field next to the **Recovery** button.
2. Set the alert recovery time.

Figure 7-3 Graph showing a zone in an alert state followed by a 10 second recovery time



Resetting the Daily Minimum and Maximum

The system monitors and constantly updates the minimum and maximum values reached within a 24 hour period. The time of the recorded minimum and maximum values is displayed. After 24 hours, the values are reset and the monitoring starts anew.

In status mode, under the **General** tab in the zone you are configuring, click on the **Reset min/max**.

The information beside the **Max 24h** and **Min 24h** buttons is reset.

Selecting the Unit of Measure

Selecting the correct units of measure for the input facilitates the reading of alert thresholds at a glance.

1. In edit mode, under the **General** tab, click on the edit field next to the **Unit** button.
2. Select the units of measure to display according to the input connected to the zone.

Entering the Minimum and Maximum Values for an Input

1. In edit mode, under the **General** tab, click in the edit field next to the **Min** button.
2. Enter the minimum value measured by your input using the keypad.
3. Click in the edit field next to the **Max** button.
4. Enter the maximum value measured by your input using the keypad.

Activating a device in the Event of an Alert or Trouble

A device, such as a fan or a heater, can be turned on or off when an alert condition or trouble is detected in a zone. To do so, a programmable output must be activated in the zone.

1. In edit mode, under the **Action** tab, click on the edit field next to the event type you want the device's output linked to.

A list of available outputs is displayed.

NOTE: *Only the previously configured outputs are displayed.*

2. Click in the box to the left of the chosen output.

Receiving a Phone Call When an Alert is Active

In the event of an alert in a zone, the system calls the phone numbers selected to inform key people of the alert state.

What You Should Know

NOTE: *The phone numbers and phone groups must first be entered in the system menu.*

1. In edit mode, under the **Action** tab of the zone you are configuring, click on the edit field next to the telephone icon .
2. Click in the box to the left the contact person or group you would like to be notified in the event of an alert in the given zone.

After You Finish

Make sure to record the message you want your system to play when calling.

Receiving an E-mail When an Alert is Active

When an alert is present in a zone, the system sends the assigned contact group an e-mail to inform them of the situation. Receiving an e-mail when an alert is activated allows you to be alerted even when you are on the phone or out of the country.

Before You Begin

NOTE: *E-mail addresses but first be entered in the **Menu**→**System**→**Contacts** to be available for selection.*

1. In edit mode, under the **Action** tab of the zone you are configuring, click on the edit field next to the e-mail icon .
2. Choose the e-mail addresses to contact from the list.

Enabling the Siren

If you install a siren, you can chose to make it sound or not when an alert is set off in a zone.

Before You Begin

NOTE: *A siren must be installed and connected to your system for this feature to work.*

In edit mode, under the **Action** tab of the zone you are configuring, click on the edit field next to siren icon .

A check mark indicates the siren is enabled.

Enabling the Internal Speaker

The internal speaker allows you to hear the alert messages from the system when you are near the main system.

In edit mode, under the **Action** tab of the zone you are configuring, click on the edit field next to the speaker icon .

A check mark indicates the internal speaker is enabled.

Recording the Zone Audio Label

The audio label is the name the system repeats to identify the zone when calling because an alert is set off in the zone.

1. In edit mode, under the **Mess.** tab of the zone you are configuring, click on the record icon .

NOTE: *The time remaining to record the audio label starts counting down once you press the record button.*

Tip

For consistency, use the same words as you used when giving the **Name** in the zone's **General** tab.

2. State the zone audio label clearly.

NOTE: *The recording stops when it has reached the allowed time of 8 seconds.*

3. Click on the play icon  to listen to the recording.
4. If the recording is not satisfactory, press the garbage icon  to delete the recording and start over.
5. Repeat steps 2 through 5 to record the zone audio label in another language.

Calibrating the Sensor Outputs

To correct a possible zero or span error, it is important to calibrate the sensor outputs.

1. Using a 0 to 300 PSI pressure sensor, measure the sensor's output. The output should read 0 volts.
2. If the reading isn't 0, enter the the value with an inverted sign in the appropriate field. This becomes the **b** value in our equation.
3. Measure the output once more while at its maximum stimulation. The output should read 5 volts. If it doesn't, perform the following equation:

Maximum value of the input / (value generated by the sensor - the offset)

For example, 5 volts / (6 volts - 0,4 volts) = 0.89 span.

NOTE: The span entered by the user is not the *m* but rather the ratio between the normal curve and the correction.

Setting the Calibration Zero and Calibration Span

Setting the calibration zero and calibration span ensures accuracy in the values being monitored by the system in the event that an input is not calibrated.

What You Should Know

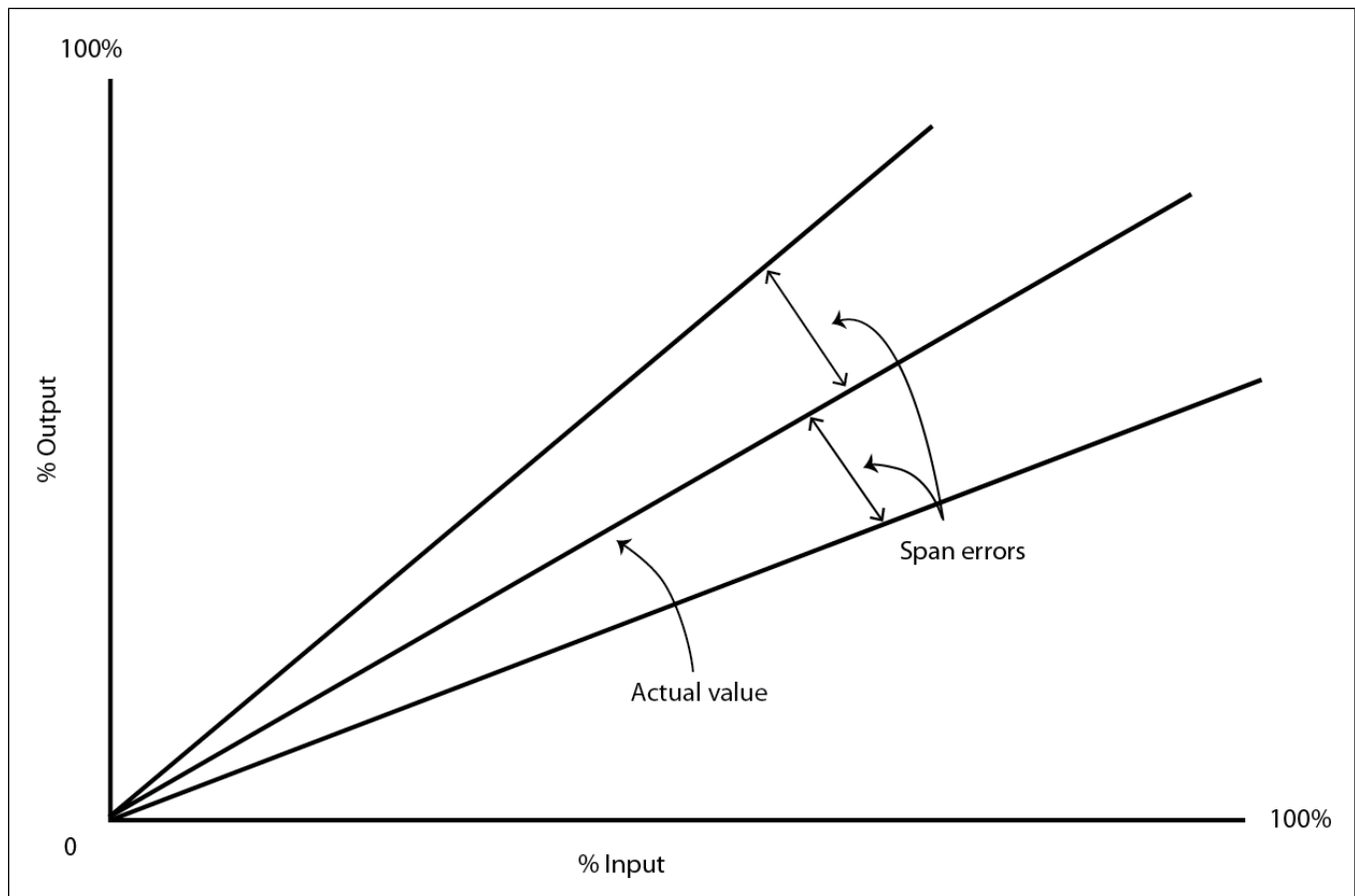
The calibration zero and calibration span only need to be entered if the input calibration is incorrect.

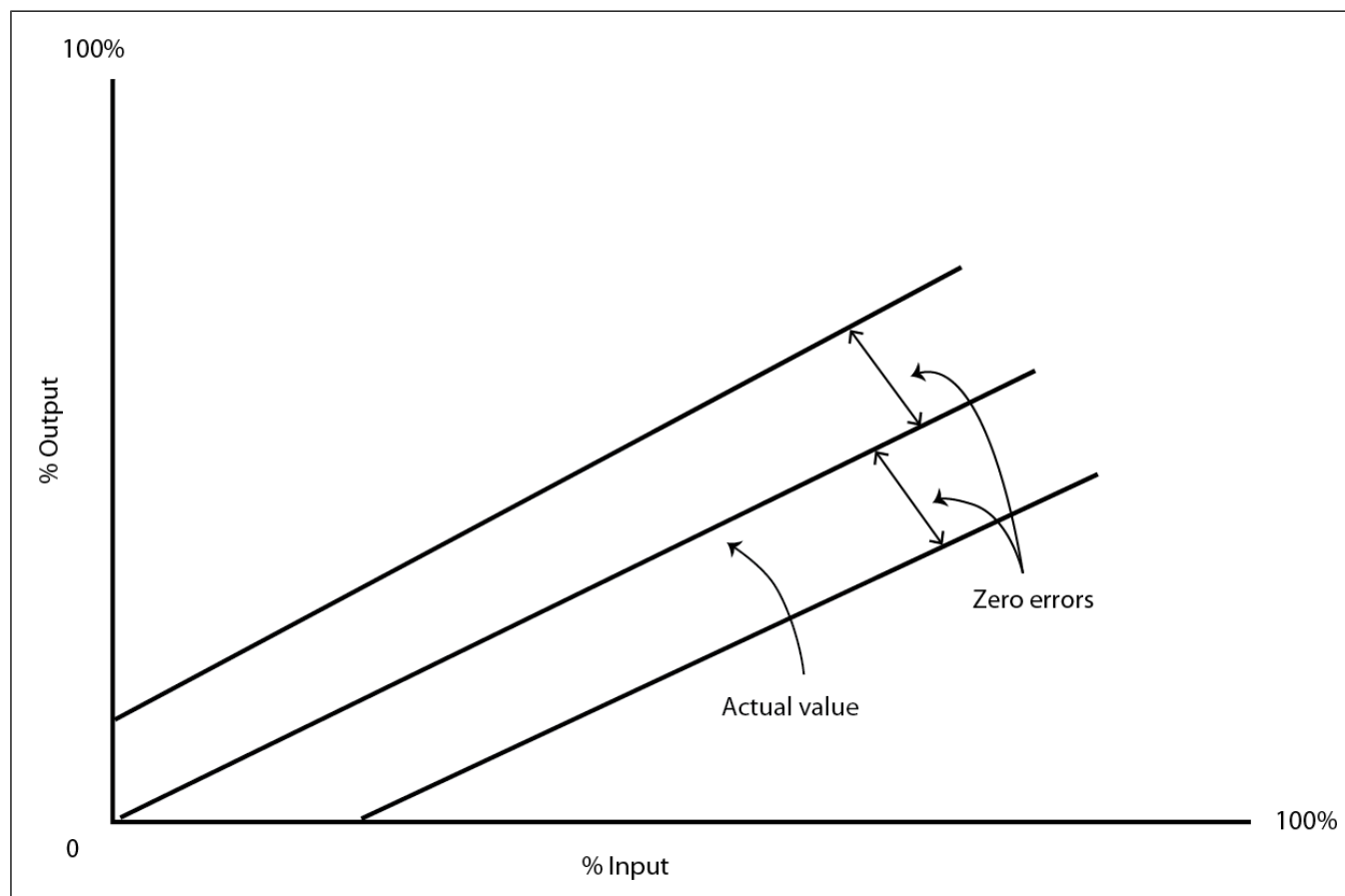
1. In edit mode, under the **General** tab, click on the edit field beside the **Cal. Zero** button.
2. Enter the zero calibration.
3. Click on the edit field next to the **Cal. Span** button.
4. Enter the calibration span.

How it Works: Calibration Zero and Calibration Span

Calibrating the zero and span errors allow the installer to correct the output of a sensor. A sensor output is viewed as a linear function $y = mx + b$

Sensors that are not calibrated can generate span or zero errors as illustrated in the figures below:





To correct the problem, the output of the sensor must be calibrated to be linear and represent the measure.

You can also use the calibration zero and span to get a range specific to the sensor output. For example, if you want a reading with a range of 0 to 250 PSI, you can adjust the span so that when the sensor reads 250 PSI, the input of the system indicates 20 mA. With a 0,000016 mA by PSI, to get 16 mA at 250 PSI, the span must be 4. By adjusting the readings, you are playing with the gain and offset to have readings reflect your sensor's range.

Viewing Zone Calibration

In addition to system diagnostics, you can view the zone calibration in the zone itself.

In status mode, under the **Message** tab, click on the **Calibration** button.

Trouble limits, raw and calibrated data is displayed.

The green LED lights when the **Calibration** button is enabled

8 Configuring a 0-5 Volt Zone Type

Topics Covered in this Chapter

- Naming the Zone with a Text Label
- Selecting a Partition
- Selecting a Module
- Selecting an Input
- Selecting a Zone Type
- Resetting the Daily Minimum and Maximum
- Setting the Alert Recognition Time
- Setting the Alert Recovery Time
- Selecting the Unit of Measure
- Entering the Minimum and Maximum Values for an Input
- Activating a device in the Event of an Alert or Trouble
- Receiving a Phone Call When an Alert is Active
- Receiving an E-mail When an Alert is Active
- Enabling the Siren
- Enabling the Internal Speaker
- Recording the Zone Audio Label
- Viewing Zone Calibration
- Calibrating the Sensor Outputs
- Setting the Calibration Zero and Calibration Span
- How it Works: Calibration Zero and Calibration Span

Naming the Zone with a Text Label

The zone text label is a name you give to a zone to facilitate its identification. In addition to the zone number, the text label appears everywhere where the zone is identified in writing on the user interface.

1. In edit mode, under the **General** tab of the zone you are configuring, click on the edit field next to the **Name** button.
2. Type in the zone label of your choice.

NOTE: *The field is limited to 32 characters.*

Selecting a Partition

Partitions are used to group zones that are located in the same area or that are logically connected together. This can represent entire buildings or portions of a building. If you select the same partition in the zones belonging to a specific area, monitoring is done with one partition instead of several zones. Zones in a partition can also be bypassed and activated collectively.

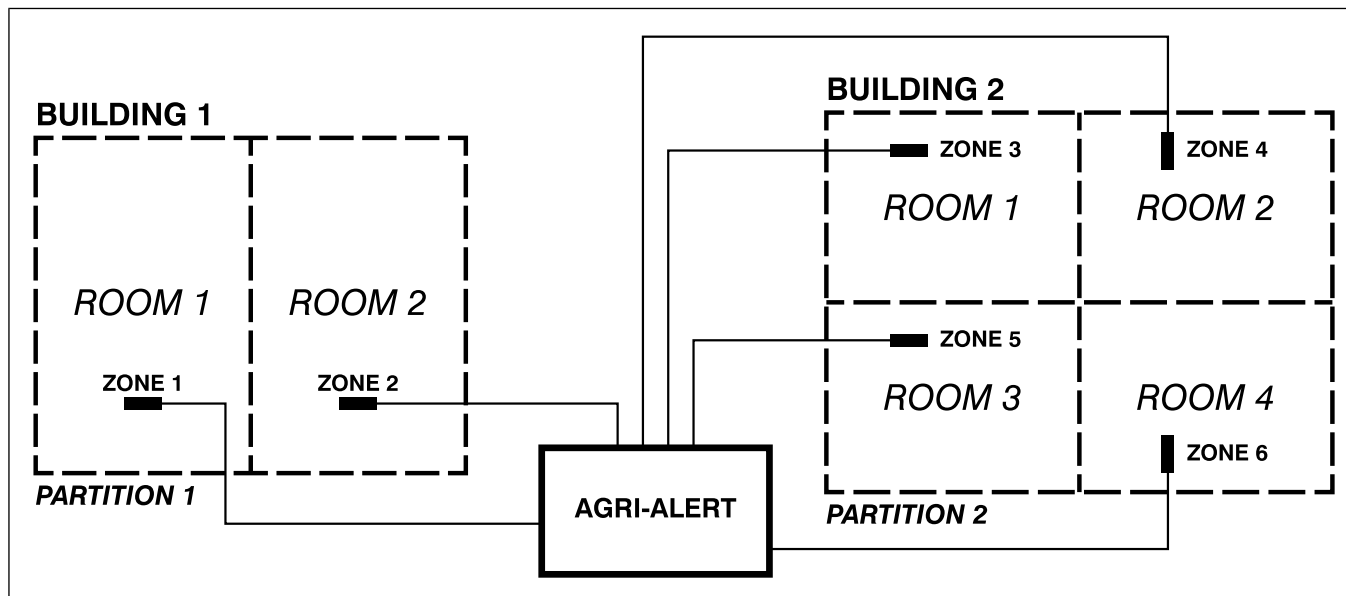
What You Should Know

NOTE: *In order to be available for assignment, a partition must be created.*

Chapter 8: Configuring a 0-5 Volt Zone Type

1. In edit mode, Under the **General** tab, click on the edit field next to **Partition**.
2. Click in the circle to the left of the partition of your choice.

Figure 8-1 Example of a partition



Selecting a Module

By selecting a module you link the zone to the area you want to monitor.

1. In edit mode, under the **General** tab, click on the **Module** edit field to display the selection box.
2. Select a module from the list.

NOTE: Only the modules that are connected to the system and that are initialized in the system are available for selection.

Selecting an Input

1. In edit mode, under the **General** tab, click on the **Input** edit field to display the selection box.
2. Select the input from the list.

Selecting a Zone Type

Selecting a zone type allows the system to properly interpret the data received from the selected input

What You Should Know

IMPORTANT: The selected zone type must correspond to the type of sensor associated with the input you selected.

1. In edit mode, under the **General** tab, click on the **Type** edit field to display the selection box.
2. Select a zone type from the list. Once a zone type has been selected, the configuration page displays the appropriate settings.

NOTE: The outdoor temperature zone type is not available if it has already been assigned to a zone.

Resetting the Daily Minimum and Maximum

The system monitors and constantly updates the minimum and maximum values reached within a 24 hour period. The time of the recorded minimum and maximum values is displayed. After 24 hours, the values are reset and the monitoring starts anew.

In status mode, under the **General** tab in the zone you are configuring, click on the **Reset min/max**.

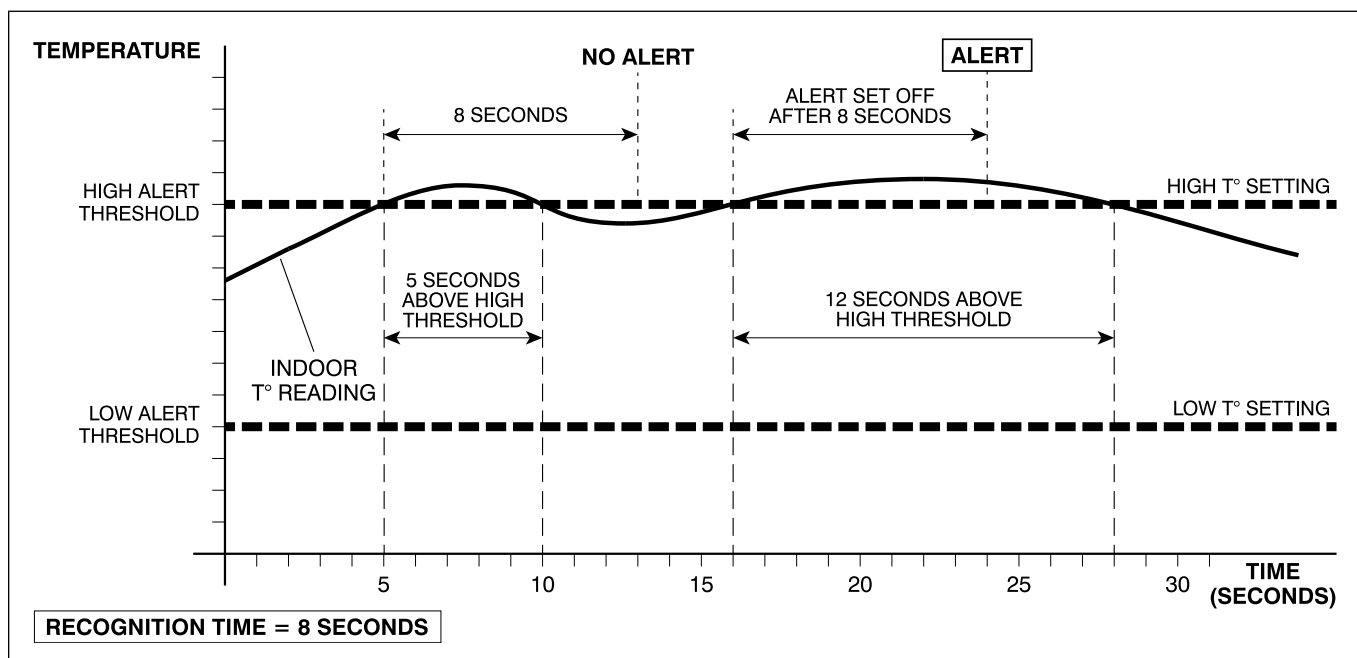
The information beside the **Max 24h** and **Min 24h** buttons is reset.

Setting the Alert Recognition Time

The alert recognition time is used to calculate the set period of time before an alert condition is recognized and an alert set off. The zone must continuously be in an alert condition for a specific period of time before an alert is recognized and set off.

1. In edit mode, under the **General** tab of the zone you are configuring, click on the edit field next to the **Recognition** button.
2. Set the alert recognition time.

Figure 8-2 Graph displaying an example of an alert with an 8 second recognition time

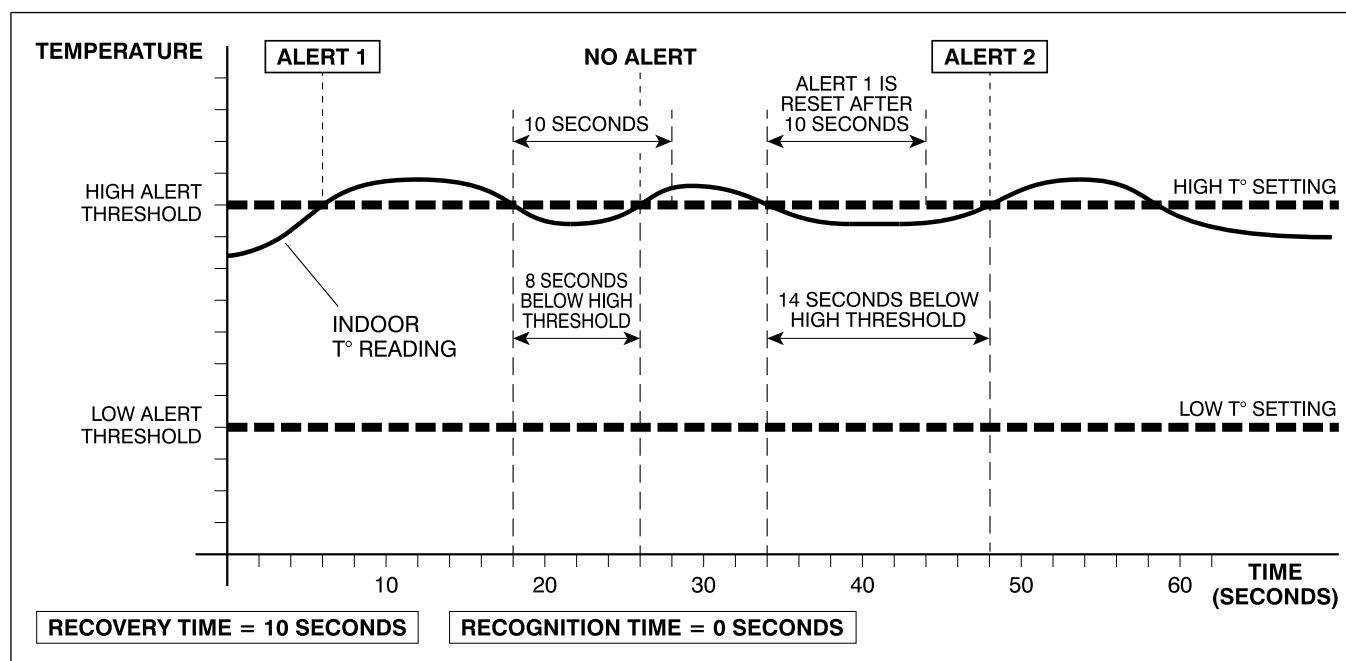


Setting the Alert Recovery Time

The alert recovery time is a set amount of time that a zone must remain within its normal range following an alert before a new alert can be set off.

1. In edit mode, under the **General** tab of the zone you are configuring, click on the edit field next to the **Recovery** button.
2. Set the alert recovery time.

Figure 8-3 Graph showing a zone in an alert state followed by a 10 second recovery time



Selecting the Unit of Measure

Selecting the correct units of measure for the input facilitates the reading of alert thresholds at a glance.

1. In edit mode, under the **General** tab, click on the edit field next to the **Unit** button.
2. Select the units of measure to display according to the input connected to the zone.

Entering the Minimum and Maximum Values for an Input

1. In edit mode, under the **General** tab, click in the edit field next to the **Min** button.
2. Enter the minimum value measured by your input using the keypad.
3. Click in the edit field next to the **Max** button.
4. Enter the maximum value measured by your input using the keypad.

Activating a device in the Event of an Alert or Trouble

A device, such as a fan or a heater, can be turned on or off when an alert condition or trouble is detected in a zone. To do so, a programmable output must be activated in the zone.

1. In edit mode, under the **Action** tab, click on the edit field next to the event type you want the device's output linked to.

A list of available outputs is displayed.

NOTE: Only the previously configured outputs are displayed.

2. Click in the box to the left of the chosen output.

Receiving a Phone Call When an Alert is Active

In the event of an alert in a zone, the system calls the phone numbers selected to inform key people of the alert state.

What You Should Know

NOTE: *The phone numbers and phone groups must first be entered in the system menu.*

1. In edit mode, under the **Action** tab of the zone you are configuring, click on the edit field next to the telephone icon .
2. Click in the box to the left the contact person or group you would like to be notified in the event of an alert in the given zone.

After You Finish

Make sure to record the message you want your system to play when calling.

Receiving an E-mail When an Alert is Active

When an alert is present in a zone, the system sends the assigned contact group an e-mail to inform them of the situation. Receiving an e-mail when an alert is activated allows you to be alerted even when you are on the phone or out of the country.

Before You Begin

NOTE: *E-mail addresses must first be entered in the **Menu**→**System**→**Contacts** to be available for selection.*

1. In edit mode, under the **Action** tab of the zone you are configuring, click on the edit field next to the e-mail icon .
2. Choose the e-mail addresses to contact from the list.

Enabling the Siren

If you install a siren, you can choose to make it sound or not when an alert is set off in a zone.

Before You Begin

NOTE: *A siren must be installed and connected to your system for this feature to work.*

In edit mode, under the **Action** tab of the zone you are configuring, click on the edit field next to siren icon .

A check mark indicates the siren is enabled.

Enabling the Internal Speaker

The internal speaker allows you to hear the alert messages from the system when you are near the main system.

In edit mode, under the **Action** tab of the zone you are configuring, click on the edit field next to the speaker icon .

A check mark indicates the internal speaker is enabled.

Recording the Zone Audio Label

The audio label is the name the system repeats to identify the zone when calling because an alert is set off in the zone.

1. In edit mode, under the **Mess.** tab of the zone you are configuring, click on the record icon .

NOTE: *The time remaining to record the audio label starts counting down once you press the record button.*

Tip

For consistency, use the same words as you used when giving the **Name** in the zone's **General** tab.

2. State the zone audio label clearly.

NOTE: *The recording stops when it has reached the allowed time of 8 seconds.*

3. Click on the play icon  to listen to the recording.
4. If the recording is not satisfactory, press the garbage icon  to delete the recording and start over.
5. Repeat steps 2 through 5 to record the zone audio label in another language.

Viewing Zone Calibration

In addition to system diagnostics, you can view the zone calibration in the zone itself.

In status mode, under the **Message** tab, click on the **Calibration** button.

Trouble limits, raw and calibrated data is displayed.

The green LED lights when the **Calibration** button is enabled

Calibrating the Sensor Outputs

To correct a possible zero or span error, it is important to calibrate the sensor outputs.

1. Using a 0 to 300 PSI pressure sensor, measure the sensor's output. The output should read 0 volts.
2. If the reading isn't 0, enter the the value with an inverted sign in the appropriate field. This becomes the **b** value in our equation.
3. Measure the output once more while at its maximum stimulation. The output should read 5 volts. If it doesn't, perform the following equation:

Maximum value of the input / (value generated by the sensor - the offset)

For example, 5 volts / (6 volts - 0,4 volts) = 0.89 span.

NOTE: *The span entered by the user is not the **m** but rather the ratio between the normal curve and the correction.*

Setting the Calibration Zero and Calibration Span

Setting the calibration zero and calibration span ensures accuracy in the values being monitored by the system in the event that an input is not calibrated.

What You Should Know

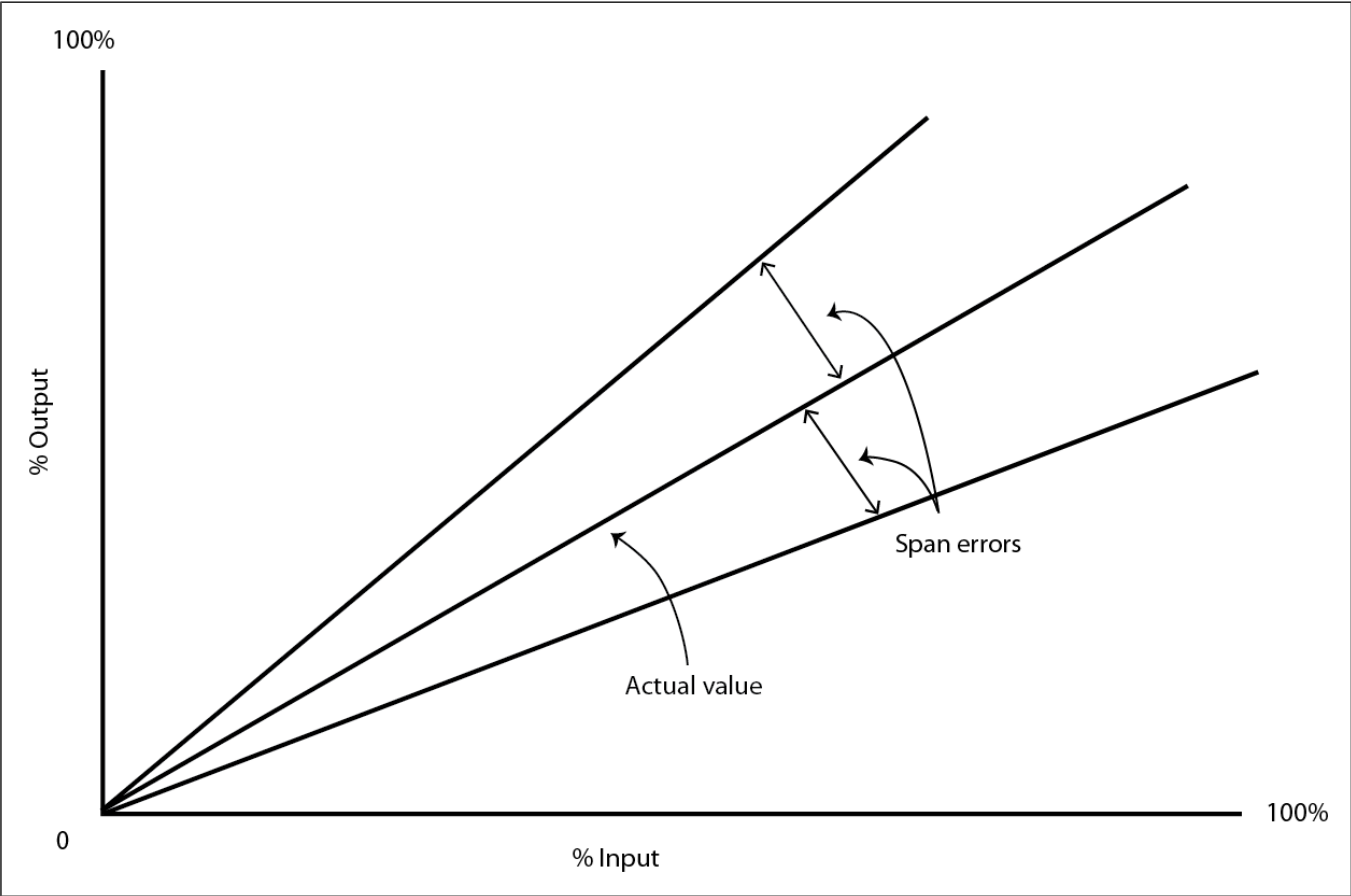
The calibration zero and calibration span only need to be entered if the input calibration is incorrect.

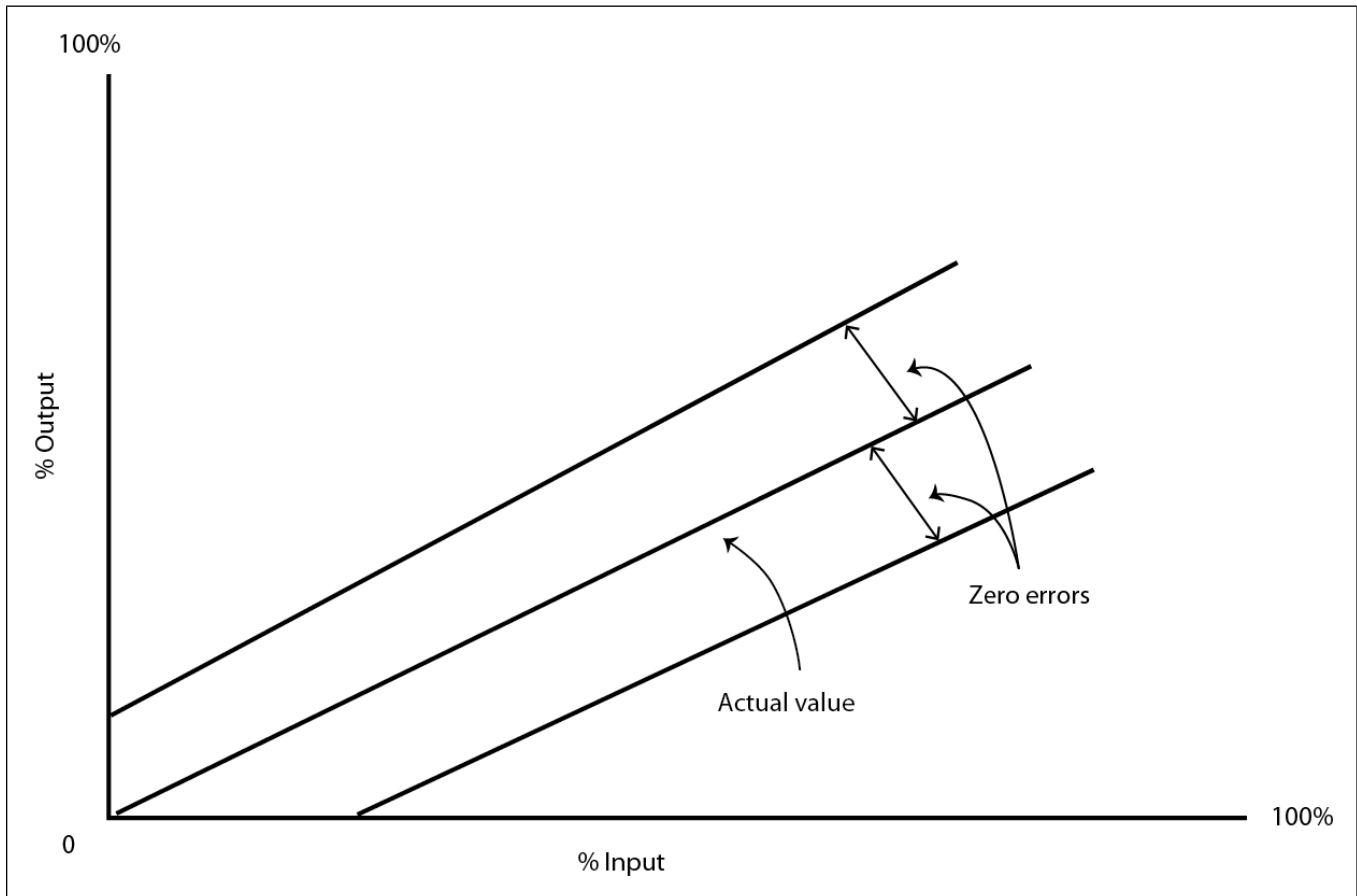
1. In edit mode, under the **General** tab, click on the edit field beside the **Cal. Zero** button.
2. Enter the zero calibration.
3. Click on the edit field next to the **Cal. Span** button.
4. Enter the calibration span.

How it Works: Calibration Zero and Calibration Span

Calibrating the zero and span errors allow the installer to correct the output of a sensor. A sensor output is viewed as a linear function $y = mx + b$

Sensors that are not calibrated can generate span or zero errors as illustrated in the figures below:





To correct the problem, the output of the sensor must be calibrated to be linear and represent the measure.

You can also use the calibration zero and span to get a range specific to the sensor output. For example, if you want a reading with a range of 0 to 250 PSI, you can adjust the span so that when the sensor reads 250 PSI, the input of the system indicates 20 mA. With a 0,000016 mA by PSI, to get 16 mA at 250 PSI, the span must be 4. By adjusting the readings, you are playing with the gain and offset to have readings reflect your sensor's range.

NOTES

9 Configuring a Dry Contact Zone

Topics Covered in this Chapter

- Naming the Zone with a Text Label
- Selecting a Partition
- Selecting a Module
- Selecting an Input
- Selecting a Zone Type
- Setting the Alert Recognition Time
- Setting the Alert Recovery Time
- Resetting the Daily Minimum and Maximum
- Choosing the Type of End of Line Resistor
- Selecting the Type of Contact in the Dry Contact Zone
- Activating a device in the Event of an Alert or Trouble
- Receiving a Phone Call When an Alert is Active
- Receiving an E-mail When an Alert is Active
- Enabling the Siren
- Enabling the Internal Speaker
- Recording the Zone Audio Label
- Viewing Zone Calibration
- Calibrating the Zone Trouble Thresholds

Naming the Zone with a Text Label

The zone text label is a name you give to a zone to facilitate its identification. In addition to the zone number, the text label appears everywhere where the zone is identified in writing on the user interface.

1. In edit mode, under the **General** tab of the zone you are configuring, click on the edit field next to the **Name** button.
2. Type in the zone label of your choice.

NOTE: *The field is limited to 32 characters.*

Selecting a Partition

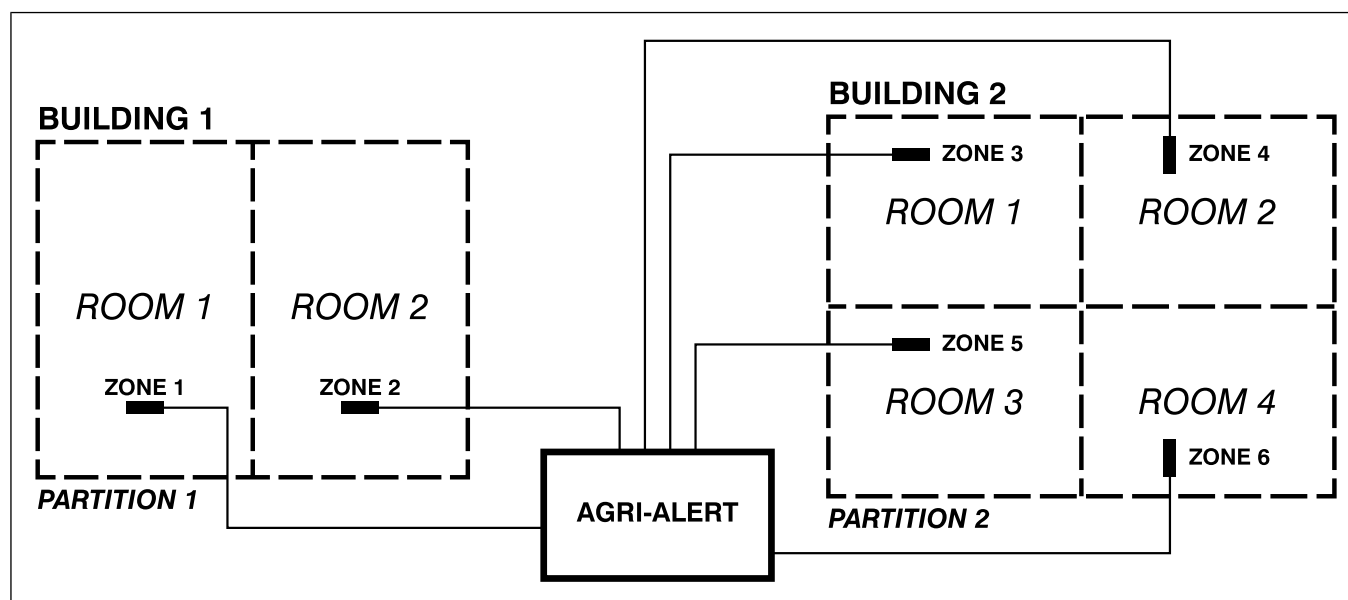
Partitions are used to group zones that are located in the same area or that are logically connected together. This can represent entire buildings or portions of a building. If you select the same partition in the zones belonging to a specific area, monitoring is done with one partition instead of several zones. Zones in a partition can also be bypassed and activated collectively.

What You Should Know

NOTE: *In order to be available for assignment, a partition must be created.*

1. In edit mode, Under the **General** tab, click on the edit field next to **Partition**.
2. Click in the circle to the left of the partition of your choice.

Figure 9-1 Example of a partition



Selecting a Module

By selecting a module you link the zone to the area you want to monitor.

1. In edit mode, under the **General** tab, click on the **Module** edit field to display the selection box.
2. Select a module from the list.

NOTE: Only the modules that are connected to the system and that are initialized in the system are available for selection.

Selecting an Input

1. In edit mode, under the **General** tab, click on the **Input** edit field to display the selection box.
2. Select the input from the list.

Selecting a Zone Type

Selecting a zone type allows the system to properly interpret the data received from the selected input

What You Should Know

IMPORTANT: The selected zone type must correspond to the type of sensor associated with the input you selected.

1. In edit mode, under the **General** tab, click on the **Type** edit field to display the selection box.
2. Select a zone type from the list. Once a zone type has been selected, the configuration page displays the appropriate settings.

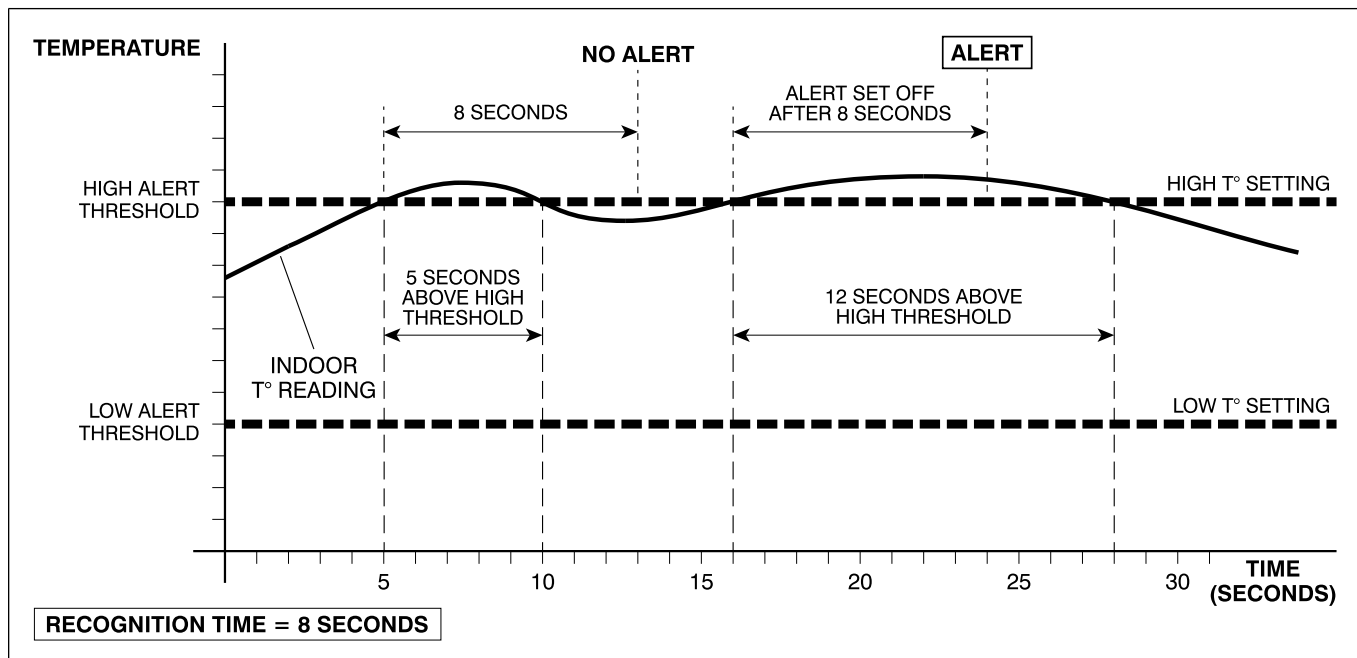
NOTE: The outdoor temperature zone type is not available if it has already been assigned to a zone.

Setting the Alert Recognition Time

The alert recognition time is used to calculate the set period of time before an alert condition is recognized and an alert set off. The zone must continuously be in an alert condition for a specific period of time before an alert is recognized and set off.

1. In edit mode, under the **General** tab of the zone you are configuring, click on the edit field next to the **Recognition** button.
2. Set the alert recognition time.

Figure 9-2 Graph displaying an example of an alert with an 8 second recognition time

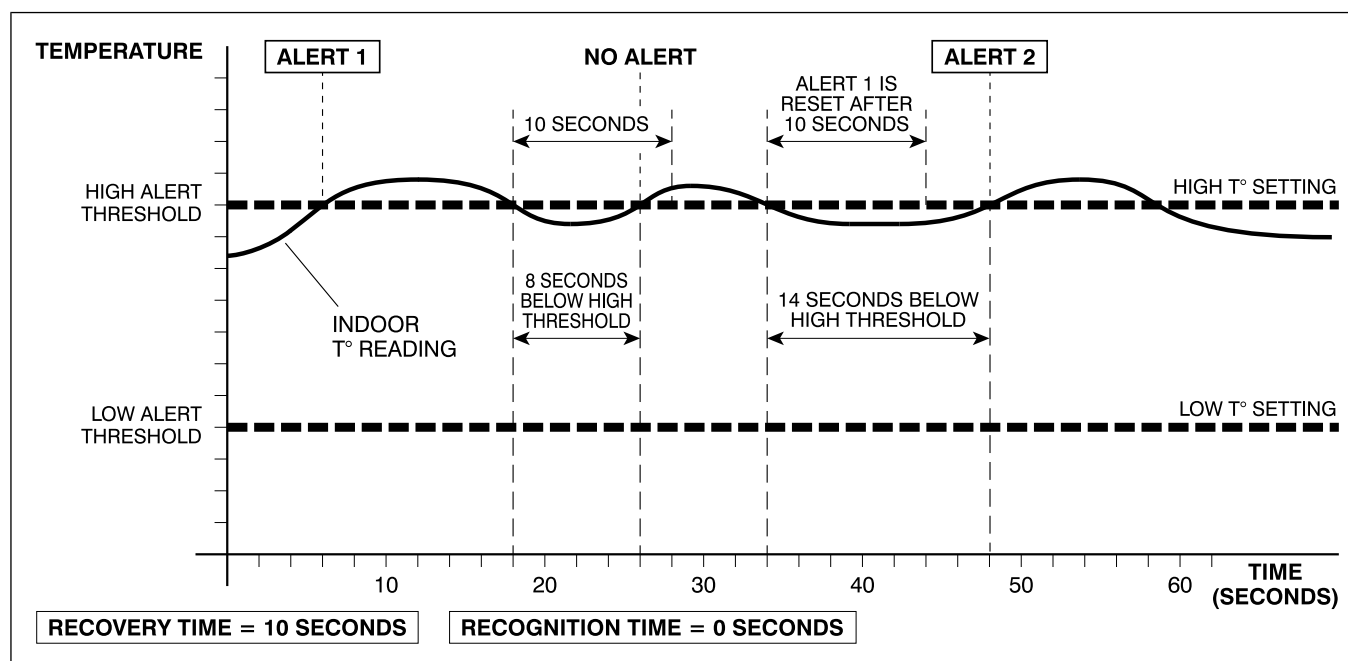


Setting the Alert Recovery Time

The alert recovery time is a set amount of time that a zone must remain within its normal range following an alert before a new alert can be set off.

1. In edit mode, under the **General** tab of the zone you are configuring, click on the edit field next to the **Recovery** button.
2. Set the alert recovery time.

Figure 9-3 Graph showing a zone in an alert state followed by a 10 second recovery time



Resetting the Daily Minimum and Maximum

The system monitors and constantly updates the minimum and maximum values reached within a 24 hour period. The time of the recorded minimum and maximum values is displayed. After 24 hours, the values are reset and the monitoring starts anew.

In status mode, under the **General** tab in the zone you are configuring, click on the **Reset min/max**.

The information beside the **Max 24h** and **Min 24h** buttons is reset.

Choosing the Type of End of Line Resistor

When configuring a zone using end of line resistors, you must choose the type of end of line resistors used in your installation for the zone you are configuring to ensure data accuracy.

1. In edit mode, under the **General** tab, click on the edit field next to **EOLR**.
2. Select the type of resistor you are using.

Selecting the Type of Contact in the Dry Contact Zone

1. In edit mode, under the **General** tab, click on the edit field next to the **Contact** button.
2. Select the contact type used for the zone.

Activating a device in the Event of an Alert or Trouble

A device, such as a fan or a heater, can be turned on or off when an alert condition or trouble is detected in a zone. To do so, a programmable output must be activated in the zone.

1. In edit mode, under the **Action** tab, click on the edit field next to the event type you want the device's output linked to.

A list of available outputs is displayed.

NOTE: *Only the previously configured outputs are displayed.*

2. Click in the box to the left of the chosen output.

Receiving a Phone Call When an Alert is Active

In the event of an alert in a zone, the system calls the phone numbers selected to inform key people of the alert state.

What You Should Know

NOTE: *The phone numbers and phone groups must first be entered in the system menu.*

1. In edit mode, under the **Action** tab of the zone you are configuring, click on the edit field next to the telephone icon .
2. Click in the box to the left the contact person or group you would like to be notified in the event of an alert in the given zone.

After You Finish

Make sure to record the message you want your system to play when calling.

Receiving an E-mail When an Alert is Active

When an alert is present in a zone, the system sends the assigned contact group an e-mail to inform them of the situation. Receiving an e-mail when an alert is activated allows you to be alerted even when you are on the phone or out of the country.

Before You Begin

NOTE: *E-mail addresses must first be entered in the **Menu**→**System**→**Contacts** to be available for selection.*

1. In edit mode, under the **Action** tab of the zone you are configuring, click on the edit field next to the e-mail icon .
2. Choose the e-mail addresses to contact from the list.

Enabling the Siren

If you install a siren, you can choose to make it sound or not when an alert is set off in a zone.

Before You Begin

NOTE: *A siren must be installed and connected to your system for this feature to work.*

In edit mode, under the **Action** tab of the zone you are configuring, click on the edit field next to siren icon .

A check mark indicates the siren is enabled.

Enabling the Internal Speaker

The internal speaker allows you to hear the alert messages from the system when you are near the main system.

In edit mode, under the **Action** tab of the zone you are configuring, click on the edit field next to the speaker icon .

A check mark indicates the internal speaker is enabled.

Recording the Zone Audio Label

The audio label is the name the system repeats to identify the zone when calling because an alert is set off in the zone.

1. In edit mode, under the **Mess.** tab of the zone you are configuring, click on the record icon .

NOTE: *The time remaining to record the audio label starts counting down once you press the record button.*

Tip

For consistency, use the same words as you used when giving the **Name** in the zone's **General** tab.

2. State the zone audio label clearly.

NOTE: *The recording stops when it has reached the allowed time of 8 seconds.*

3. Click on the play icon  to listen to the recording.
4. If the recording is not satisfactory, press the garbage icon  to delete the recording and start over.
5. Repeat steps 2 through 5 to record the zone audio label in another language.

Viewing Zone Calibration

In addition to system diagnostics, you can view the zone calibration in the zone itself.

In status mode, under the **Message** tab, click on the **Calibration** button.

Trouble limits, raw and calibrated data is displayed.

The green LED lights when the **Calibration** button is enabled

Calibrating the Zone Trouble Thresholds

In certain installations, you have to adjust the low or high ohm trouble calibration to avoid constant false trouble alerts.

In edit mode, under the **Calibration** tab, enter the desired value in the edit fields next to **Low ohm trouble** and **High ohm trouble**.

NOTES

10 Maintenance

Topics Covered in this Chapter

- Inspecting and Cleaning the Controller
- Replacement Fuse Specifications
- Replacing a Fuse
- Replacing the Battery

Inspecting and Cleaning the Controller

Inspecting the controller and its units and keeping them clean can help prolong the proper functioning of the controller.

Before You Begin



Disconnect supply before servicing or performing any maintenance operations.



Unplug the phone cord while installing or servicing the phone card.



Lock the enclosure once the wiring is completed or when servicing. Use the included nut and bolt or a padlock (not included) to lock the enclosure.

- Once a year, open and inspect the enclosures for moisture or dust build-up.
- Using a damp cloth, wipe clean the exterior of the enclosures.



Do not spray water on the controller or on any of its modules.

Replacement Fuse Specifications

Replacement fuses are supplied with your system if ever the need occurs to change them. Two of each model are available.

GSI Electronics part number	GSI Electronics part description	Reference	Fuse recommended by the manufacturer	Recommended fuse model
127-00031	Fuse 2.5A slowblow 5X20MM 250V	F27- F28	Bel Fuse	5HT 2.5-R
127-00032	Fuse 1A slowblow 5X20MM 250V	F29- F30	Bel Fuse	5HT 1-R

127-00033	Fuse 500MA slowblow 5X20MM 250V	F31- F32	Bel Fuse	5HT 500-R
127-00034	Fuse 2A slowblow 5X20MM 250V	F33- F34	Bel Fuse	5HT 2-R

Replacing a Fuse

Before You Begin

Only service personnel is authorized to replace a fuse.



Before servicing the system, disconnect the main sector voltage and disconnect the battery wires from the battery.



Wear appropriate grounding devices such as an anti-static wristband to service the system.

1. Open the circuit of the main sector voltage.
2. Disconnect the red wire from the positive battery terminal.
3. Isolate the source of the fault and correct it.
4. Install the red wire to the positive battery terminal if the replacement is completed.
5. Close the circuit of the main sector voltage.

Replacing the Battery

At some point the battery will need to be changed. Properly doing so ensures the system functions properly.

Before You Begin



Installation must only be performed by qualified service personnel. Comply with local and national safety codes.

1. Open the circuit of the main sector voltage
2. Disconnect the red wire from the positive battery terminal.
3. Disconnect the black wire from the negative battery terminal.
4. Remove the battery from the battery box
5. Install the new battery in the battery box. Ensure that the new battery is fastened correctly in the battery box.
6. Install the black wire to the negative battery terminal.
7. Install the red wire to the positive battery terminal.
8. Close the circuit of the main sector voltage to reactivate the controller.

11 Tests

Topics Covered in this Chapter

- Testing the System
- Testing Communication With the Contacts

Testing the System

The system can continuously test the system's hardware and communication in sequence.

Before You Begin

NOTE: *You can click on the item's button to test a single field.*

1. Click on **Menu**→**Test**.
2. Click on **Start auto test** to start testing all tabs sequentially.
A list of the ongoing tests are displayed on the right hand side of the page.
3. Click on **Stop auto test** to end the testing.

Testing Communication With the Contacts

Testing communication methods with the contacts ensures the messages reach the contacts in the event of an alert.

Before You Begin

NOTE: *The chosen contacts receive a message from the system informing them of the test.*

1. Click on **Menu**→**Test**.
2. In edit mode, under the **General** tab, select a contact for the phone test, one for the e-mail test, and one for the SMS test.
3. Click on **Start auto test** to start the testing of all tests that are configured.
A list of the ongoing tests are displayed on the right hand side of the page.
4. Click on **Stop auto test** to end the testing.

NOTES

12 Troubleshooting

The 28 volt auxiliary is disconnected	Make sure the 28VDC does not exceed the circuit capacity.
	Check the main sector to the AA128 Touch and wiring.
	Check if the fuse F31 or F32 is not opened.
	Use a voltmeter to check voltage at the AA128 Touch supply input terminals (24Vdc minimum at J13 between VDC+ and VDC-).
	If the problem persists, contact your dealer.
The 12 volt auxiliary is disconnected	Make sure the load connected to the 12VDC output does not exceed the circuit capacity.
	Check the wiring of the 12VDC output.
	Check if the fuse F29 or F30 is not opened.
	If the problem persists, contact your dealer.
The SBI power is disconnected	Make sure the SBI power output and siren do not exceed the circuit capacity.
	Check the main sector to the AA128 Touch and wiring.
	Check if the fuse F27 or F28 is not opened.
	Use a voltmeter to check voltage at the AA128 Touch supply input terminals (24Vdc minimum at J13 between VDC+ and VDC-).
	If the problem persists, contact your dealer.
The siren output is disconnected	Make sure the load connected to the siren output does not exceed the circuit capacity.
	Check the wiring of the siren output.
	Check if the fuse F33 or F34 is not opened.
	If the problem persists, contact your dealer.
The Low battery icon is displayed and electrical power is functioning	Check the main sector to the AA128 Touch and wiring.
	Use a voltmeter to check voltage at the AA128 Touch supply input terminals (24Vdc minimum at J13 between VDC+ and VDC-).
	Check the battery wiring.
	Use a voltmeter to check voltage at the battery terminal (battery at full load: between 12 and 13 V).
	If the problem persists, contact your dealer.
The recharge is suspended	That is not a problem. The system automatically stops charging the battery when the battery's temperature gets too high.
The No battery icon is displayed	Make sure a battery is connected to the controller.

Chapter 12: Troubleshooting

The disconnected line icon is displayed	Make sure the entry line is plugged in the right phone jack of the phone plug-in card.
	Make sure the plug-in card is properly inserted in the "PHONE CARD" connector.
	If the problem persists, unplug the telephone jack from the phone plug-in card and contact you dealer.
The phone card disconnected icon is displayed	Make sure the plug-in card is properly inserted in the "PHONE CARD" connector.
	Check the phone line wiring.
	If the problem persists, unplug the phone card and contact your dealer.
The siren doesn't work	Make sure the siren load does not exceed the circuit capacity.
	If no siren is connected to the siren terminals, a resistor must be connected in its place (1.5k Ω , 1/2 W) or you can disable the siren output .
	If the siren impedance is too high, add a 1,5K Ω , 1/2W resistor to the siren circuit, as close to the siren as possible.
	The siren wire or the siren may be defective.
	If the problem persists, contact your dealer.
I plugged the battery into the controller and it doesn't start	On first startup, the controller needs to be powered by the main sector.
The system does not detect any probe	Make sure the flat cable between the top and the bottom board inside the enclosure is properly connected.
	Make sure the removable terminal block is properly inserted on the bottom board.
	Check the wiring of the zone inputs.
	If the problem persists, contact your dealer.
The system shuts down as soon as I unplug the main sector	Make sure the battery is correctly connected.
	Let the system recharge the battery for about 3 hours and a half.
	Make sure the loads connected to the siren output, 12VDC output, 28 VDC output, SBI power output do not exceed the circuit capacity.
	If the problem persists, contact your dealer.
The system refuses to arm	Make sure a intrusion zone is programmed.
	Make sure there is no active alarm in any intrusion zone.
	Login with the installer or master password.
	If the problem persists, contact your dealer.

Phone communication troubles

Problem	Cause	Solution
I cannot change the relay status on the phone	The relay is assigned to a zone	When a relay is assigned to a zone, it is not possible to change its status on the phone (the relay status is related to the zone status).

I cannot stop the on-site listening on the phone	This is normal	The On-Site listening automatically ends after a user-defined delay (On- Site Listening delay); it cannot end sooner.
The system cannot recognize my password or selection over the phone	Phone compatibility	If the AA128 Touch does not recognize your selection, try typing your choice slower (leave about 1/2 seconds between each key).

NOTES

A List of Terminals in the Main Enclosure and Battery Enclosure

Each module, input, or output has its place on the system board. To ensure no false alerts or trouble occur, connect all modules, inputs and outputs in the correct area.

Table A-1 *Main enclosure terminals and usage*

Terminal	Terminal Board	Description
ZONE1		Sensor input terminals numbered 1 through 8. Each input has its own return (AGND).
AGND1–2		
ZONE2		
ZONE3		
AGND3–4		
ZONE4		
ZONE5		
AGND5–6		
ZONE6		
ZONE7		
AGND7–8		
ZONE8		
EXT. MIC +		Inputs for an external microphone.
EXT. MIC –		
EXT. MIC SHIELD		
SBI +		Serial bus interface communication bus. Wired between the main system and optional expansion modules. Each module has the same four terminals. The same terminals are wired to each other between all modules.
SBI COMM A		
SBI COMM B		
SBI –		
PVX COMM A		PVX communication bus.
PVX COMM B		
GND		
12 VDC +		12 VDC power output for external sensors. Maximum 750 mA.
12 VDC –		
AUX. SUPPLY +		28 VDC power output for external sensors. Maximum 350 mA.
AUX. SUPPLY –		
SIREN +		Outputs to connect a siren.
SIREN –		

Appendix A: List of Terminals in the Main Enclosure and Battery Enclosure

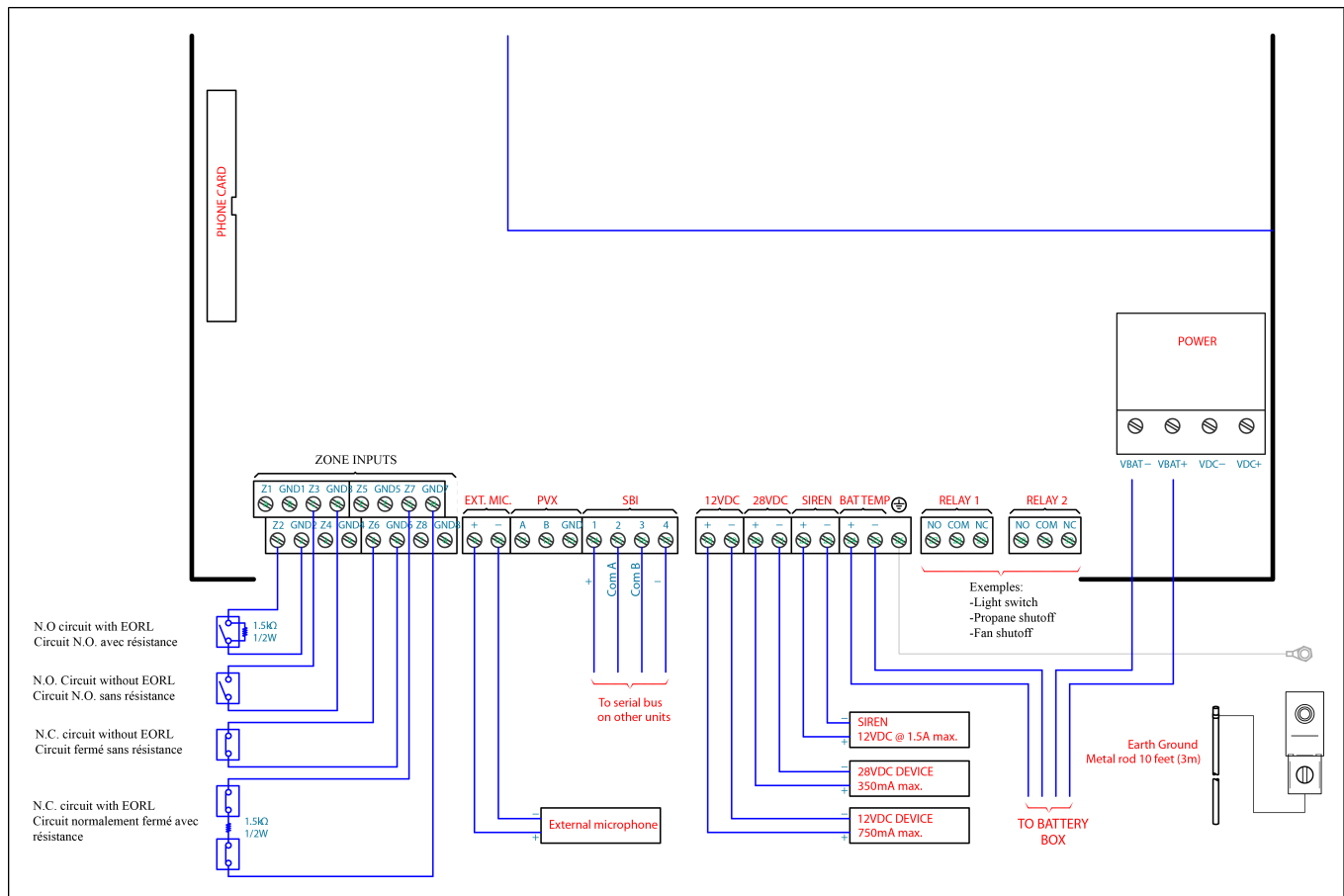
Table A-1 Main enclosure terminals and usage (cont'd.)

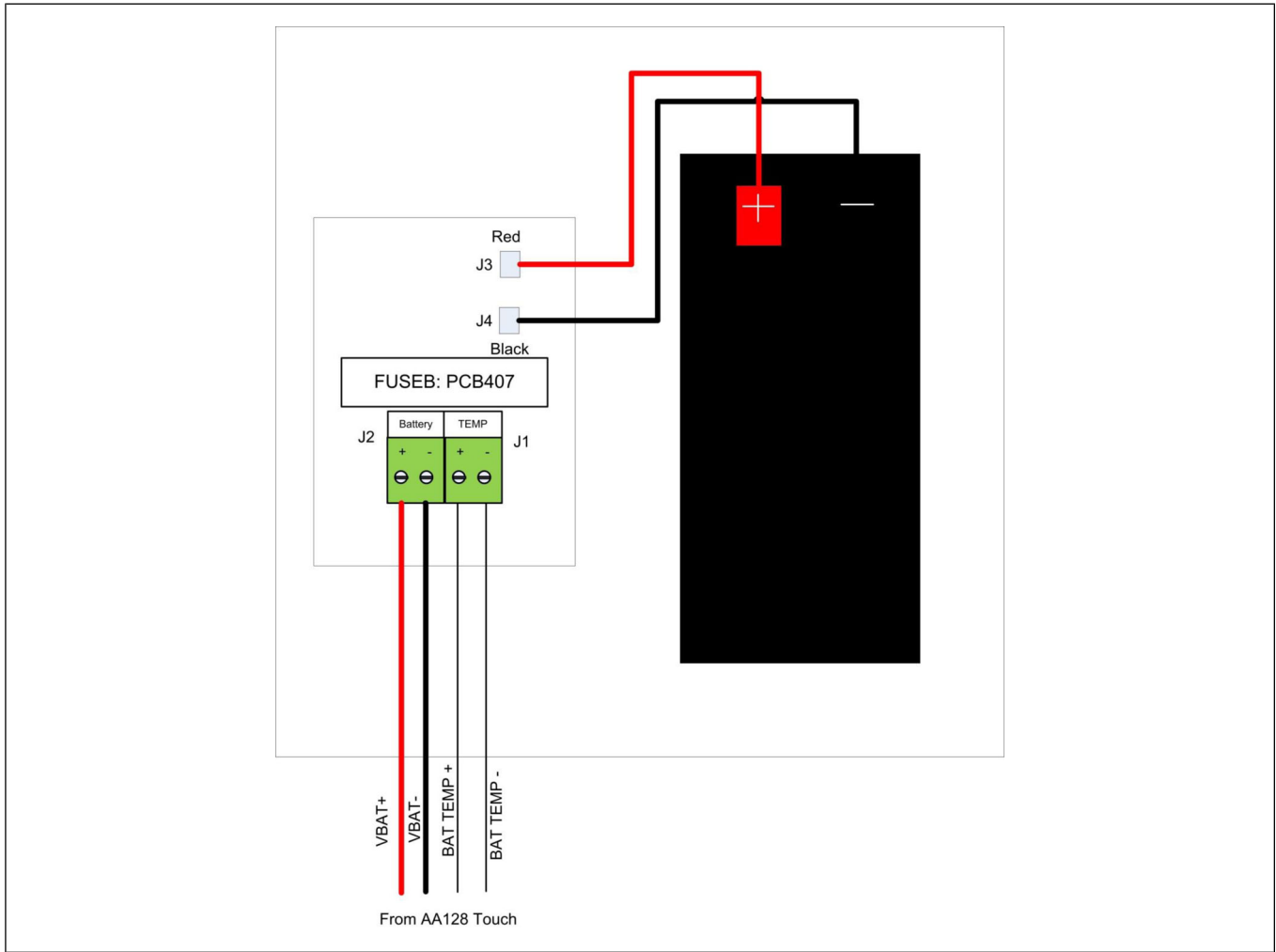
Terminal	Terminal Board	Description
RELAY 1 NO		Relay 1 output. You can select from a normally open or a normally closed contact.
RELAY 1 COM		
RELAY 1 NC		
RELAY 2 NO		Relay 2 output. You can select from a normally open or a normally closed contact.
RELAY 2 COM		
RELAY 2 NC		
EARTH		
TEMP_BATT +		Battery temperature probe connections (through power cable from power pack).
TEMP_BATT –		
BATT +		Battery power supply inputs (through power cable from power pack).
BATT –		
VDC +		Line power supply inputs (through power cable from power pack).
VDC –		
TIP (LINE)		Phone connection for alert communications.
RING (LINE)		
TIP (PHONE)		
RING (PHONE)		

Table A-2 Battery enclosure terminals

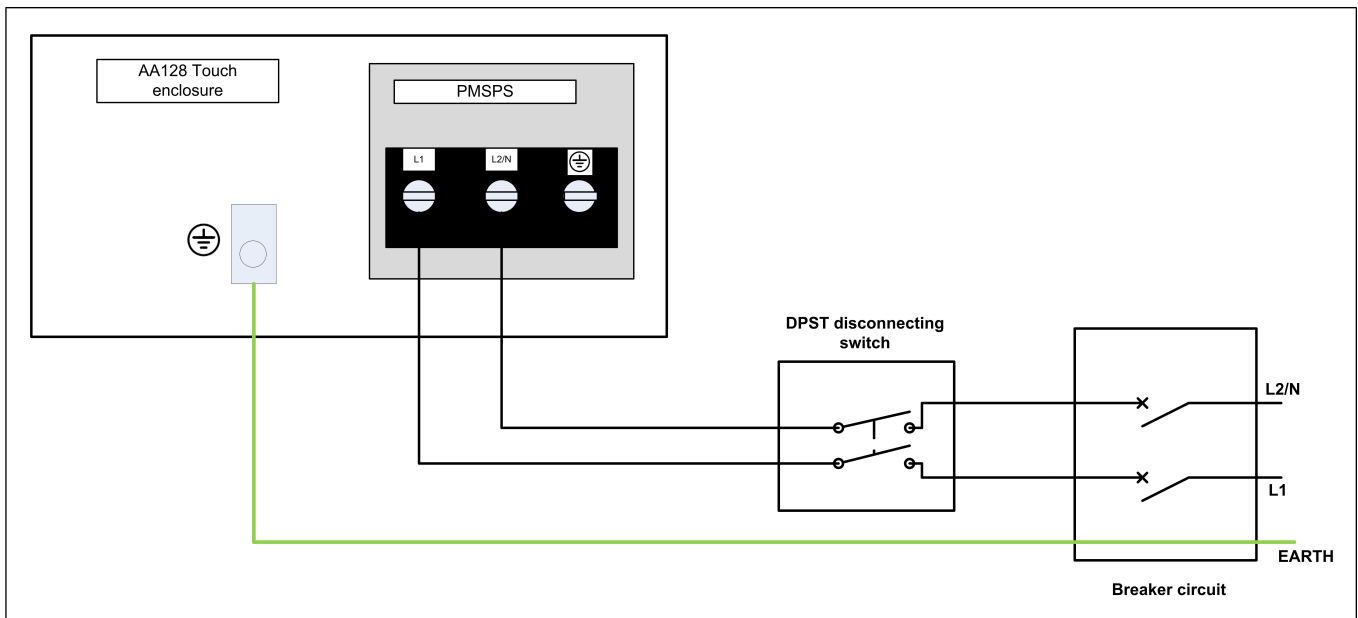
Terminal	Terminal Board	Description
L1		Line supply inputs (120 V, 60 Hz).
L2/N		
EARTH		
VDC +		Main power supply outputs (through power cable to control module).
VDC –		
BATT +		Battery power supply outputs (through power cable to control module).
BATT –		
BATT TEMP +		Battery temperature probe outputs (through power cable to control module).
BATT TEMP –		

B Wiring Diagram with Terminals

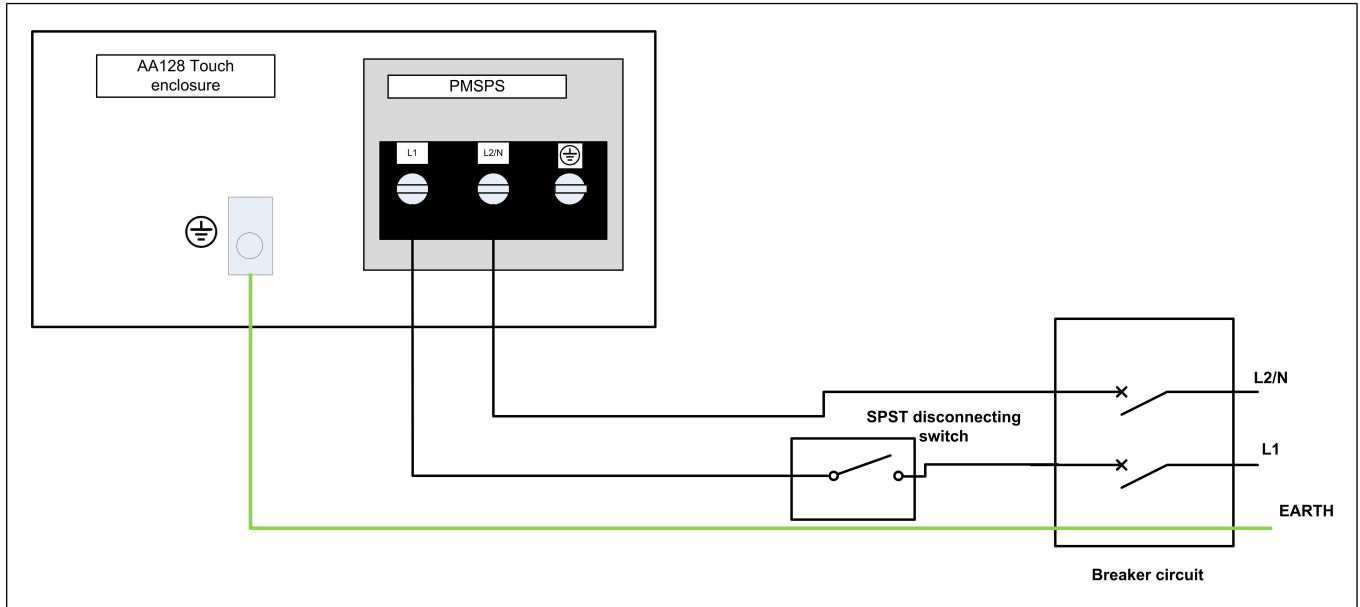




Wiring diagram with a DPST disconnect switch



Wiring diagram with a SPST disconnect switch



NOTES

C Technical Specifications

TYPE: Agri-Alert system

Operating Temperature: 32 to 104°F (0 to 40°C)

Indoor use only

Pollution Degree: 2

Installation Category: 2

Altitude: 7900 Ft. Max (2000 Meters Max)

Humidity (maximum relative) operating:

- 0 to 10 °C (32 to 50 °F) Non condensing
- 10 to 30 °C (50 to 86 °F) 95 % (± 3 %) Non condensing
- 30 to 40 °C (86 to 104 °F) 95 % (± 3 %) Non condensing

SUPPLY INPUT :

100V_{AC}-240V_{AC}, 1 phase, 240W, 50-60Hz

BATTERY: Rechargeable, sealed, lead-acid, 12V-7.0AH

OUTPUTS :

RELAY 1-2: 28Vdc, 4A max.

SERIAL BUS: 28Vdc, 2A max.

SIREN: 12Vdc, 1.5A max.

12VDC: 12Vdc, 750mA max.

28VDC : 28Vdc, 350mA max.

Main supply voltage fluctuations shall not exceed +/- 10% of the nominal supply voltage.

Table C-1 Main enclosure specifications

Item	Description	
Enclosure material	Flame retardant ABS	
Dimensions	Width	11 inches (28 cm)
	Height	9-7/8 inches (25 cm)
	Depth	5 inches (12.7 cm)
	Weight	5.15 kilograms (11.35 lbs)
Sensor inputs	8 inputs, self-configuring for various sensor types	

Appendix C: Technical Specifications

Table C-1 Main enclosure specifications (cont'd.)

Item	Description	
Touch screen	Size	7 inches (17.8 cm)
	Type	TFT color LCD
	Resolution	WVGA (800 × 480 pixels)

Table C-2 Battery enclosure specifications

Item	Description		
Enclosure material	Flame retardant ABS		
Dimensions	Width	11 inches (28 cm)	
	Height	9-7/8 inches (25 cm)	
	Depth	5 inches (12.7 cm)	
Weight	2.97 kilograms (6.55 lbs) including the weight of the battery		
Nominal voltage	12 Volts		
Nominal capacity	7.00 Ah		
Terminal	T2 (Faston Tab 250)		
Storage temperature	-20 °C to 40 °C (-4 °F to 104 °C)		
Battery (the values shown are based on ambient temperatures of 20 - 25 °C (68 - 77 ° F))	Type	Sealed lead-acid battery	
	Power output	12 VDC, 7.5 Ah	
	Shelf discharge	3% per month	
	Average battery capacity with low load	When the siren, the 12 VDC outputs and the SBI are not used.	32 hours
	Average battery capacity with high load	When the siren, the 12 VDC outputs and the SBI are used.	20 minutes
	Average lifespan	3 years	
	Battery weight	2.2 kilograms (4.85 lbs)	

D Safety Characteristics and Certification

This controller is Safety Class I according to IEC classification and has been designed to meet the requirements of UL 61010-1 third edition and CAN/CSA-C22.2 n° 61010-1 third edition (Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use). It is an Installation Category II intended for operation from a normal single phase supply.

This controller has been tested in accordance with IEC61010-1 and has been supplied in a safe condition. This instruction manual contains some information and warnings which have to be followed by the user to ensure safe operation and to retain the instrument in a safe condition.

Emission standards

This controller has been designed to meet the requirements of the EMC Directive 2004/108/EC. The compliance was demonstrated by meeting the test limits of the following standards:

Test number	Test name	Standard	Standard level
1	Conducted emissions	CISPR 11 : 2009 A1 (2010) FCC part 15, under part B : 2012	Group 1, class A Class A
2	Radiated emissions	CISPR 11 : 2009 A1 (2010) FCC part 15, under part B : 2012	Group 1, class A Class A
3	Harmonic current emissions	IEC61000-3-2: 2006 A1 (2009) A2 (2009)	Class A
4	Flickers limitation	IEC61000-3-3: 2008	≤4% on the main sector voltage envelope

Immunity standards

EN61326-1 (2013) EMC product standard for Electrical Equipment for Measurement, Control and Laboratory Use and FCC part 15. Test methods, limits and performance achieved are shown below (requirement shown in brackets):

Test number	Test name	Standard	Standard level
5	Radiated, radio-frequency, electromagnetic field immunity test	EN61000-4-3 : 2006 A1 : 2007 A2 : 2010	80% AM at 1kHz, 10V/m, 80MHz – 1GHz: Performance: A (A) 80% AM at 1kHz, 3V/m, 2GHz to 2.7GHz:
6	Immunity to conducted disturbances, induced by radio-frequency fields	EN61000-4-6 : 2008	150kHz-80MHz : 3Vrms + 1kHz 80% AM (AC line, Earth, I/O connections >3m)
7	Electrostatic discharge immunity test	EN61000-4-2 : 2008	± 8 kV air ± 4 kV contact Performance A (B)
8	Electrical fast transient/ burst immunity test	EN 61000-4-4 : 2012	±2kV/5kHz on the main sector ±1kV/5kHz on the I/O >3m Performance A (B)

Appendix D: Safety Characteristics and Certification

9	Surge immunity test	EN61000-4-5 : 2005	On the main sector : L-PE : $\pm 2\text{kV}$ L-L : $\pm 1\text{kV}$ I/O : L-PE : $\pm 1\text{kV}$ L-L : $\pm 1\text{kV}$
10	Power frequency magnetic field immunity test	EN 61000-4-8 : 2009	30 A/m
11	Voltage dips, short interruptions and voltage variations immunity tests	EN61000-4-11 : 2004	0%, 1, 1 cycle: Performance A (B) 40%, 1, 10 cycles: Performance A (C) 70%, 1, 25 cycles: Performance A (C) 0%, 1, 250 cycles: Performance A (C)

According to EN61326-1 the definitions of performance criteria are as follows:

- Performance criterion A — During test normal performance within the specification limits
- Performance criterion B — During test, temporary degradation, or loss of function or performance which is self-recovering
- Performance criterion C — During test, temporary degradation, or loss of function or performance which requires operator intervention or system reset occurs.

Phone circuit safety characteristics

The phone card is designed and tested to meet the following requirements:

- UL 60950-1 second edition and CAN/CSA-C22.2 no 60950-1 second edition in the section 6.
- NSI/TIA-968-B (Telecommunications, Telephone Terminal Equipment, Technical Requirements for Connection of Terminal Equipment to the Telephone Network, Approved: August 11, 2009 TIA-968-B-1 Addendum 1, June 2012).
- FCC standard Part 68 (FCC rules for Registration of Telephone Equipment).
- CS-03 Part I (Issue 9 Amendment 4, December 2010, requirements for terminal equipment and related access arrangements intended for direct connection to analogue wireline facilities).

The phone card, model PCB402 (300-00319), the ACTA number is US:32ZCN01BGSIE0001. The phone card, model PCB402 (300-00319), the IC number is IC: 11880A-PCB402RP002.

Environmental characteristics

Parameter	Condition	Value
Temperature Operating	battery installed	0 to 40 °C (32 to 104 °F)
	Storage	-20 to +60 °C (-4 to +140 °F)
Humidity (Maximum Relative) Operating	0 to 10 °C (32 to 50 °F)	Non condensing
	10 to 30 °C (50 to 86 °F)	95 % ($\pm 3\%$) Non condensing
	30 to 40 °C (86 to 104 °F)	95 % ($\pm 3\%$) Non condensing
	Storage	Non condensing
Altitude		7900 Ft. Max (2000 Meters Max)
Electromagnetic Environment		EN/IEC61326-1
Enclosure Protection		IP51, ref : IEC60529
Impact rating (IK)		08

Certification logos and Definition

 MH19884	Electrical safety approval in North America of the sealed lead-acid battery
	Electrical safety approval of the product in North America : Canada and USA
	European conformity
	Recycling information
	

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NOTES

GSI Group, LLC Limited Warranty

The GSI Group, LLC ("GSI") warrants products which it manufactures to be free of defects in materials and workmanship under normal usage and conditions for a period of 12 months after sale to the original end-user or if a foreign sale, 14 months from arrival at port of discharge, whichever is earlier. The end-user's sole remedy (and GSI's only obligation) is to repair or replace, at GSI's option and expense, products that in GSI's judgment, contain a material defect in materials or workmanship. Expenses incurred by or on behalf of the end-user without prior written authorization from the GSI Warranty Group shall be the sole responsibility of the end-user.

Warranty Extensions: The Limited Warranty period is extended for the following products:

	Product	Warranty Period
AP Fans and Flooring	Performer Series Direct Drive Fan Motor	3 Years
	All Fiberglass Housings	Lifetime
	All Fiberglass Propellers	Lifetime
AP/Cumberland	Flex-Flo/Pan Feeding System Motors	2 Years
Cumberland Feeding/Watering Systems	Feeder System Pan Assemblies	5 Years **
	Feed Tubes (1-3/4" and 2.00")	10 Years *
	Centerless Augers	10 Years *
	Watering Nipples	10 Years *
Grain Systems	Grain Bin Structural Design	5 Years
Grain Systems Farm Fans Zimmerman	Portable and Tower Dryers	2 Years
	Portable and Tower Dryer Frames and Internal Infrastructure †	5 Years

* Warranty prorated from list price:
0 to 3 years - no cost to end-user
3 to 5 years - end-user pays 25%
5 to 7 years - end-user pays 50%
7 to 10 years - end-user pays 75%

** Warranty prorated from list price:
0 to 3 years - no cost to end-user
3 to 5 years - end-user pays 50%

† Motors, burner components and moving parts not included.
Portable dryer screens included.
Tower dryer screens not included.

GSI further warrants that the portable and tower dryer frame and basket, excluding all auger and auger drive components, shall be free from defects in materials for a period of time beginning on the twelfth (12th) month from the date of purchase and continuing until the sixtieth (60th) month from the date of purchase (extended warranty period). During the extended warranty period, GSI will replace the frame or basket components that prove to be defective under normal conditions of use without charge, excluding the labor, transportation, and/or shipping costs incurred in the performance of this extended warranty.

Conditions and Limitations:

THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE LIMITED WARRANTY DESCRIPTION SET FORTH ABOVE. SPECIFICALLY, GSI MAKES NO FURTHER WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE IN CONNECTION WITH: (I) PRODUCT MANUFACTURED OR SOLD BY GSI OR (II) ANY ADVICE, INSTRUCTION, RECOMMENDATION OR SUGGESTION PROVIDED BY AN AGENT, REPRESENTATIVE OR EMPLOYEE OF GSI REGARDING OR RELATED TO THE CONFIGURATION, INSTALLATION, LAYOUT, SUITABILITY FOR A PARTICULAR PURPOSE, OR DESIGN OF SUCH PRODUCTS.

GSI shall not be liable for any direct, indirect, incidental or consequential damages, including, without limitation, loss of anticipated profits or benefits. The sole and exclusive remedy is set forth in the Limited Warranty, which shall not exceed the amount paid for the product purchased. This warranty is not transferable and applies only to the original end-user. GSI shall have no obligation or responsibility for any representations or warranties made by or on behalf of any dealer, agent or distributor.

GSI assumes no responsibility for claims resulting from construction defects or unauthorized modifications to products which it manufactured. Modifications to products not specifically delineated in the manual accompanying the equipment at initial sale will void the Limited Warranty.

This Limited Warranty shall not extend to products or parts which have been damaged by negligent use, misuse, alteration, accident or which have been improperly/inadequately maintained. This Limited Warranty extends solely to products manufactured by GSI.

Prior to installation, the end-user has the responsibility to comply with federal, state and local codes which apply to the location and installation of products manufactured or sold by GSI.

**This equipment shall be installed in accordance with the
current installation codes and applicable regulations
which should be carefully followed in all cases.
Authorities having jurisdiction should be consulted
before installations are made.**

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