Agri-Alert 128 Touch

Models:

075–10980, 075–10980

User manual

890-00584

Version 10

Date: 07-09-19

Agri-Alert

PN895-00686

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1 Icon List with Meanings

	Access main drop down menu		System status
	Back one level		Idle
	return to main page		Outgoing call
	System is armed		Incoming call
	System disarmed		Nobody is logged in
	Zone can’t be armed		System logged in with a user password
	Access alarm history		System logged in with master password
	Alarm acknowledged (icon on main screen)		System logged in with the installer password
	Battery is at 25 percent		Used to filter the zones shown on the main page by status
	Battery is at 50 percent		Used to filter the zones shown on the main page by zone type
	Battery is at 75 percent		Edit
	Battery is empty		Copy icon
	Battery trouble		Paste icon
	Battery state is unknown		Delete icon
	Access textual help		Stay at home arming

	Temperature zone type		Entry and exit delay
	Dry contact zone type		Siren icon
	Analogue zone type		Speaker icon
	Outdoor temperature compensation		Home phone or land line
	Intrusion zone type		Cellular phone
	Water meter zone type		Primary e-mail address
	Pulse zone type		Secondary e-mail address
	Page up		Primary phone number
	Page down		Secondary phone number
	Go down one		Notification
	Go up one		High temperature threshold (when icon in the zone page)
	Refresh		Low temperature threshold
	Undo change on keypad		CID for alarm central report on recovery
	Activate chime on intrusion alert		CID for alarm central report on alarm
	Play recorded message		Record button icon
	Device to activate on high alarm		Stop recording
	Device to activate on low alarm		Output
	Device to activate on trouble		Unbypass all zones
	Create a partition		Bypass all zones

	Create a contact group		Delete point from curve
	add a temperature curve		Add a curve point
	Animal inventory		Module in trouble
	Module is off		SBI network is off
	Uploading to module		SBI network is in trouble
	Modules		Test Report icon

NOTES

2 General Overview

Topics Covered in this Chapter

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

Contact Information

Manufacturer

GSI Electronics

5200 Armand Frappier

Saint-Hubert, Qc

Canada

J3Z 1G5

WARNING ***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.
TP800	Remote expansion module that allows the addition of eight zones and a programmable output to the system
KP400	Remote keypad displaying data from the main system with four dry contacts used for intrusion or temperature zones and one programmable output
KPB400	Tightly sealed keypad displaying the main system's data remotely
WM3000	One-way wireless transmitter and receiver equipped with a dry contact
Wireless RS-485	Module allowing wireless communication between the main alert system and its modules

KP-8IN-1REL	Remote keypad displaying data from the main system that allows the addition of 8 sensor inputs and a programmable relay output
TP-8IN-1REL	Remote expansion module that allows the addition of 8 sensor inputs and a programmable relay output
TR-2IN-1REL	Remote expansion module that allows the addition of 2 sensor inputs and a programmable relay output

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 Advice

OEM devices

The phone card, model : PCB402 (300-00319) is intended to use only with the Agri Alert 128 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.

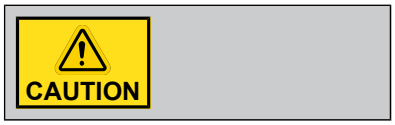
Notice for Equipment with Line Seize Capability using an RJ31X or RJ38X Jack

CAUTION

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 asso¬ciated with test and measurement circuits. These terminals are not for safety earthing purposes but provide an earth reference point.
NOTE:	To emphasize points or remind readers of something, or to indicate minor problems in the outcome of what they are doing
	Failure to follow the instructions can result in damaged equipment or loss of data or potential problems
	Failure to follow the instructions carefully can result in serious or fatal injury
IMPORTANT:	The following information is of great significance and must be read carefully

	Read the following text carefully; it contains important information which, if ignored, may cause the controller to operate improperly
Tip	Shortcut or a faster way of getting to an end result

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 advise 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

NOTES

3 Getting Started

Topics Covered in this Chapter

- Special Tools Needed for Installation
- Guidelines on the Ideal Location for Installation
- Correctly Supporting and Routing Cables
- Grounding the System

Special Tools Needed for Installation

The following tools are needed for the installation of your system:

- Hammer and punch to remove the knockouts at the bottom of the enclosures.
- Silicone caulking to seal the module mounting screws.

Guidelines on the Ideal Location for Installation

Consider the environment, mounting recommendations, and clearance space to choose the ideal location for your system.

Operating Environment

- To avoid exposing the system to harmful gases or excessive humidity, install the system modules in a corridor or a room dedicated to electronic controllers.
- The ideal ambient temperature is between 20 °C and 25 °C (68 °F - 77 °F). The temperature should not go lower than 0 °C (32 °F) and should not exceed 40 °C (104 °F).
- Ensure there is sufficient ventilation around the unit.
- Install the modules far from sources of vibrations and where it is not likely to get bumped.

IMPORTANT: *If you are not planning on installing the system immediately, store the modules in a cool dry place.*

Requirements for the Mounting Structure

Mount the system into the supporting structure behind a drywall. If this is not possible, install pieces of wood that can be screwed into the back structure and install the units on the pieces of wood.

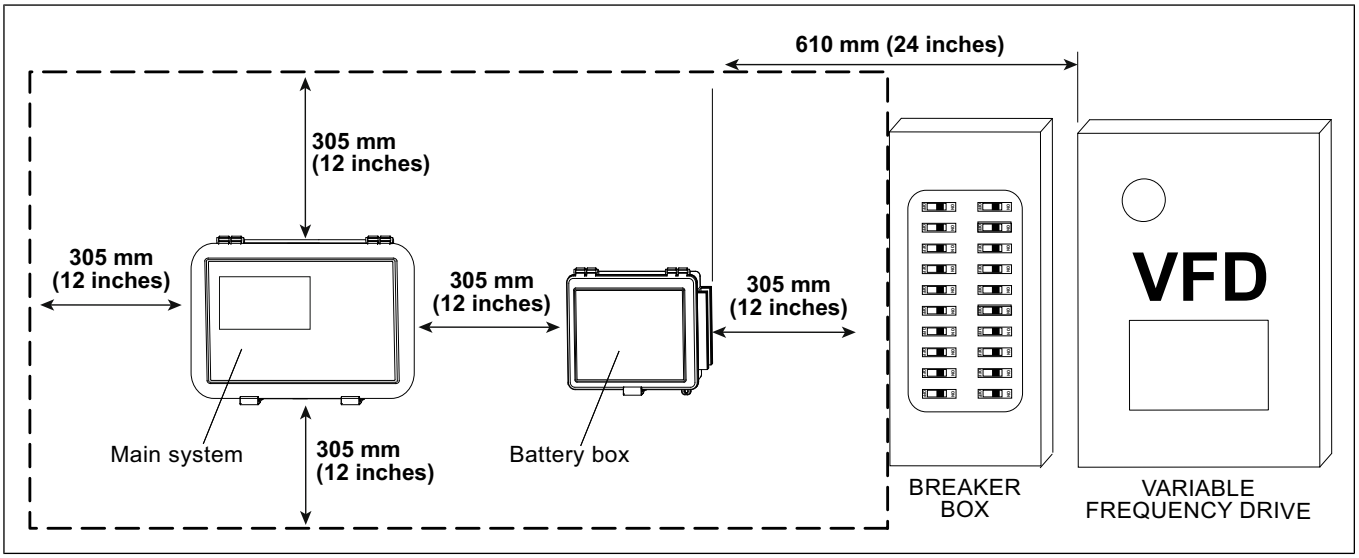
Clearance Around the System Modules

The following minimum clearances must be respected around both the main system and the battery enclosure.

- 305 mm (12 inches) above the modules to allow opening of the cover.
- 305 mm (12 inches) below the modules to leave room for the wiring.
- 305 mm (12 inches) between the modules to avoid electromagnetic interference.

- 305 mm (12 inches) between any module and a breaker box to avoid electromagnetic interference.
- 610 mm (24 inches) between any module and a variable frequency drive to avoid electromagnetic interference.

Figure 3-1 *Required minimum clearance around the system modules*



Correctly Supporting and Routing Cables

Properly supporting and routing the cables helps avoid electromagnetic interferences and wire damages.

Cable Support

Support the cables with clips or cable trays whenever possible to avoid damage at the connection points.

Cable Routing

When low voltage cables run parallel to high voltage cables (120/230/380 VAC or 24 VDC), place them at a distance of at least 300 mm (12 inches) from each other to avoid electromagnetic interference. See following figure.

If low voltage cables cross high voltage cables, ensure they cross at an angle of 90° to minimize electromagnetic interference.

WARNING ***Do not install rigid conduits. Only nylon cable glands are permitted for cable or wire fastening.***

WARNING ***Use watertight compression cable glands rated IP51 for each cable used.***

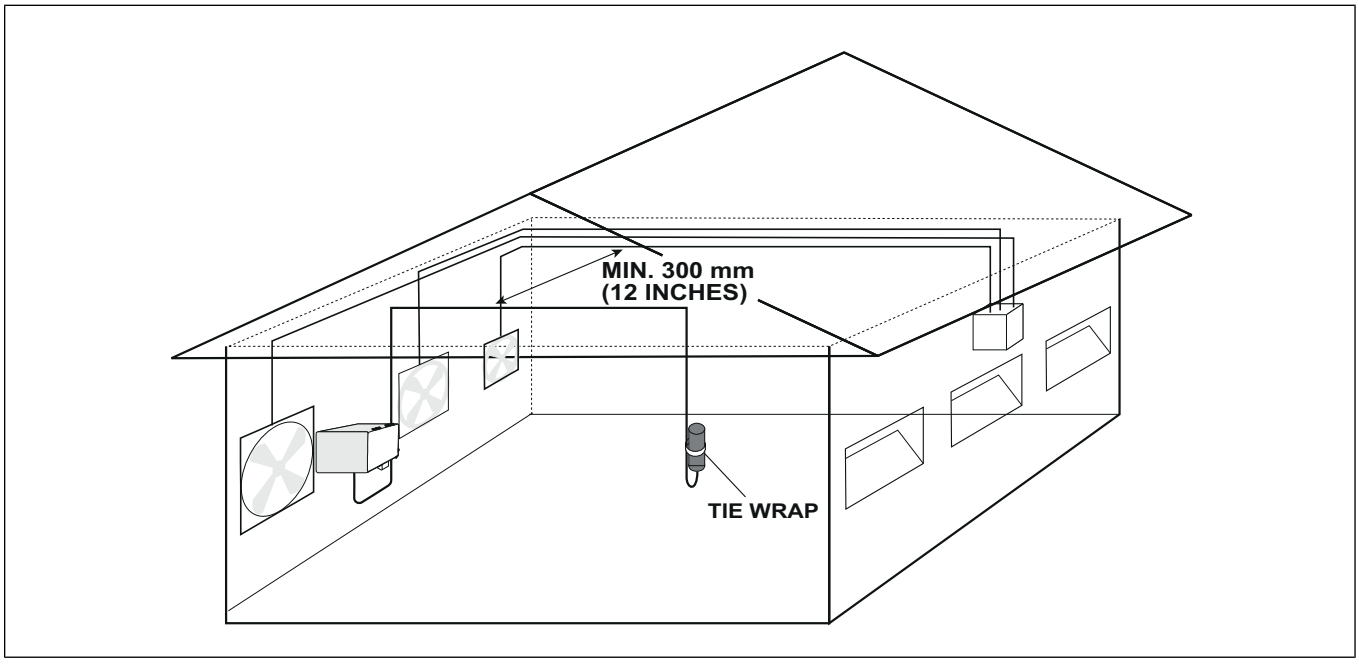
WARNING ***Use silicone to seal the cable gland rated IP51 if more than one cable is use in the same cable gland.***

WARNING ***If the product enclosures are not sealed correctly and the installation does not respect the manufacturer recommendations, the warranty is void.***

WARNING ***Ensure all cables enter through the bottom of the controller. Do not make holes on the top or on the sides of the enclosures. Be careful not to damage the electronic cards located inside the enclosure when drilling or punching the knockouts at the bottom of the enclosure.***

NOTICE ***It is acceptable to use cables in a flexible tube fastened by cable glands at the end of the flexible tube.***

Figure 3-2 *Distance between low and high voltage cables*



Grounding the System

A correctly grounded system protects your equipment from electrical surges and spikes.

CAUTION

Each module must have its own ground connection from a common junction box. Do not run the earth ground cable between the modules.

NOTICE

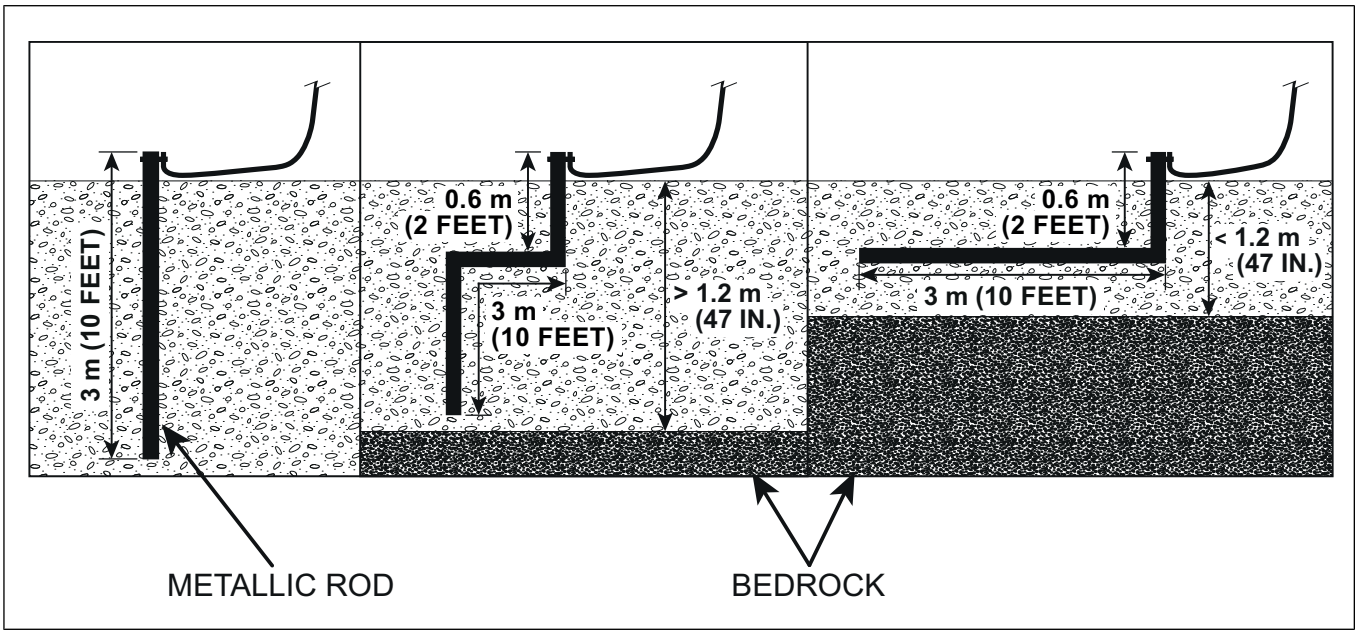
The ground resistance levels must comply with local and national electrical codes.

IMPORTANT: *If outdoor connections are used, mount the enclosure as close as possible to the entry point of the outdoor wiring.*

IMPORTANT: *An improper ground connection voids the system's warranty.*

Insert the rod into the ground until a few inches of the tip is left above ground level. Attach the cable to the rod tip with an appropriate connector. Attach the other end of the cable to a breaker box or a junction box near the main enclosure.

Figure 3-3 *Grounding installation depending on bedrock depth*



- If the bedrock is more than 3 meters (10 feet) below ground level, drive the grounding rod vertically 3 meters (10 feet) into the ground.
- If the bedrock is more than 1.2 meters (47 inches) below ground level, drive the rod into the ground to bedrock level and bury the remainder horizontally at least 0.6 meters (2 feet) below ground level.
- If the bedrock is less than 1.2 meters (47 inches) deep, bury the rod horizontally at least 0.6 meters (2 feet) below ground level.

NOTE: *Refer to your local regulations and practices if an adequate grounding installation isn't possible.*

Rod Specifications for Grounding

The rod specifications are guidelines only. Refer to your national and local regulations for compliance criteria.

Table 3-1 *Grounding rod specifications*

Item	Description
Material	Metallic, normally steel core.
Rod surface	The surface must be clean. It cannot be coated with paint, varnish or any non-conducting substance.
Minimum diameter	16 mm (5/8 inches)
Minimum length	2440 mm (8 feet)

Cable Specifications for Grounding

The cable specifications are guidelines only. Refer to your national and local regulations for compliance criteria.

Table 3-2 *Grounding cable specifications*

Item	Description
Certification and type	CSA, TEW type.
	UL, 1015 type, 12 AWG, 600 V, 105 °C (221 °F), green/yellow insulated wire.
Maximum length	15 meters (50 feet)
Suggested cable	Beldon # 9912, color code 189, or equivalent

NOTES

4 Basic Connections

Topics Covered in this Chapter

- Preparing the Enclosures for Installation
- Mounting the Enclosures
- Installing and Connecting the Battery in the Battery Enclosure
- Connecting the Power Supply to a Power Source
- Connecting the Battery to the Main Enclosure
- Connecting the Battery Temperature Sensor
- Connecting the Siren
- Phone Line Connection Possibilities
- Connecting Modules to the Serial Bus Interface
- Configuring Wireless Network
- Serial Bus Interface: How it Works
- Relay Output Specifications
- Connecting a Sensor

Preparing the Enclosures for Installation

Preparing the equipment before mounting it to the wall facilitates manipulation and ensures all parts are ready to be installed.

Before You Begin

You need a 10 AWG gauge wire to connect the main enclosure to the battery enclosure for the battery supply. You also need a twisted pair wire and shielded wire with a minimum gauge of 20 AWG for the battery temperature sensor in the battery enclosure. The wires must be less than 36 inches long.

1. Close both the main enclosure and the battery enclosure.

   NOTICE ***Perforating the punch holes while the enclosures are open may crack the enclosure.***

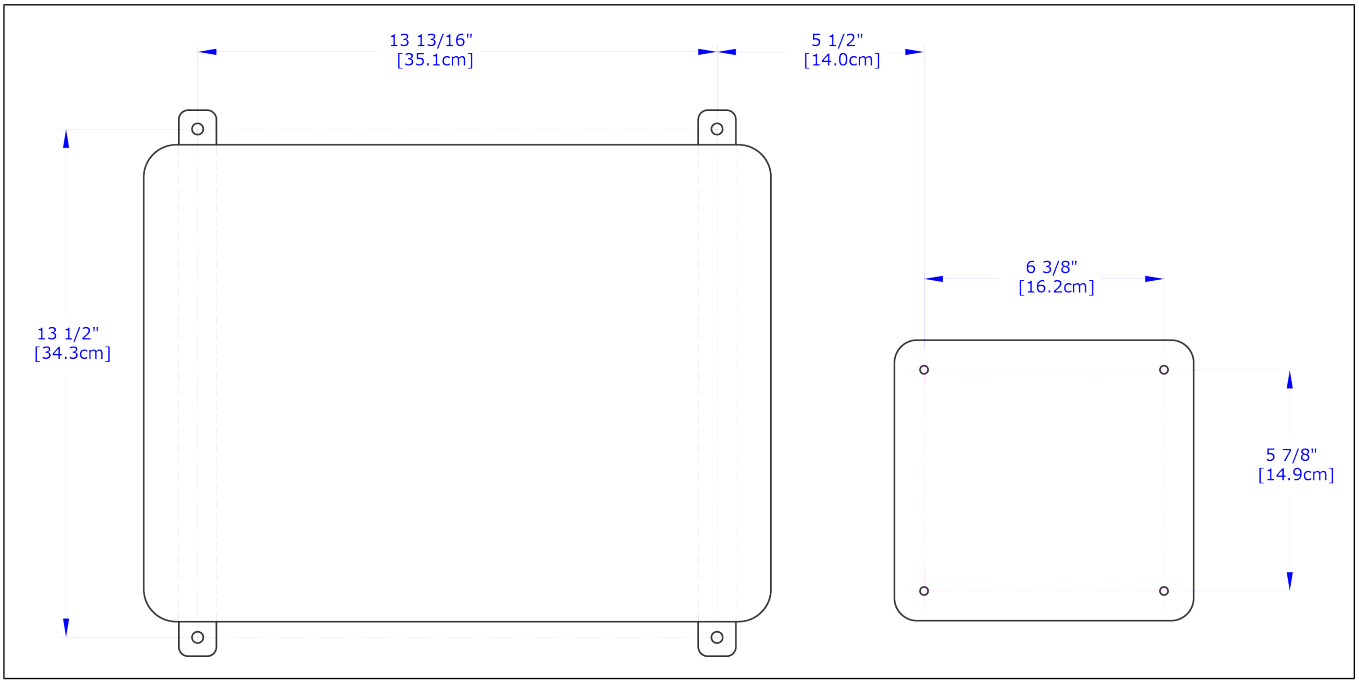
2. Using a hole punch tool, perforate the punch holes needed for your installation at the bottom of each enclosure.
3. Drill a hole the size of the your cable glands on the bottom right hand side of the main enclosure
4. Using the latches at the bottom of each enclosure, open them and remove the punched out fragments.
5. Install the cable glands provided with your system to the bottom of each enclosure.
6. Close the main enclosure and the battery enclosure.

7. Fasten the two metal brackets on the mounting holes located behind the main enclosure using four screws.
8. Using the specifications given below as a guide, drill holes into the area where the enclosures will be mounted.

   IMPORTANT: *Leave a clearance of at least 16 inches at the top of the enclosures to allow the cover to be removed for maintenance.*

   Remember

   If the enclosures can't be mounted to the supporting structure behind the drywall, mount the enclosures onto a wooden or metal frame. Do not mount the enclosures directly onto the drywall.



Mounting the Enclosures

Securely mounting the enclosures to the wall in the ideal location allows for an optimal use of the system when navigating the menus.

Before You Begin

NOTICE ***When using outdoor connections, mount the enclosure as close as possible to the entry point of the wiring.***

IMPORTANT: *The enclosures must be mounted near an unswitched AC power outlet and a telephone plug.*

IMPORTANT: *Mount the system into a wooden or metal frame. Do not mount the system directly into the drywall*

1. Using four of the eight 4.76 millimeters (0.1875 inch) screws, secure the main enclosure to the metal or wooden frame on the wall.
2. Open the battery enclosure and remove the black screw caps covering the mounting holes of the battery enclosure.

3. Using the four remaining 4.76 millimeters (0.1875 inch) screws, secure the battery enclosure 114 millimeters (4.5 inch) away from the main enclosure.
4. Place the previously removed black screw caps on the screws used to mount the battery enclosure to make the enclosure water tight. Add silicone caulking to completely seal the screws.
5. Verify that both enclosures open easily by pulling on the latch, or lock by pushing on the latch at the bottom of the enclosures.

   NOTE: *Leave a clearance of at least 16 inches at the top of the enclosures to allow the cover to be removed for maintenance.*
6. Ensure the ventilation openings on the sides of the enclosures are not obstructed.

Installing and Connecting the Battery in the Battery Enclosure

1. Put battery terminals toward the top.
2. Align both Velcros in the Battery Box and then press on the battery to fasten it to the battery enclosure.
3. Install the black wire (from printed circuit board J4) to the negative battery terminal.
4. Install the red wire (from printed circuit board J3) to the positive battery terminal.
5. Close the circuit of the main sector voltage to reactivate the controller.

Connecting the Power Supply to a Power Source

Once the main enclosure and the battery enclosure are mounted to the wall and connected together, the last step before configuration is to connect the equipment to a power source.

Before You Begin

IMPORTANT: *An external or circuit breaker and a disconnecting switch must be installed to interrupt power to L1 and N/L2 electric power lines before connecting the system's main sector input on the panel mount power supply. It must be in close proximity to the equipment and within easy reach of the operator. It must be marked as the disconnecting device for the equipment. We recommend installing it to the left of the system or to the right of the battery enclosure.*

From the power source, follow the wiring diagram to connect the main sector to the system main sector inputs on the panel mount power supply. We recommend using a DPST disconnecting switch in series with a breaker. In the case of the use of a SPST disconnecting switch, connect SPST disconnecting switch to cut the Hot line with a Neutral circuit case.

IMPORTANT: *Before plugging the system into an electrical supply, power on your system to make sure the backup battery is functioning correctly.*

CAUTION

Disconnect supply before servicing.

WARNING

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

1. Ensure there is no switch on the power outlet.
2. Plug the wire from the power supply into a power source (AC main sector voltage).
3. Power on the system and make sure it is receiving power from the power source only.

   The system works at nominal voltage between 100Vac and 240Vac for the main sector voltage. The working voltage range is between 90Vac and 264Vac. The system consumes a current of 2.90A at the minimum voltage on the main sector voltage input. Size your breaker circuit and the wires according with local and national safety codes. The recommendation current value is 5A for the breaker.

   Refer to the wiring diagram included with this manual for more information.

NOTICE

For the black terminal blocks used on the power supply, use a tightening torque from 0.9N*m (7.96lbf*in) to 1.13N*m (10lbf*in) to fasten a wire gage from 14 AWG to 18AWG.

NOTICE

For the metal terminal used for the Protective Earth, use a tightening torque from 2.26N*m (20lbf*in) to 3.95N*m (35lbf*in) to fasten a wire.

Connecting the Battery to the Main Enclosure

Connecting the battery enclosure to the main enclosure is the step that allows you to power on your system for the first time.

Before You Begin

IMPORTANT: *The Agri-Alert 128 Touch may not power up when you plug the Battery supply the first time without AC supply.*

NOTE: *Finish your installation before connecting the battery to the battery enclosure.*

What You Should Know

NOTICE ***Do not use a different battery than the one supplied with your system. See the appendices for specifications.***

WARNING ***Do not use another kind of battery than the lead-acid batteries recommended by GSI Electronics Inc. Although different technologies of lead-acid batteries are available on the market, the use of other technologies can cause the controller to malfunction, increase the risk of explosion, and increase the risk of fire.***

WARNING ***Use only the rechargeable type of recommended lead-acid batteries. The non-rechargeable type of battery can cause the controller to malfunction, increases the risk of explosion, and increases the risk of fire.***

1. Run a 10 AWG cable of maximum 36 inches, from the battery enclosure to the main system enclosure into cable glands to the bottom of each enclosure.
2. Connect one end of a cable to the negative terminal block VBAT - on the main board in the main enclosure.
3. Connect the other end of the cable to the negative terminal BATTERY - in the battery enclosure.
4. Connect one end of the other cable to the positive terminal block VBAT + on the main board in the main enclosure.
5. Connect the other end of the cable to the positive terminal BATTERY + in the battery enclosure.

NOTICE ***For the terminal Block J13 on the PCB391 in the main enclosure, use a tightening torque from 0.68N*m (6lbf*in) to 0.79N*m (7lbf*in) to fasten a wire.***

NOTICE ***For the terminal Block J2 on the PCB407 in the Battery Box, use a tightening torque from 0.89N*m (7.9lbf*in) to 1N*m (8.9lbf*in) to fasten a wire.***

Connecting the Battery Temperature Sensor

What You Should Know

The battery temperature sensor is located in the battery box, on the electronic board. Refer to *Appendix B , page 109* for more information.

1. Run a 20 AWG cable of maximum 36 inches from the battery enclosure to the main enclosure.
2. Connect one end of the cable to the negative terminal BAT TEMP - on the main board in the main enclosure.
3. Connect the other end of the cable to the negative terminal TEMP - in the battery enclosure.
4. Connect one end of the other cable to the positive terminal BAT TEMP + on the main board in the main enclosure.
5. Connect the other end of the cable to the positive terminal TEMP + in the battery enclosure.

NOTICE ***For the terminal Block J1 on the PCB407 in the Battery Box, use a tightening torque from 0.89N*m (7.9lbf*in) to 1N*m (8.9lbf*in) to fasten a wire.***

Connecting the Siren

The siren is used as a visual and audio queue when an alert is active. The use of a siren is optional.

Before You Begin

NOTICE ***The maximum voltage supplied to the siren is 12 VDC with a maximum current of 1 ampere.***

The siren's audio must not exceed 120 decibels.

The system must be connected to the battery if a siren is used.

1. Connect the wires from the siren to the SIREN terminals on the main board.

   Make sure the positive wire is connected to the positive terminal of the siren.

2. If the siren's impedance is too high, add a 1.5k ohm resistor (1/2 watt) in parallel with the siren, as close as possible to the siren on the circuit.

3. If you are not using a siren, connect a 1.5k ohm resistor (1/2 watt) to the siren output or disable the siren monitoring.

NOTICE ***Use a tightening torque from 0.56N*m (5lbf*in) to 0.79N*m (7lbf*in) to fasten a wire.***

Phone Line Connection Possibilities

The system uses the telephone line to reach you when an alert is set off. There are two types of phone line connections depending on your needs.

CAUTION ***To reduce the risk of fire, use only No. 26AWG or larger telecommunication line cord***

CAUTION ***Unplug the phone cord while installing or servicing the phone card***

Customer Phone Priority Connection

A customer phone priority connection is made through a regular phone outlet. With this type of connection, the system waits until the phone line is free before beginning the dial out sequence..

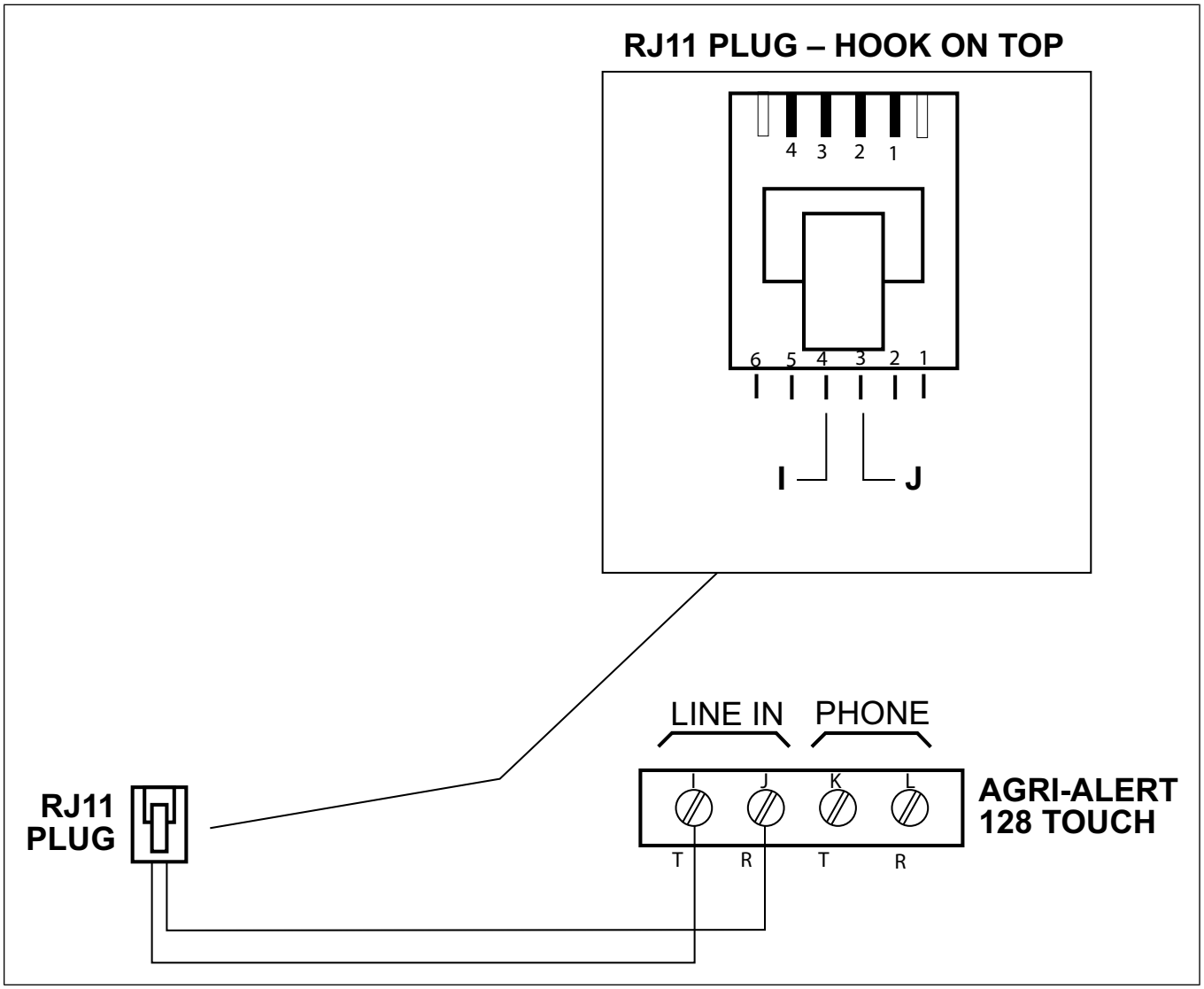
WARNING ***This type of connection is not recommended. The inability for the system to make phone calls during an alert may cause the loss of livestock and property.***

The following is required to make such a connection.

- A regular phone cable with a phone plug.
- A standard phone wall jack near the control module.

Only two wires will be used to connect the control module to the phone line.

Figure 4-1 *Example of a phone line hookup without line seizure RJ11 (6P4C)*



WARNING ***To correctly wire the Agri Alert 128 Touch, see your telecommunication standard.***

NOTICE ***Use a tightening torque from 0.56N*m (5lbf*in) to 0.79N*m (7lbf*in) to fasten a wire.***

System Phone Priority Connection (Line Seizure)

A system phone priority connection is made at the phone line entrance bridge (where the phone company line comes in). With this type of connection, the system seizes the phone line if a call is in progress in order to send alerts. This is the recommended type of phone connection. Only the RJ standard is shown below. Consult your telecommunication standard to find an equivalent for your country.

CAUTION

In order for dialing equipment to be able to seize the phone line to report an alert or other event when other customer equipment (telephone, answering system, computer modem, etc.) is connected to the same line in use, the 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. Series installation of an RJ31X jack is depicted in the following figure. 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.

NOTE: *Install the system as close as possible to the phone line entrance bridge to facilitate the installation.*

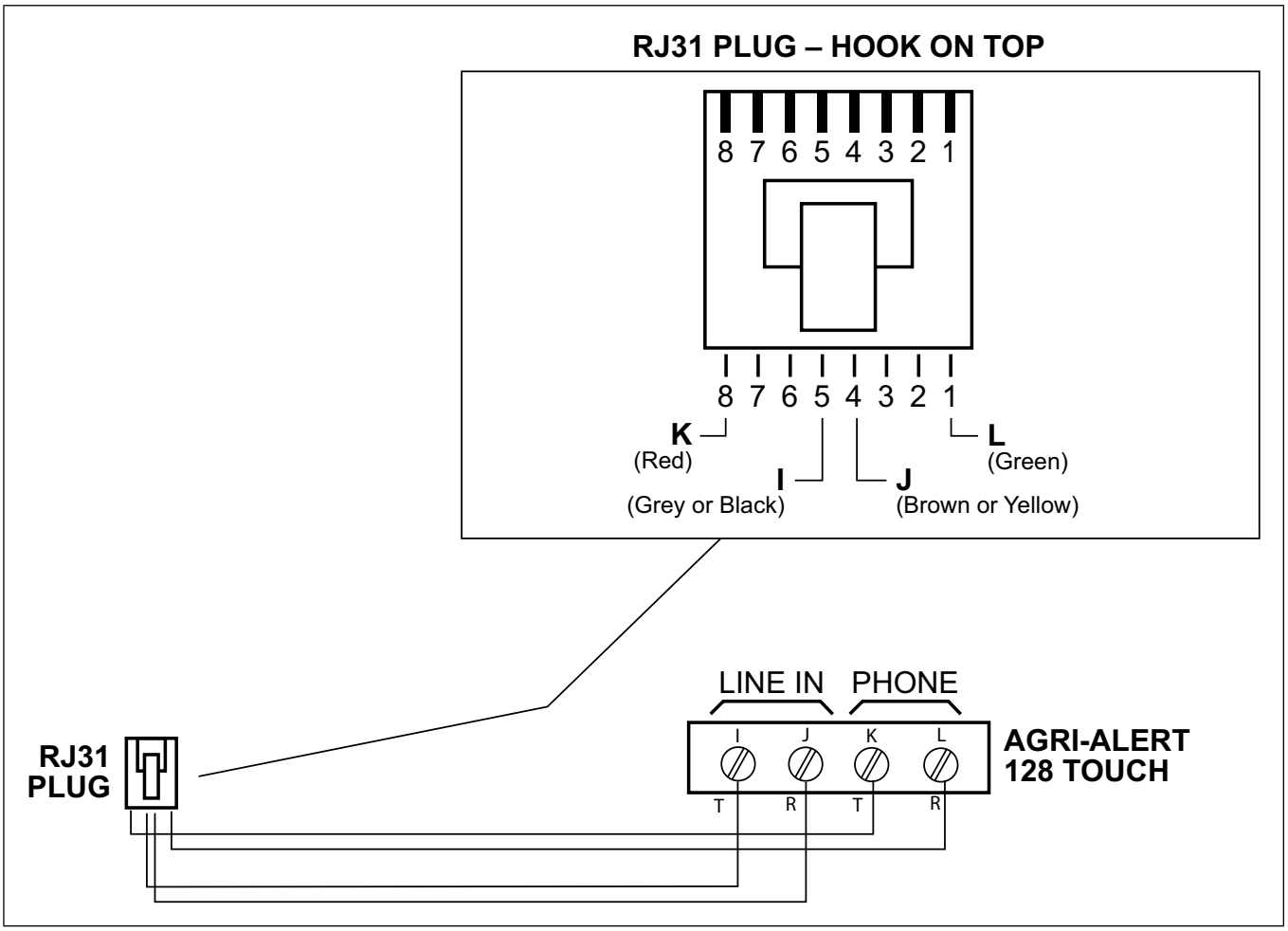
The following is required to make such a connection.

- An RJ31 cable (8 wires) and connector. A standard 4-wire phone cable can also be used if the wires are properly connected to an RJ31 connector.
- An RJ31 alarm interface jack.

Four wires are used to connect the control module to the phone line.

Refer to the local building code and telephone regulations to determine the type and quality of cable required.

Figure 4-2 *Example of a phone line seizure hookup*



Connecting Modules to the Serial Bus Interface

There are two generations of modules that can be connected to your Agri Alert 128 Touch. There are a few differences between the models.

NOTICE ***The SBI power output can provide up to 58W which corresponds to a maximum of 10 modules. Use an independent power supply to connect all exceeding modules.***

NOTICE ***Use a tightening torque from 0.56N*m (5lbf*in) to 0.79N*m (7lbf*in) to fasten a wire.***

IMPORTANT: *An increasing number of modules increases the time between new readings. Each new module adds approximately 1 second to the data acquisition loop for zones. A system with 10 modules takes approximately 10 seconds to refresh all zones on the main screen.*

WARNING ***Insulation on conductors must be rated for 600 Volts and 90°C (194°F).***

NOTICE ***SBI or AA128 Touch cables have to use class 1 load type. GSI Electronics recommends using TC-ER cable type.***

NOTICE ***Refer to the Wiring Methods and Materials section from the National Electric Code to use the correct wire for the installation.***

NOTICE ***TC-ER conductors in sizes 18 AWG and 16 AWG shall be type FFH-2, KF-2, KFF-2, PAF, PAFF, PF, PFF, PGF, PGFF, PTF, PTFF, RFH-2, RFHH-2, RFHH-3, SF-2, SFF-2, TF, TFF, TFFN, TFN, ZF, or ZFF. Conductor with other types and thicknesses of insulation shall be listed for Class 1 load circuit use.***

NOTICE ***Consult the wiring diagrams to see the maximum cable distance according to the wire gauge. Consult the appendix Low voltage cable specifications to know the cables requirements.***

Connecting a TP-800, or KP(B)-400 to the SBI

1. Locate the SBI wires on the module you want to connect to the main system.
2. Connect the SBI wires from the module to the main board of your system.

IMPORTANT: *Make sure to connect same numbers together.*

Connecting a TP-8IN-1REL, KP-8IN-1REL, or TR-2IN-1REL

IMPORTANT: *These modules communicate at a higher bit rate that the old modules, TP800 and KP(B) 400. For this reason, they can't be connected directly to the SBI pins of the Agri Alert 128 Touch. You must make a new connection using pin 1 and 4 of the SBI for power, and pin A and B (located at position 11 and 12 on the Agri Alert 128 Touch base board, see wiring diagram).*

1. To connect the module to the Agri Alert, use a four shielded, twisted pair cable to connect pin 1 and 4 of the SBI for power and pin A and B (located at position 11 and 12 of the base board) on the Agri Alert 128 Touch network, and use the Automation network on the module.
2. To connect two modules together, use the Automation network, and make sure the same numbered terminals are wired together.
3. Respect the end of line rule.

Configuring Wireless Network

A wireless network consists of a module called the Base, which receives the RS-485 communication from the Agri Alert, and Remote modules (up to 7 on the SBI bus, and 16 on the PVX bus). All modules are the same, only their position determines if they are Base or Remote modules. There is no jumper configuration or DIP switch to differentiate them.

What You Should Know

NOTE: *Only one Base is allowed on a wireless network on the SBI. Adding a second Base would interfere with the first one. If the wireless network is used on the SBI bus, no configuration is needed in the Agri Alert software.*

IMPORTANT: *Turn on all the modules prior to configuring the network.*

1. Press on **Menu→System→Wireless**.
2. The bases are automatically detected upon start up. If no bases have been detected, press on the rediscover icon.
3. Press the **Manage Remotes** button, and then put a checkmark next to the Remote that connects to the Base. Press **Ok**.

   NOTE: *To view the Remote status, go to the **Remotes** tab. The RSSI value is the quality of the signal. If it's above -90dB, the signal is considered strong. If it's lower, try to move Remote to see if the signal can be increased.*
4. Repeat steps 2 and 3 for each Base detected by the Agri Alert.

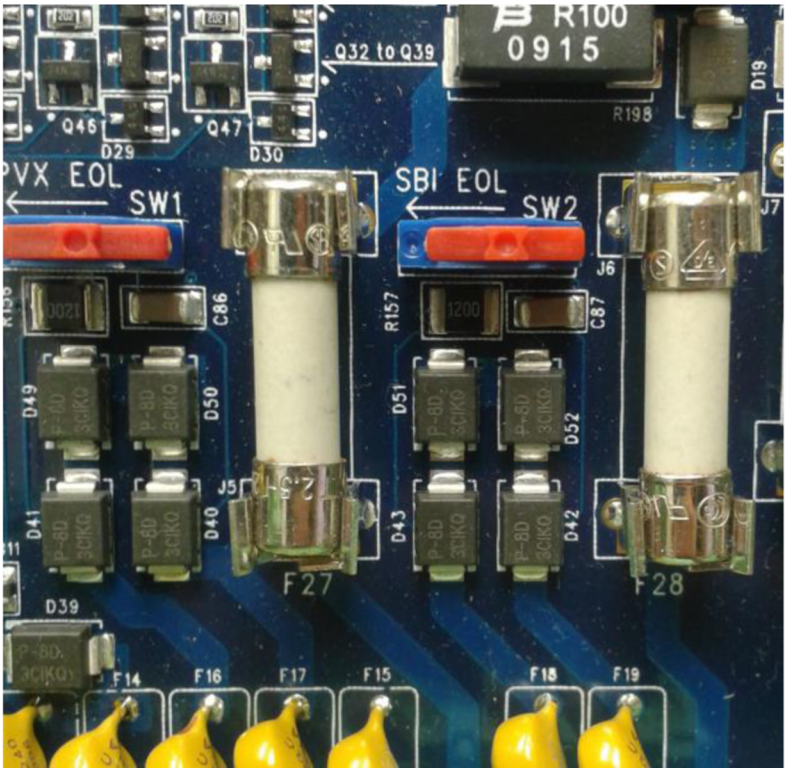
   NOTE: *A Remote can be disconnected from a Base by removing the checkmark in the **Manage Remotes** list. Once a remote is connected to a Base, it isn't displayed in other Base remote lists for management. It must be disconnect prior to reassigning to another Base. When disconnecting a Remote, allow 5 seconds for the Remote to send a new join request to be displayed in the other Base lists.*

   Tx power : the power at which the base emits radio waves. Unless the modules are very close (less than 10ft), leave power at 63mW (+18dB).

   Frequency Band: since the radio module shares the 2.4GHz band (location of Bluetooth, Wi-Fi and other system frequencies), in some cases it may require to force radio modules to use only a subset of the available range. If radio modules are unable to keep a strong signal, even when close and in line of sight, it could be helpful to validate the frequencies used on site. Call technical support for advice.

Serial Bus Interface: How it Works

The Serial Bus Interface (SBI) is a four cable bus used to both power and communicate with the system's modules. The ordering of the wires is very important. If the wiring can't be done in a single chain, you might need to deactivate the end-of-line (EOL) resistor (as shown below) to improve communication.


R100
0915
Q32 to Q39
Q46
Q47
D29
D30
R198
D19
PVX EOL
SW1
SBI EOL
SW2
J6
J7
C86
C87
R157
D49
D50
D51
D52
D41
D40
D43
D42
J5
F27
F28
D39
F14
F16
F17
F15
F18
F19

Examples of different network configurations

Relay Output Specifications

The maximum voltage on the relay outputs is 28 VDC with a maximum current of 4A.

The minimum permissible load on the relay outputs is 0,1A.

NOTICE

Use a tightening torque from 0.56N*m (5lbf*in) to 0.79N*m (7lbf*in) to fasten a wire.

Connecting a Sensor

A variety of different sensors can be hooked up to the system to monitor various inputs. The terminals used for sensor inputs are numbered Z1, Z2, Z3, etc. on the main board.

What You Should Know

NOTE: *Sensors needing a DC supply have the possibility of two different supply outputs : 12Vdc output and the 28 VDC output.*

The maximum voltage supplied to the siren output is 12 VDC with a maximum current of 1.5 amperes.

The maximum voltage supplied to the 28 VDC output is 28 VDC with a maximum current of 350 mA.

Connect each sensor to a Z terminal and to the COM terminal.

IMPORTANT: *Make sure each sensor is connected to the proper COM. False alarms can result if the wires are not properly connected.*

NOTICE

Use a tightening torque from 0.56N*m (5lbf*in) to 0.79N*m (7lbf*in) to fasten a wire.

See *Low Voltage Cable Specifications, page* for more information on sensors.

NOTES

5 Basic Operations

Topics Covered in this Chapter

- Switching Into Edit Mode
- Accessing System Information and Settings
- Arming and Disarming Intruder Zones
- Acknowledging an Alert On-site or on the Phone
- Viewing Alert History
- Viewing and Managing Notifications
- Logging In
- Selecting the Language Displayed on the User Interface
- Accessing Onscreen Help
- Filtering Zones on the Main Page
- Adjusting the Size of the Zone Tiles
- Navigating Through the Main Screen Pages
- Bypassing a Zone
- Deleting Information

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.

Accessing System Information and Settings

1. From the main screen, press on the main menu button.
2. Press on **System**.

   The menus available are displayed on screen.
3. press on the menu to view the system information or to configure setting in edit mode.

Arming and Disarming Intruder Zones

1. From the main screen, press on the drop down menu button.
2. Press 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.

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 with a keypad connected to the system or on the system's user interface, enter your PIN 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 PIN when asked by the system.
    2. Contact someone on-site or take action to return the zone into a normal state.

    NOTE: *If you miss an alert call from the system, you can call the system and follow the instructions to acknowledge the alert.*

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, press on the zone you would like to view.
2. Press 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.

Viewing and Managing Notifications

Notifications are messages displayed for a short period of time on the main screen when the system is performing an action that you can't know about except through these notifications. A small window is displayed for 5 seconds over the other menus.

1. Press on the notification balloon to read the notification. The last 15 notifications are kept in history.
2. Press on the close button or anywhere on screen to close the notifications.

Logging In

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

1. When prompted, press on the login icon  .
2. Enter the PIN 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.*

Selecting the Language Displayed on the User Interface

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

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

Accessing Onscreen Help

A very complete and helpful onscreen help is easily accessible through the user interface.

1. From any page on the user interface, press on the ? icon to access help.

   All fields that have help available turn blue.
2. Press on the field on which you need help.

   A page containing information on the field is displayed.
3. Press on the ? icon to exit the help.

Filtering Zones on the Main Page

You can apply a filter on the main page in order to see zones according to type or status. For example, you can choose to display only zones that are in an alert state or only temperature zones.

1. Press on either the filter showing zone type icons or the filter showing zone status icons at the bottom of the main page.
2. Select the filter to be applied.
3. To show all zones, press on the ⊘ icon.

Only the zones fitting the filter criteria are displayed on the main page.

Adjusting the Size of the Zone Tiles

You can adjust the size of the tiles on the main page to make the tiles smaller or bigger depending on the number of zones in your installation. Eight zones can be displayed on the main screen in their largest state.

From the main page, press on the **+** or **-** buttons to adjust the size of the zone tiles.

Navigating Through the Main Screen Pages

When you have more than eight zones being monitored and you leave them at their largest display size, you will have to change main screen pages to view your other zones.

From the main page, use the right and left arrows at the bottom right of the man screen to navigate through the main screen pages.

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. Press on the zone you would like to bypass on the zone monitoring screen (main page).
2. Press 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, press on the **Bypass** button.

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

Deleting 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 delete it from the system.

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. Press on the garbage icon .

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

6 Information Creation and Management

Topics Covered in this Chapter

- Switching Into Edit Mode
- Creating and Managing Partitions
- Creating and Managing Contacts
- Assigning the Contacts' Access level
- Assigning and resetting the Contacts' PIN
- Assigning a User name and Password for Remote Access
- Assigning a User an RFID
- Creating and Managing Contact Groups
- Managing Modules
- Creating and Managing Temperature Curves

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.

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 Contacts

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

What You Should Know

IMPORTANT: *Before any zone can be configured, all zone modules, contacts and contact groups, partitions, temperature curves, and outputs must first be created in the **System** menu.*

1. Press on **Menu→System→Contacts**.
2. In edit mode, under the **General** tab, enter the contact name and populate the fields. There are two fields to enter either an e-mail address or an SMS number with a gateway refer to *Configuring the System to Send E-mails and SMS Messages , page 53* for more information. There are two fields to enter phone numbers. The primary number is called first. If there is no answer, the system calls the second number.

   NOTE: *When entering a contact's phone number, use the prefix **1** only if the call is to a long distance number.*

3. If you want to receive an e-mail or a text message when an alert has been acknowledged, press on the box **Send email on alarm recovery/acknowledge**.
4. 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.
5. Fill in the **PIN** and **Remote** tabs if needed.

Assigning the Contacts' Access level

There are two default contacts: One master and one installer. All new contacts are created as Users, with limited access. Afterwards, they can be configured as master or installer if needed:

1. Press on **Menu→System→Contacts**.
2. Navigate to the contact whose access level you want to change.
3. In edit mode, under the PIN tab, press on the Access level field.
4. Select the desired access level.

Assigning and resetting the Contacts' PIN

Default Master and Installer's PIN are factory set to 0128 and 0129 respectively. They can be modified by pressing on the Change Pin button, under the PIN tab.

To assign or modify a PIN to a newly created contact:

1. Press on **Menu→System→Contacts**.
2. Navigate to the contact whose PIN you want to assign.

3. In edit mode, under the PIN tab, press on the PIN field.
4. Write a four digits number.

If you need to reset an existing PIN, press on the Reset PIN button. Note that:

1. Only masters and installers have the right to reset or change PINs.
2. Default Master and Installer's PIN will reset to factory settings (0128 and 0129 respectively). All other contact's PIN reset to empty.
3. If all master and installers' PINs are forgotten, call technical support.

Assigning a User name and Password for Remote Access

In order to give a remote access to the system from the local area network, you must create a user name and a password. You will have the same functionality from the web client than locally on the system, based on the credentials.

1. Press on**Menu**→**System**→**Contacts**.
2. Navigate to the contact you want to give a remote access.
3. In edit mode, under the **Remote** tab, enter the contact desired user name.
4. Enter the password.
5. Confirm the password.

   A pop-up window is displayed informing you the access has been created.

Assigning a User an RFID

A contact with an RFID tag can activate the output of a module by scan. Only the output with the scan can be activated. All scans are recorded and logged into a file that can be viewed on the Agri Alert or exported to a USB key. Only the KP-8IN-1REL and TR-2IN-1REL are equipped with and RFID reader.

1. Press on **Menu**→**System**→**Contacts**.
2. Navigate to the desired contact and press on the RFID tab.
3. In edit mode, press on the add button.
4. Scan the tag on any module that is equipped with an RFID reader.

   A number is displayed in the RFID # box.

   NOTE: *If you want a user to be able to activate the module's output by scan, put a checkmark in the* ***Activate output on scan*** *box. The module's output must be configured in the RFID to be activated by scan.*

   NOTE: *It is possible to unassign a tag from a contact by pressing the remove button. The history will be kept for the contact. However, deleting the contact deletes the contact's history.*

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. Press on **Menu→System→Groups.**
2. In edit mode, under the **General** tab, enter the group name.

   NOTE: *If no groups have been created yet, the system creates the first one.*
3. Press on the time slot number 1.
4. On the left panel, enter the time of the day at which this time slot is active and on what day of the week.

   NOTE: *by default the time slot is configured to cover 24h, 7 days for each contact you add.*

   NOTE: *if you set the time from 5PM to 6AM, the coverage always starts for days that are checked and ends the following day in the morning, even if the following day is not checked.*
5. On the right panel, in edit mode, add a contact for this time slot. You can place the contacts in order of call priority.
6. Edit the other time slots if needed.
7. Once all the time slots are set, under the **General tab**, enable the desired time slots. Once this os done, you can associate contact groups with zones.

   NOTE: *If the time entered in the slots does not cover a 24 hour period, 7 days a week, a message is displayed in the zone.*

Managing Modules

Prior to assigning zones to modules, they need to be assigned and monitored by the system.

1. Press on **Menu→System→Module**.

   NOTE: *The first module is always the Base input and output card of the Agri-alert 128 Touch. It can't be deleted or turned off.*
2. In edit mode, press on the add module button to add a new module.
3. Enter the module name of your choice and then choose a module type.

   For legacy modules (TP-800, KP-400, KPB-400), proceed as follows:

   a. Enter the module ID. The system populates the software version automatically when the module is detected.

      NOTE: *If the system doesn't automatically detect the module, there could be a problem with the connection, or it could be that it isn't turned on properly. See* *Connecting Modules to the Serial Bus Interface, page 33* *and* *Viewing and Managing Power Output Circuits, page 49* *for more information.*

   The TP-8IN-1REL, KP-8IN-1REL, and TR-2IN-1REL are next generation modules for the TP800 and KP(B)400. They don't use the same communication bus although they share the same power bus.

NOTE: *This module is automatically detected when the Agri Alert is turned on. There is no need to set an ID. However to identify the physical location of the module on site, use the UID number located on the base board. The UID is needed to finalize configuration in the Agri Alert 128 Touch.*

For new generation modules (TP-8IN-1REL, KP-8IN-1REL, and TR-2IN-1REL), proceed as follows:

a. Press on the UID edit box.

b. From the list, choose the module matching the UID that represents the module's physical location.

NOTE: *If the module's UID is not in the list, validate that the correct module type has been selected. Only the selected module type is displayed. Check the connection to the module and then press on the* ***Rediscover*** *icon below the pen icon. Wait a few seconds for the discovery to complete.*

4. Once the system has detected the module, validate the quality of the communication by looking in the **Diagnostic** tab.

8. Adding a new module automatically create a new output tab. The output name reflects the module name and ID.

NOTE: *When you turn a module off in this menu, only the communication is turned off. Power to the module is not turned off. Close the SBI prior to maintenance.*

Configuring Programmable Outputs

Different programmable outputs can be connected to the system and to the system modules. When correctly configured and assigned to the correct zones, the outputs can activate or deactivate equipment during an alert that could potentially save livestock.

Before You Begin

NOTE: *The programmable outputs must first be configured before being assigned to zones.*

1. Click on **Menu→System→Output.**

NOTE: *Only the Agri Alert 128 Touch has two outputs.*

2. In edit mode, modify the output name if desired.

3. Choose the output mode: automatic, semi-automatic, manual, or RFID controlled power mode.

NOTE: *The semi-automatic power mode activates the output when an alert is set off, but the output can only be closed manually. RFID controlled is only available with the KP-8IN-1REL and TR-2IN-1REL. This means that the output will be activated only when a successful RFID scan is done. See* *Creating and Managing Contacts, page 44*

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.

7 System Configuration

Topics Covered in this Chapter

- Viewing and Managing Power Output Circuits
- Viewing and Resetting Output Circuits
- Configuring Siren Timings
- Setting the Date and Time Parameters
- Selecting the Temperature Scale
- Selecting a Volume Scale
- Configuring Phone Settings for the Call Out Sequence
- Configuring Technical Phone Line Settings
- Setting the Entry Delay
- Setting the Exit Delay
- Configuring the System Internet Protocol Address
- Configuring the System to Send E-mails and SMS Messages
- Configure the System to Monitor the Network
- Configuring the System to Communicate with the Alarm Central
- Recording the System Name
- Modifying the System Name and Web Identification
- Setting the System Trouble Recognition and Recovery Times
- Managing Software Versions
- Accessing the System From a Computer, Tablet or Phone
- Exporting the Configuration and Log Files

Viewing and Managing Power Output Circuits

1. Click on **Menu→System→General settings**.
2. In edit mode, turn the power output of the base IO card on or off for the 12V, 28V and SBI.

   NOTE: *If the output doesn't stay on, check that the protection is not tripped.*
3. Put a checkmark next to **Monitor Siren** for the system to report a trouble if the siren output is shorted or disconnected.

   NOTE: *The software does not try to turn the siren output on if it is shorted or disconnected.*

Viewing and Resetting Output Circuits

If an output is tripped it is detected by the system and can be reset.

1. Press on **Menu→System→Settings→Status and ID**.
2. In edit mode, under the **General** tab, press on **Reset output circuits prot.** if the **Output circuits protection** is tripped.

NOTE: *When an output protection is tripped, you must turn it on manually after resetting the fuse. Resetting the fuse does not turn the output on.*

Configuring Siren Timings

It is possible to add a delay before the siren output is activated and a run time for the siren.

1. Click on **Menu→System→settings→General Settings**.
2. Click on the **Siren** tab.
3. In edit mode, adjust the delay time. the maximum allowed delay is 1 hour.
4. Adjust the run time if desired. setting the run time to zero means the siren runs until it is stopped manually.
5. Put a checkmark next to **Monitor Siren** for the system to report a trouble if the siren output is shorted or disconnected.

   NOTE: *The software doesn't try to turn the siren output on if it is shorted or disconnected.*

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.

Selecting the Temperature Scale

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

Selecting a Volume Scale

1. Navigate to **System→Settings→Time and Units**.
2. In edit mode, under the **General** tab, press on the edit field next to **Volume Unit**.
3. select the volume unit desired.

Configuring Phone Settings for the Call Out Sequence

The call out phone settings are the parameters the system follows when an alert is set off and a call out sequence begins. When the system calls out, there is no way for it to know if someone answers the call or the call goes to an answering machine. The system detects human presence by asking to press key 1. When you press the key, the system delivers the message from the beginning and asks to enter a PIN.

1. Press on **Menu→System→Settings→Phone settings**.
2. Set the following parameters:

Parameter	Description
Country	The country where the unit is used
Alarm time to start dialing	The amount of time the system waits after an alert is set off and the first number is called
Time between calls	The number of seconds the unit waits after ending a call before calling the next number

Min ring count	The number of rings before the unit ends the call
Alarm recall delay	Delay between the calls once the alert is acknowledged
Monitor phone line cut	Monitors the phone line and advises of any trouble on the line
Number of message repetitions	The number of times the alert message is repeated
No user interaction timeout	The amount of time the system waits between the end of one call and the beginning of another
Fax/ answering machine	Put a checkmark if you have a fax or an answering machine on the parallel line of the Agri Alert 128 Touch. The system allows the fax or answering machine take the call when the line rings. To reach the Agri Alert, call once and let it ring no more than 2 times and hang up. Wait 30 seconds and call again. The Agri Alert will answer the call.
Allow acknowledge without PIN on recall	Enabling this option allows you to acknowledge alerts by recalling the Agri Alert 128 Touch without entering a PIN number. This option must be used only when you experience issues when trying to enter a PIN to acknowledge an alert. Enabling this option forces the time between call delay to 1 minute, to allow a sufficient window for call back. Please note that anyone or anything that calls back the Agri Alert 128 Touch during this window acknowledges the alert. Please also note that fax and answering machine functionality is suspended during this window meaning the system answers all calls. In order to make the recall quicker, you can decrease the **No user interaction timeout** to 30 seconds.

Configuring Technical Phone Line Settings

Technical specifications are required to configure the phone settings upon installation.

1. Click on **Menu→System→Settings→Phone settings**.
2. If needed, under the **Advanced** tab, use the **+** and **-** signs to adjust the following parameters or populate the fields:

Do not modify any parameters unless otherwise specified by a certified phone technician.

Dial tone wait time	Number of seconds the system must wait before starting dial tone detection. Ranges between 0 and 10 seconds
Receive gain	Increases the volume of voice reception. Ranges between -48dBm and -9dBm and increases by increments of 3dBm
Transmit gain	Increases the volume of the emitting voice. Ranges between -48dBm and -9dBm and increases by increments of 3dBm
DTMF ON and OFF	Duration of the DTMF ON and OFF when dialing. Ranges between 10 ms and 1 second by 10 ms increments
DC impedance	Changes the DC termination impedance. Increases the line resistance. Choice between 50 and 800 ohms
Tip-ring voltage	Changes the Tip-Ring voltage for countries using a lower line voltage
DTMF LF and HF	Power frequency that makes up the tone. Ranges between -15dBm and -1dBm and increases by increments of 1 dBm

Ringer threshold	Choose the appropriate voltage, depending on the country, to detect the ringer
Measured line voltage	Measures the resting line voltage. An alert is set off if the voltage becomes too low (less than 3 volts)

Setting the Entry Delay

To avoid an alert being set off when you enter the building, provide enough time to access the system and disarm before an alert is set off.

Before You Begin

Attention

Only entry zones can have an **Entry delay**. You must put a checkmark next to the **Entry zone** icon in the zone itself to make the zone an entry zone.

1. To set the entry delay, navigate to **System→Settings→Intrusion Arming**.
2. In edit mode, under the **General** tab, Click on the edit field next to the **Entry delay** button.
3. Enter the amount of time needed to reach and disarm the system when entering the building.

Setting the Exit Delay

Once you have armed your system, you must have enough time to exit the building without setting off an alert.

Before You Begin

Attention

Only entry zones can have an **Exit delay**. You must put a checkmark next to the **Entry zone** icon in the zone itself to make the zone an entry zone.

1. To set the exit delay, navigate to **System→Settings→Intrusion Arming**.
2. In edit mode, under the **General** tab, press in the edit field next to the **Exit delay**.
3. Enter the time needed to exit the building after arming.

Configuring the System Internet Protocol Address

The system's software is programmed to receive an IP (Internet Protocol) address automatically from a DHCP (Dynamic Host Configuration Protocol) server. You can also assign a static IP address if desired.

1. Press on **Menu→System→Settings→Ethernet settings**.
2. In edit mode, under the **General** tab, press on the Static IP button
3. Populate the field address, mask and gateway.
4. If needed, change the DNS server from automatic to manual and fill the DNS 1 field. Add a secondary DNS if available.
5. press on the **Apply** button when you are finished.

Configuring the System to Send E-mails and SMS Messages

Before the system can send an e-mail or and SMS message, it must first be configured properly in the System menu.

Do not rely on e-mail or SMS messages only for alert messages. Although they are usually very fast to be delivered, sometimes it can take minutes or even hours before an e-mail is delivered because of server failure, heavy traffic, or other issues

Navigate to **System→Settings→Ethernet Settings**.

The can use a dedicated server to send e-mails and SMS. If your system does not use the default parameters, and you want to use the default ones, press on the **Reset to default** button. This erases all current fields and replaces them with the GSI SMTP server.

If you prefer to use your SMTP information, set the following parameters with the help of information provided by your internet supplier:

Host server	The computer that the Agri Alert reaches to send the message. The Host Server is what relays the message to your inbox
Port #	The gateway the Agri-Alert must pass through. The Host Server only accepts a message from the Agri-Alert through this port number
Authentication	The box that needs to be checked for the Agri-Alert to send the username and password to identify the Host Server
SSL enable	The box that needs to be checked if the Host Server uses secure transactions that requires the data to be encrypted
Username	The username can either be your e-mail address or your account identifier depending on your internet provider
Password	The password can be either be the password you use for your e-mail address or your account ID
Confirm password	The password but be typed in a second time to confirm it is correct
Confirm password button	Press on the this button to confirm both the **Password** and the **Confirm Password** fields match. An error displays if the two fields are different

Once configuration is done, you can enter an e-mail address when creating contacts. To receive an SMS message, enter your cellular phone number as follows: phonenumber@providergateway .

IMPORTANT: *You must validate the gateway with your service provider.*

IMPORTANT: *Don't forget to check the box under the **Action** tab next to the e-mail icon when configuring a zone.*

Configure the System to Monitor the Network

The system can monitor the network and it is capable to detect and automatically correct a number of problems.

To enable and configure the monitoring capability:

1. Click on **System→Settings→Ethernet settings**.
2. In edit mode, under the **Monitoring** tab, populate the following parameters:

Monitor network	Put a checkmark in the box to allow the system to periodically poll the gsiedge.com server and local router (gateway).
Network poll frequency	Sets the delay between two consecutive tests.
Warning threshold	Configures the number of consecutive network errors that will trigger a Network warning.
Trouble threshold	Configures the number of consecutive network errors that will raise a Network trouble.

A **Network warning** consists in displaying a regular notification and turning the configuration gear orange.

A **Network trouble** is a regular alarm. All actions configured in the Status and ID's **Action** tab will be triggered.

NOTE: *Obviously, no email or SMS will be sent to announce a network trouble. But, upon recovery, a message will be sent to all users listed in the Status and ID's Action tab, indicating the type of error (server or router) as well as the timestamp. This applies also to both, warning and trouble.*

Configuring the System to Communicate with the Alarm Central

The system communicates with an alarm central when an alert is set off. Different codes represent the different type of alerts. In order for the alarm central to receive the information of an alert, the alarm central information must be entered in the system.

1. Click on **System→Settings→Alarm Central.**
2. In edit mode, under the **General** tab, populate the following parameters:

Use Alarm Central	Put a checkmark in the box to allow the system to communicate with the alarm central
Account number	Your account number given to you by the alarm central
Central's phone number	The alarm central phone number to report alerts
First call priority	Put a checkmark in the box if you want the alarm central to be called before any contacts
Report alarm recovery	If you want the system to report to the central when a zone returns to its normal state following an alert
Periodic test report	Select **Yes** if you want the system to send reports to the central periodically
Periodic report time of day	If you want the system to send periodic test reports, enter the frequency the reports must be sent
Periodic test interval	Use the + and - buttons to select the interval between reports

3. Under the **System CID** tab, change the three digit codes that vary with your alarm central.

Recording the System Name

Recording the name of the system lets you determine which system is in an alert or trouble state when you have more than one system on site.

1. Press on **Menu→System→Settings→Status and ID**.
2. In edit mode, under the **Message** tab, press on the red record button next to the language of your choice.
3. Clearly state the name of the system.

   NOTE: *The amount of time remaining to record the name is displayed at the bottom of the page.*
4. Press on the black square to stop recording. You can listen to the recording by pressing the play button.
5. If you want to delete the recording, press on the garbage icon  .

Modifying the System Name and Web Identification

You can edit the system name so that it appears as the e-mail sender, or when exporting log and configuration files for example.

1. Press on **Menu→System→Settings→Status and ID**.
2. In edit mode, press on the name field and enter the system name of your choosing.
3. If you created an account on the gsiedge.com website, you need to enter the account ID in the **Web Account ID** field.

   The account ID is made up of 5 uppercase, alphanumeric characters without the letter **O**.

Setting the System Trouble Recognition and Recovery Times

By setting the recognition and recovery times for system troubles, the system waits the recognition time before going into trouble state, and then waits for the system to return to a normal state for the amount of time indicated in the recovery time before coming out of a trouble state.

1. Click on **Menu→System→Settings→Status and ID**.
2. In edit mode, under the **General** tab, set the desired **System trouble recognition time** and **System trouble recovery time**.

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. Every night, between 1 am and 3 am, the system searches for new available updates. When an update is found, a notification message will pop-up indicating the name of the file. Also, the configuration gear turns green to prompt the user to navigate into the Software Info menu.

1. Insert the USB stick into the USB port of the main system.
2. Press on **Menu→System→Settings→Software Info** to view the current software, firmware, and hardware information.

3. Under the **File** tab, press 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.

   NOTE: *If the software is corrupted (cannot boot), consult the troubleshooting guide in the section Chapter 21Executing software recovery procedure, page 103.*

Accessing the System From a Computer, Tablet or Phone

The system can be accessed remotely from a computer, tablet or phone on a local area network. Almost all actions that can be done locally are available remotely and are protected by the same type of credentials.

1. Connect the system to your local router with a standard Ethernet RJ-45 cable, CAT-5 at least.
2. Navigate to **System→Settings→Ethernet** to see the address assigned to the system.
3. From your electronic device, open a web client and enters the address of the system.
4. The system will prompt you to enter an user name and a password. Refer to *Assigning a User name and Password for Remote Access, page 45*.

   NOTE:

   *To minimize the bandwidth, all data are refreshed every minute. You can configure the refresh rate by going to **System→Settings→General Settings**; However you can force a refresh with the circular arrow at the top.*

   Alarms and troubles are sent to the web interface immediately, without waiting for the next refresh period.

   Users can acknowledge alarms and troubles from the web interface.

   If a user with a higher credential level than you logs into the system, either locally or remotely, you will be disconnected.

   When updating the system from the remote access, you will need to approve the installation of the update locally. The status gear will be green and a button update will bring you the Software management menu.

Exporting the Configuration and Log Files

You can export your configuration or log files both locally (either on the controller or on a computer connected to the same network as the controller), and remotely through gsiedge.com.

To export a configuration or log file locally, proceed as follows:

1. Press on **Menu→System→Settings→Software info**.
2. Under the **File** tab, press on the button of the action you would like to perform.
3. Click on the link of the file you want to download. If you are downloading the files directly from the controller, you must previously insert a USB key.

To export a configuration or log file remotely, proceed as follows:

1. Press on **Menu→System→Settings→Software info**
2. Under the **File** tab, click on the **Export files** button. A pop-up message is displayed prompting you to enter an e-mail address where the configuration and log files will be sent.
3. Enter your e-mail address, and then press **Send**.

The files are compressed using the tar.gz format and then e-mailed to the provided address.

NOTES

8 Zone Configuration

Topics Covered in this Chapter

- Zone Types
- Adding a New Zone
- Zone Configuration Settings
- 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 a device in the Event of an Alert or Trouble
- Selecting Contacts and Contact Groups
- 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

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 8-1 *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.

Table 8-1 *List of the different zone types (cont'd.)*

Zone Type	Description
Water meter	Used to monitor water consumption based on a dry contact water meter.
Pulse speed	Used to monitor motor rotation speed with a dry contact.
AA-CS	Used to monitor current used when using the AA-CS sensor.

Adding a New Zone

What You Should Know

IMPORTANT: *Before any zone can be configured, all zone modules, contacts and contact groups, partitions, temperature curves, and outputs must first be created in the **System** menu.*

IMPORTANT: *The Agri-Alert 128 Touch system is module number one and has eight inputs (1-8). Other modules must be connected to the system to add more than eight zones.*

1. Press on an existing zone tile on the main page.
2. Press on the pencil icon to switch into edit mode.

   NOTE: *You need to be logged with the installer password to create a new zone.*
3. Navigate to the zone number you want to create using the navigation arrows.
4. Complete all required fields in sequence.

   NOTE: *Fields containing an asterisk are mandatory to complete the zone configuration.*

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 8-2 *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	Water meter	Pulse Speed	AA-CS
Zone Text Label	X	X	X	X	X	X	X	X	X
Partition Selection	X		X		X	X	X	X	X
Module Selection	X	X	X	X	X	X	X	X	X
Input Selection	X	X	X	X	X	X	X	X	X
Zone Type	X	X	X	X	X	X	X	X	X
Alert Recognition Time	X		X		X	X		X	X
Alert Recovery Time	X		X		X	X		X	X
Temperature Offset	X	X							
Temperature Probe Calibration offset	X	X							
Output Activation on Alert or Trouble	X	X (only	X	?	X	X	X	X	X

Table 8-2 *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	Water meter	Pulse Speed	AACS
		trouble)							
Alert Phone Call	X	X	X	X	X	X	X	X	X
Alert E-mail	X	X	X	X	X	X	X	X	X
Alert Texting (SMS)	X	X	X	X	X	X	X	X	X
Alert Siren	X	X	X	X	X	X	X	X	X
Internal Speaker	X	X	X	X	X	X	X	X	X
Zone Audio Label	X		X	X	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			

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, press on the edit field next to the **Name** button.

   NOTE: *The field is limited to 32 characters, however, in order for the complete string of characters to be visible on screen, you must add spaces between the words to split the entries onto two lines if the entry is long.*

2. Type in the zone label of your choice.

Selecting a Partition

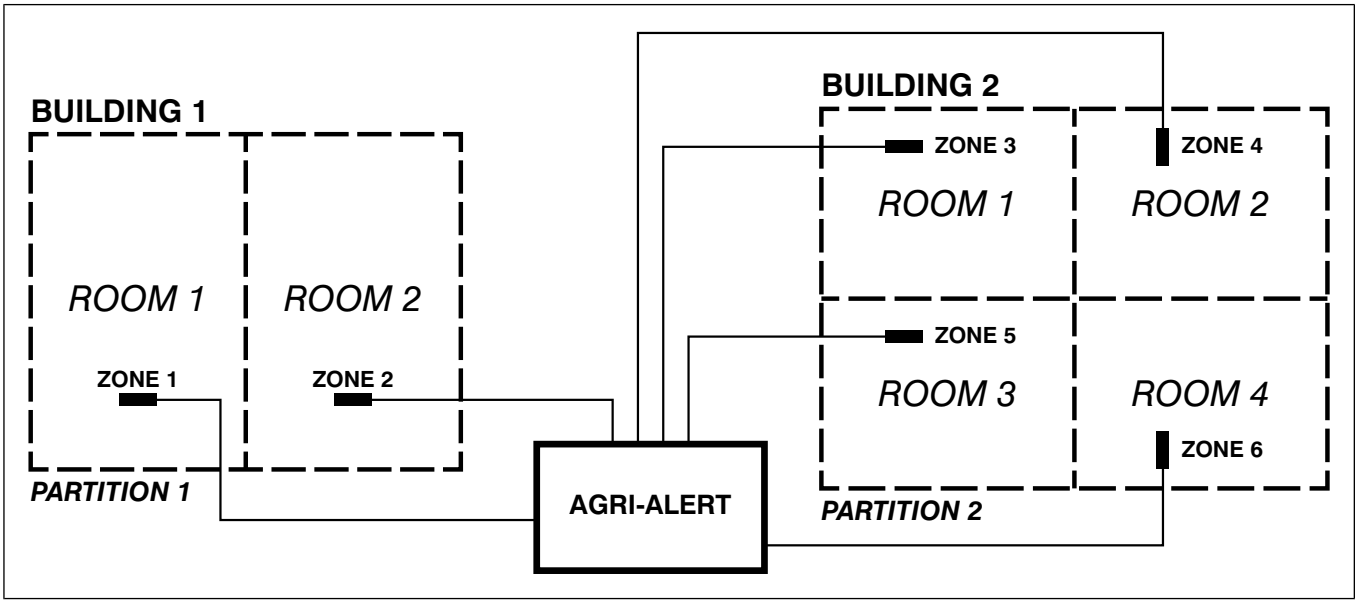
Partitions are used to group zones that are located in the same area or that are logically connected together. This can represent entire buildings or portions of a building. If you select the same partition in the zones belonging to a specific area, monitoring is done with one partition instead of several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

What You Should Know

IMPORTANT: *Before any zone can be configured, all zone modules, contacts and contact groups, partitions, temperature curves, and outputs must first be created in the **System** menu.*

1. In edit mode, Under the **General** tab, press on the edit field next to **Partition.**
2. Press 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.

What You Should Know

IMPORTANT: *Before any zone can be configured, all zone modules, contacts and contact groups, partitions, temperature curves, and outputs must first be created in the **System** menu.*

NOTE: *The Agri-Alert 128 Touch system is module number one. It has eight inputs, therefore, inputs 1-8 are associated to the Agri-Alert 128 Touch system.*

1. In edit mode, under the **General** tab, press 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

What You Should Know

NOTE: *The Agri-Alert 128 Touch system is module number one. It has eight inputs, therefore, inputs 1-8 are associated to the Agri-Alert 128 Touch system.*

1. In edit mode, under the **General** tab, press 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, press 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.

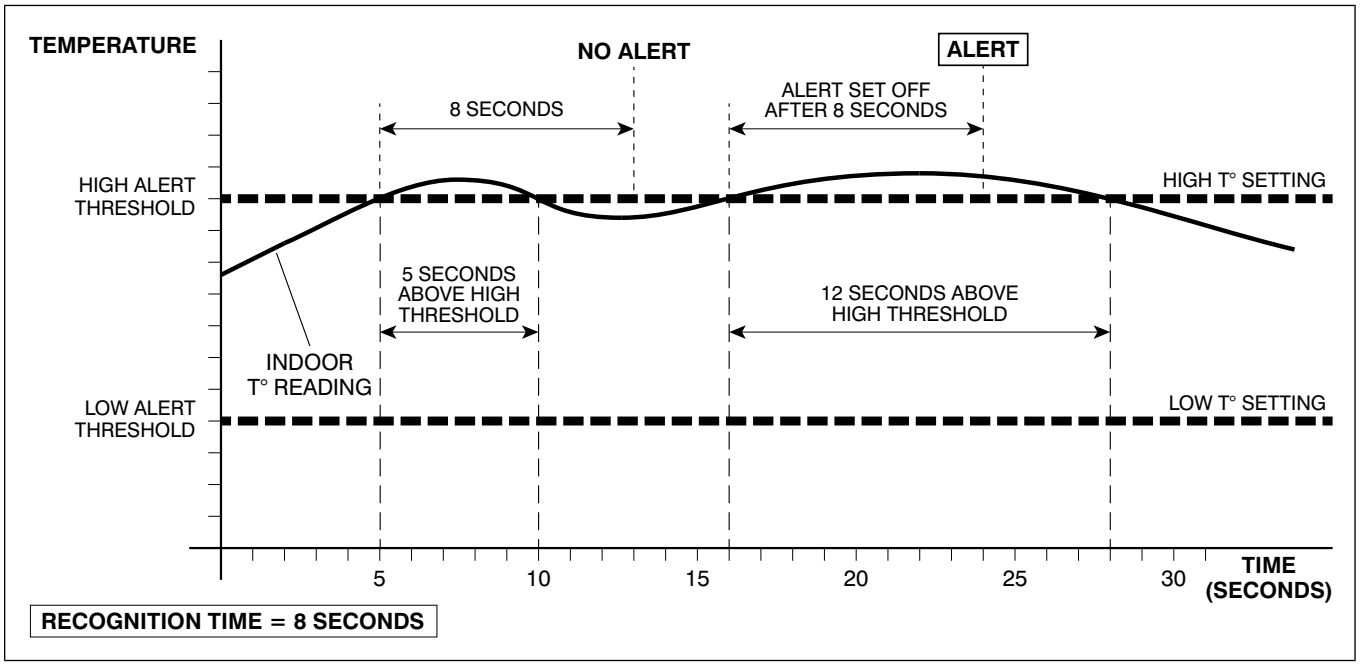
   NOTE: *The outdoor temperature zone type is not available if it has already been assigned to a zone.*

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, press 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*

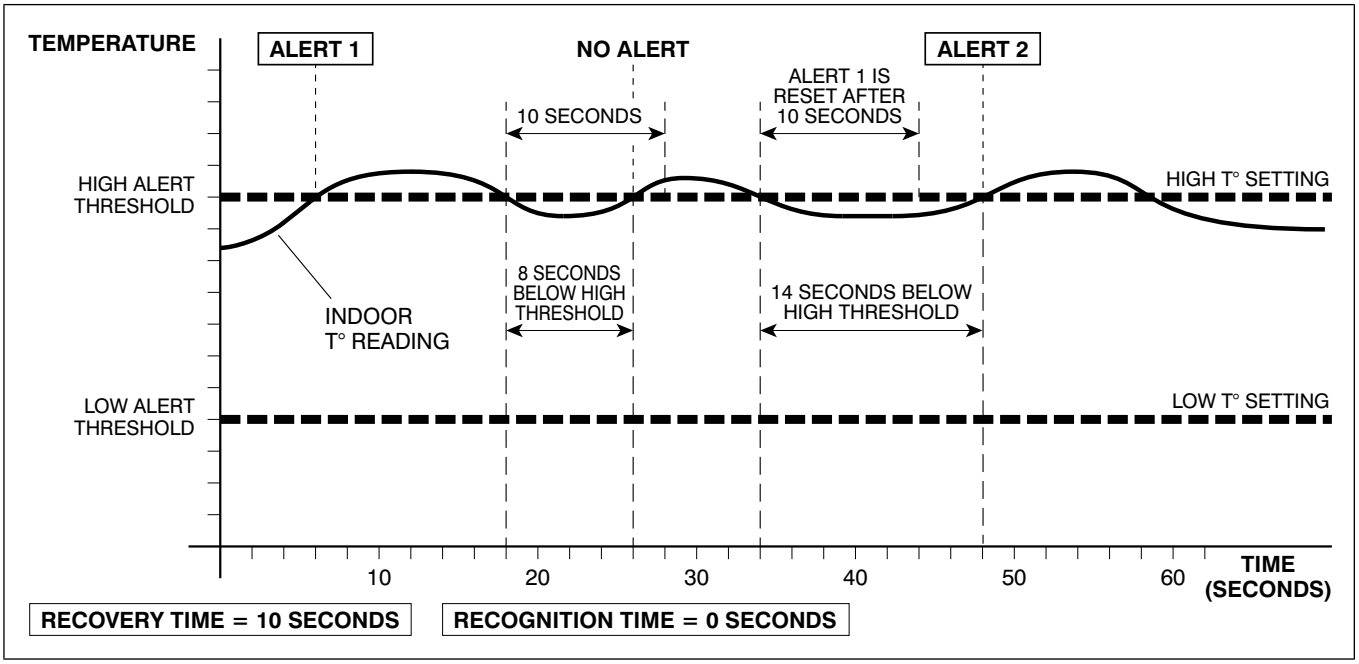


Setting the Alert Recovery Time

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, press 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*



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, you must select the output to which the device is connected and assign it to the zone.

1. In edit mode, under the **Action** tab, press 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. Press in the box to the left of the chosen output.

Selecting Contacts and Contact Groups

When an alarm is set off, the system builds a list of phone numbers from the contact groups and contacts taken from the field **Contacts** in the **Action** tab. The system parses groups and gets phone numbers from the users that are in the time slot covering the start time of the alarm.

1. In edit mode, under the **Action** tab, press on the **Contacts** field.
2. From the list, press on the little pen.
3. Choose the group or contact you want called wen an alarm in this zone is set off. Press on the green checkmark.
4. You can reorder the list if desired.
5. If you only select contact groups, and the coverage is not complete for 24 hours a day, 7 days a week, a red warning message is displayed. If you want a complete coverage for this zone, you might have to edit the group time slot or add a second group.

NOTE: *If you select individual contacts, they are considered 24 hours a day, 7 days a week contacts.*

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 contacts and contact groups must first be created in the **System** menu before they can be available for selection.*

In edit mode, under the **Action** tab, put a checkmark next to the phone icon to receive a phone call when an alert or trouble is active in the 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

IMPORTANT: *E-mail messages are not a reliable way of receiving alerts. Most of the time the messages are delivered instantly, but occasionally, delivery delays might occur and the Agri-Alert 128 Touch can't do anything about them. The system doesn't get proof of delivery of the alert messages.*

NOTE: *It is possible to receive the e-mail in the form of an SMS message by entering the phonenumber@phoneprovider information in the e-mail field when creating contacts. Contact your phone provider for the correct syntax.*

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

In edit mode, under the **Action** tab, put a checkmark next to the envelope to receive an e-mail when an alert or trouble is active in the zone.

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, press 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, press 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, press 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. Press 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.

9 Configuring Parameters Specific to a Temperature Zone

Topics Covered in this Chapter

- 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
- Resetting the Daily Minimum and Maximum
- Calibrating the Temperature Probe

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.

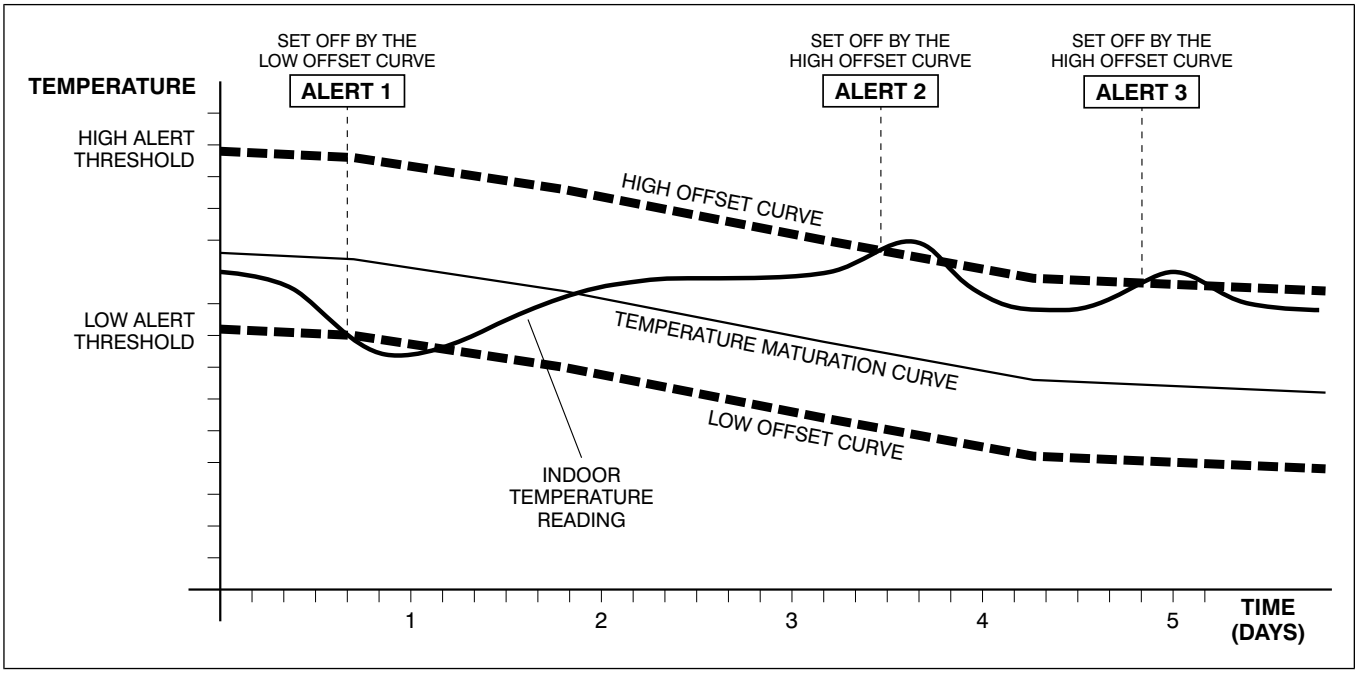
1. In edit mode, under the **Limits** tab, press on the **T° curve** button.

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

   NOTE: *Temperature curves must be created in the **System** menu before they are available for selection.*

2. Press on the circle to the left of the desired temperature maturation curve.
3. Press on the edit field next to the **High Offset** to display the input keypad and enter the high offset value.
4. Press on the edit field next to the **Low Offset** to display the input keypad and enter the low offset value.
5. Select the starting day for your temperature maturation curve.
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 9-1 *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, press on the edit field next to the red bell.
2. Enter the high limit threshold using the keypad.
3. Press 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, press 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, press on the box next to **External temperature compensation**.
2. Press on the **Ext. offset** edit field to display the keypad. Enter the desired value.
3. Press 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 9-1 *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 9-2 *Graph combining the high-low temperature and the outdoor temperature compensation features*

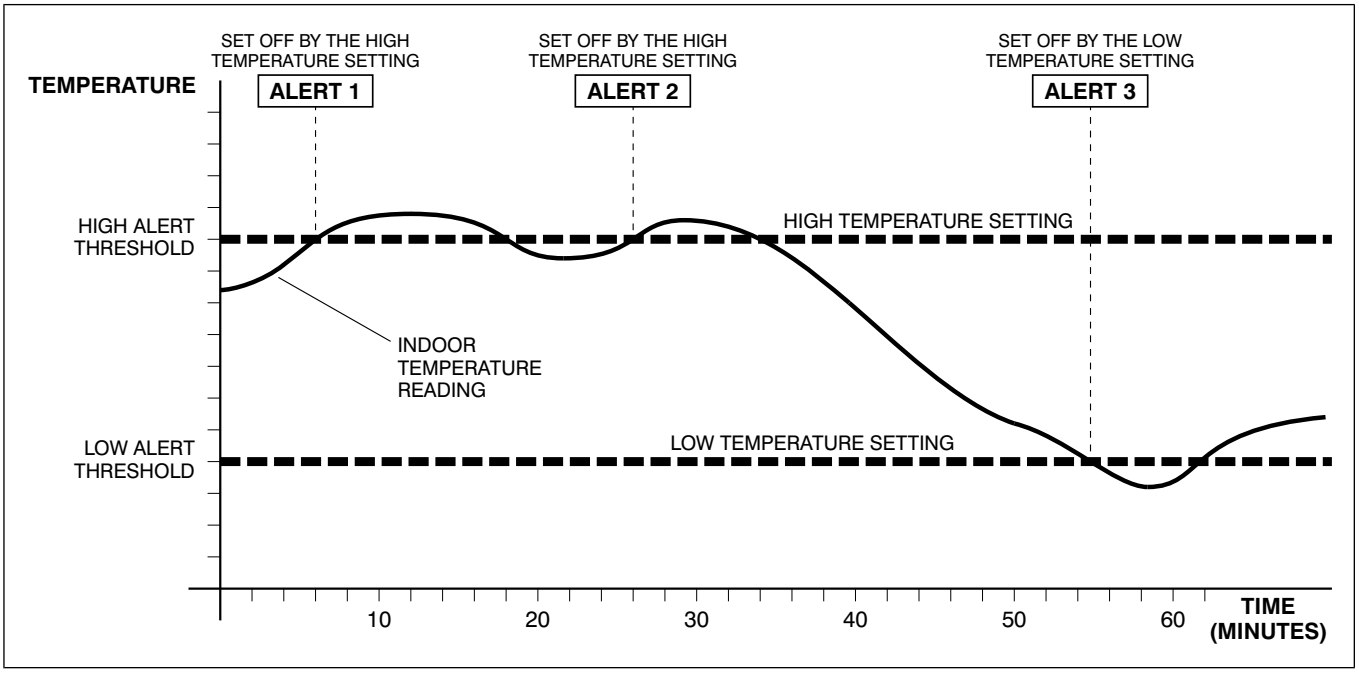
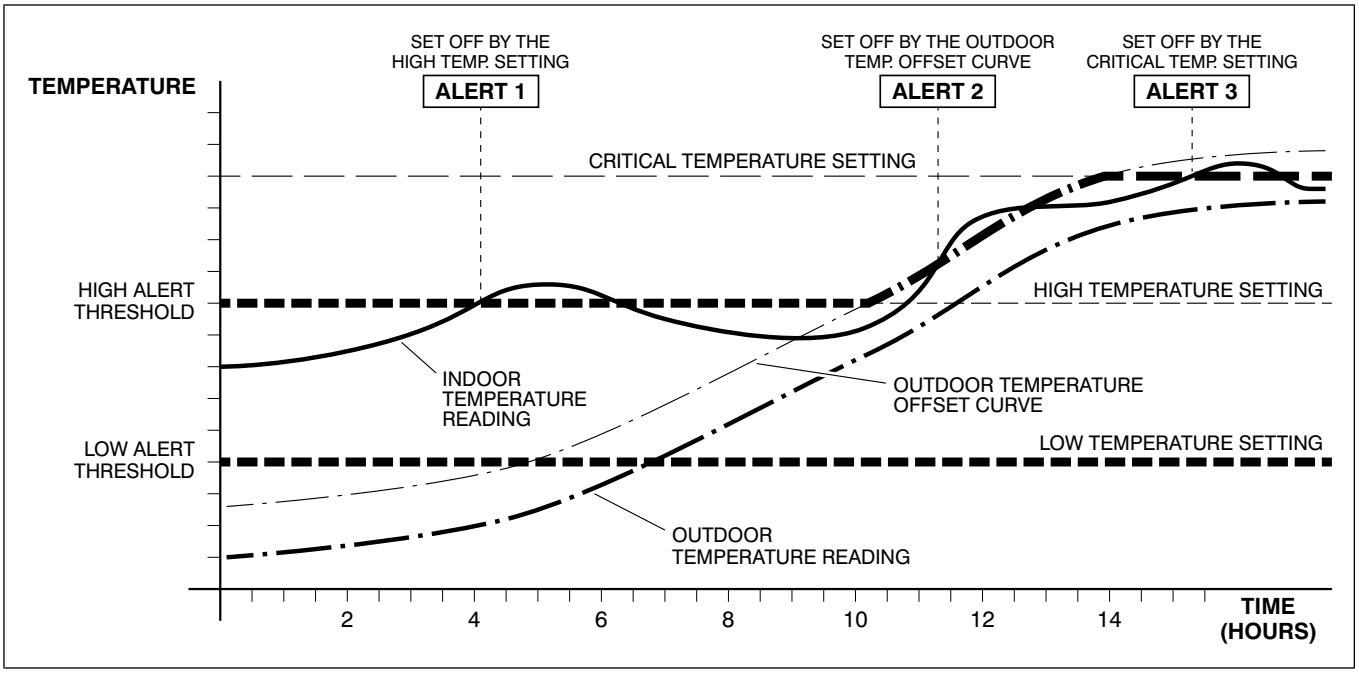


Figure 9-3 *Graph combining the temperature maturation curve and the outdoor temperature compensation features*



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, press 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 ± 10 °F (± 5.5 °C) with an accuracy of one tenth of a degree

1. In edit mode, under the **Calibration** tab, press 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 °F from the actual temperature, you must enter – 1.3 °F to calibrate the probe.

NOTES

10 Configuring Parameters Specific to a 0-5 Volt Zone Type

Topics Covered in this Chapter

- Resetting the Daily Minimum and Maximum
- Selecting the Unit of Measure
- Entering the Minimum and Maximum Values for an Input
- Viewing Zone Calibration
- Calibrating the Sensor Outputs
- Setting the Calibration Zero and Calibration Span
- How it Works: Calibration Zero and Calibration Span

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, press 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, press 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, press in the edit field next to the **Min** button.
2. Enter the minimum value measured by your input using the keypad.
3. Press in the edit field next to the **Max** button.
4. Enter the maximum value measured by your input using the keypad.

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, press on the **Calibration** button.

Trouble limits, raw and calibrated data is displayed.

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.

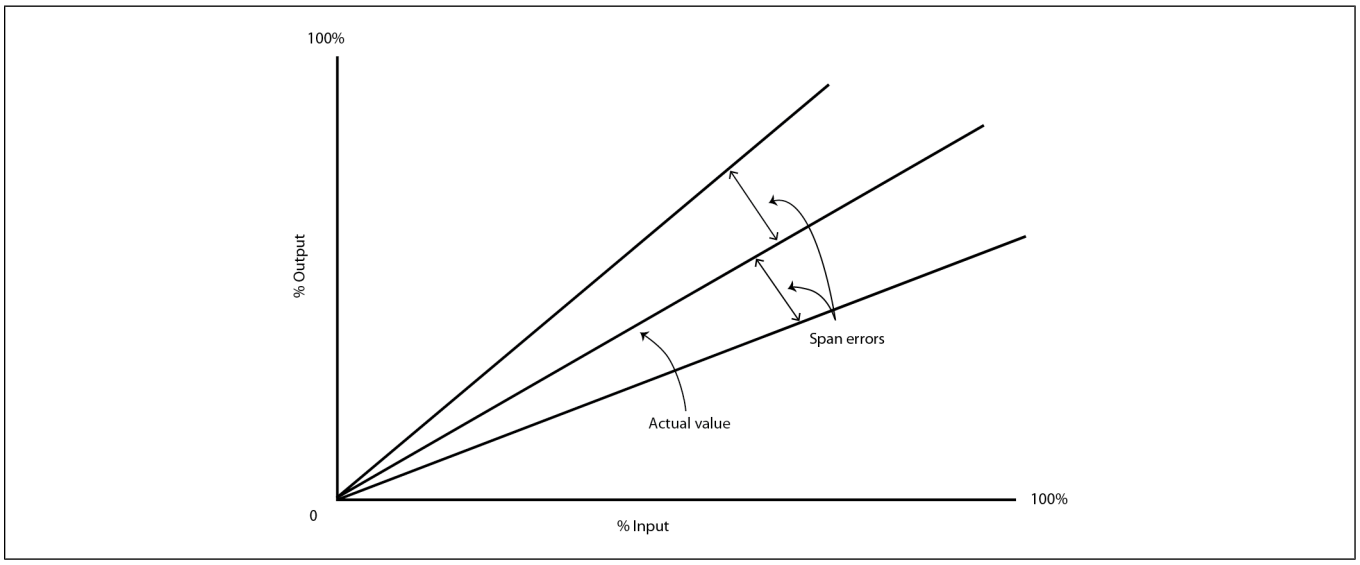
What You Should Know
The calibration zero and calibration span only need to be entered if the input calibration is incorrect.

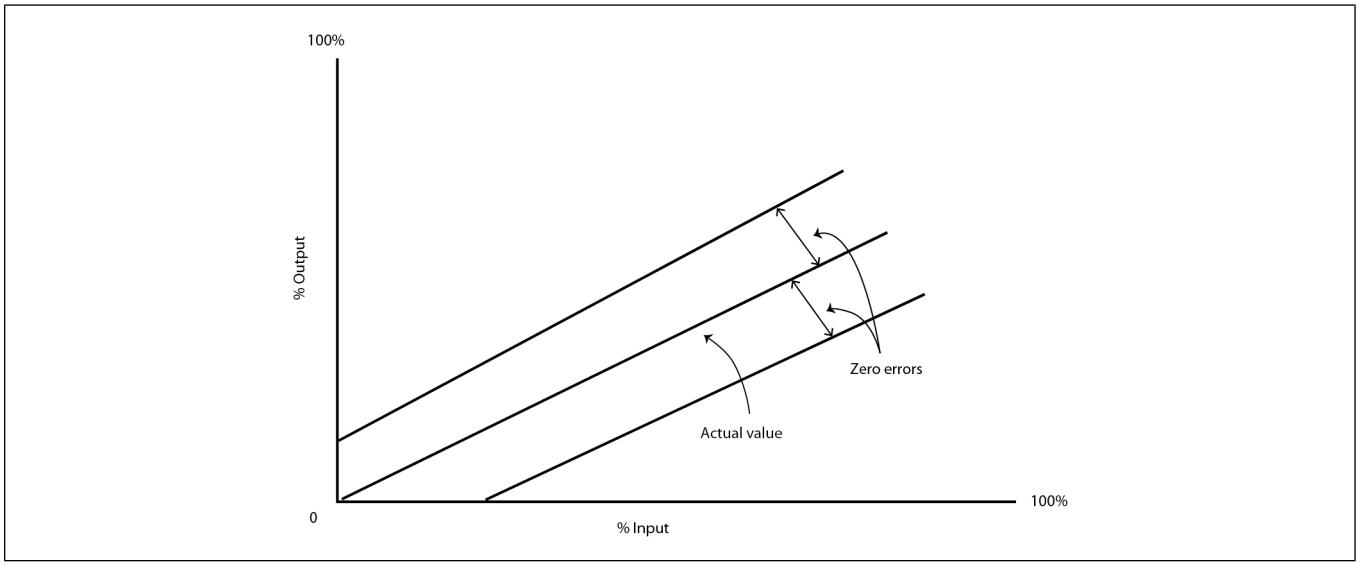
1. In edit mode, under the **General** tab, press on the edit field beside the **Cal. Zero** button.
2. Enter the zero calibration.
3. Press on the edit field next to the **Cal. Span** button.
4. Enter the calibration span.

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

11 Configuring Parameters Specific to a 4 - 20mA Zone Type

Topics Covered in this Chapter

- Resetting the Daily Minimum and Maximum
- Selecting the Unit of Measure
- Entering the Minimum and Maximum Values for an Input
- Calibrating the Sensor Outputs
- Setting the Calibration Zero and Calibration Span
- How it Works: Calibration Zero and Calibration Span
- Viewing Zone Calibration

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, press 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, press 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, press in the edit field next to the **Min** button.
2. Enter the minimum value measured by your input using the keypad.
3. Press in the edit field next to the **Max** button.
4. Enter the maximum value measured by your input using the keypad.

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.

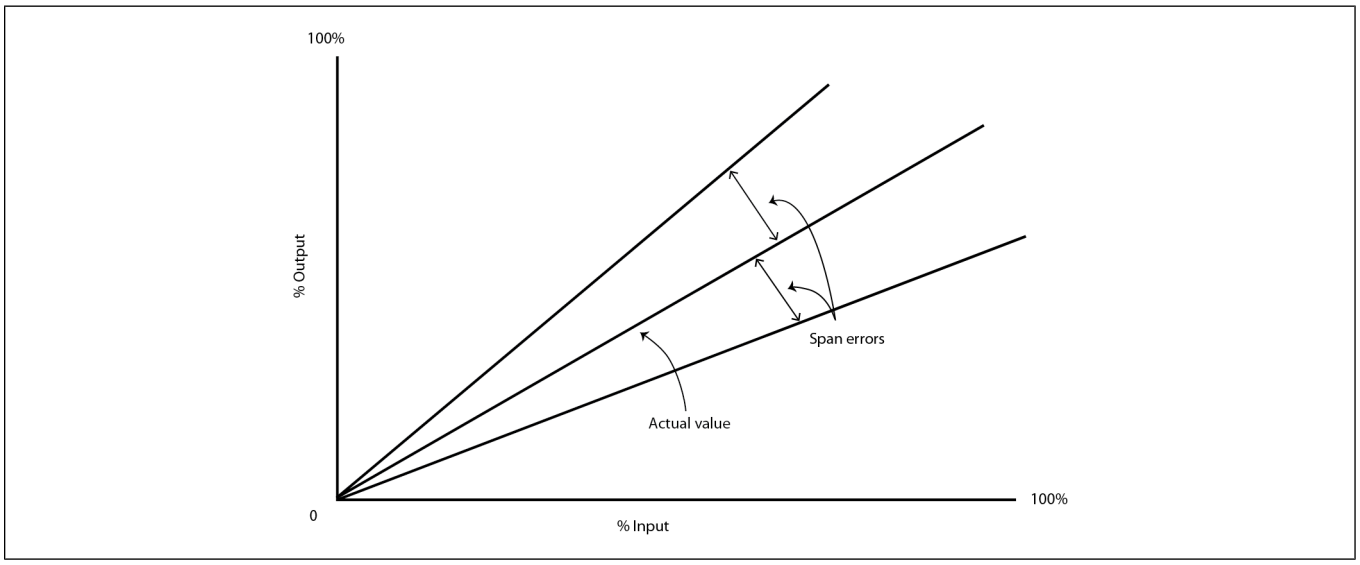
What You Should Know
The calibration zero and calibration span only need to be entered if the input calibration is incorrect.

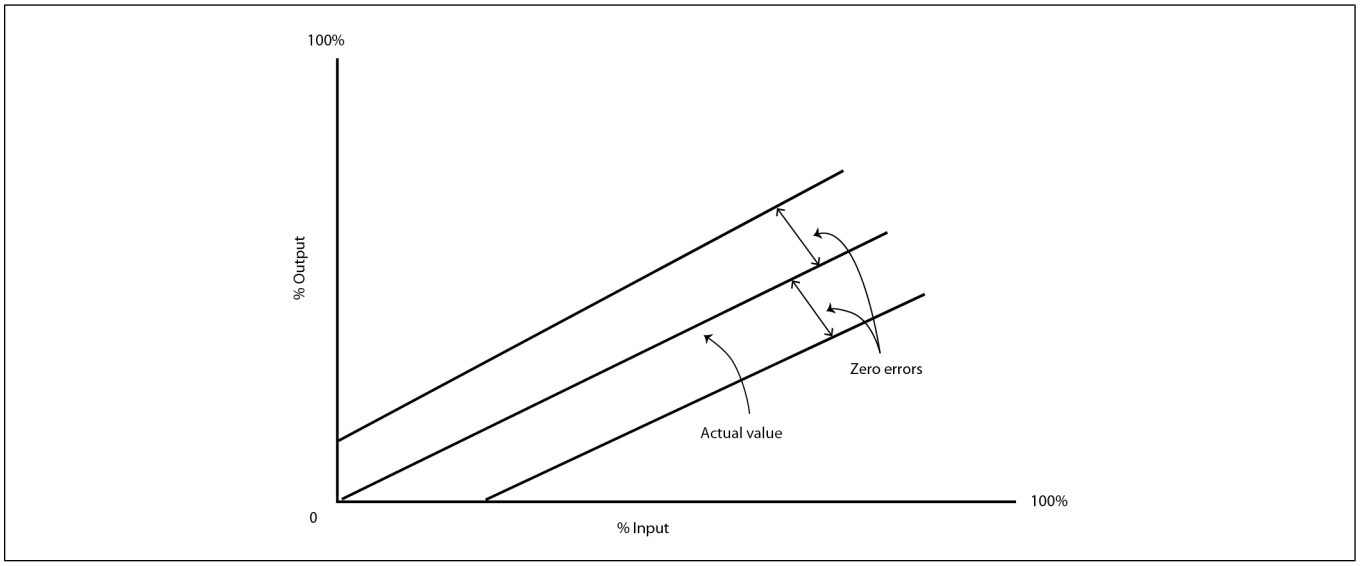
1. In edit mode, under the **General** tab, press on the edit field beside the **Cal. Zero** button.
2. Enter the zero calibration.
3. Press on the edit field next to the **Cal. Span** button.
4. Enter the calibration span.

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, press on the **Calibration** button.

Trouble limits, raw and calibrated data is displayed.

NOTES

12 Configuring Parameters Specific to a Dry Contact Zone

Topics Covered in this Chapter

- Resetting the Daily Minimum and Maximum
- Choosing the Type of End of Line Resistor
- Selecting the Type of Contact in the Dry Contact Zone
- Viewing Zone Calibration
- Calibrating the Zone Trouble Thresholds

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, press 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, press 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, press on the edit field next to the **Contact** button.
2. Select the contact type used for the zone.

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, press on the **Calibration** button.

Trouble limits, raw and calibrated data is displayed.

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**.

13 Configuring Parameters Specific to an Intrusion Zone

Topics Covered in this Chapter

- Choosing the Type of End of Line Resistor
- Selecting the Type of Contact in the Dry Contact Zone
- Activating the at Home Arming
- Activating the Chime on an Intrusion Zone Type
- Viewing Zone Calibration

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, press 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, press on the edit field next to the **Contact** button.
2. Select the contact type used for the zone.

Activating the at Home Arming

When your building is equipped with motion detectors, and you would like to arm the windows and doors, you can activate the at home arming.

In edit mode, under the **General** tab, put a checkmark in the box next to the at home arming icon.

Activating the Chime on an Intrusion Zone Type

In edit mode, under the **General** tab, press on the box next to the chime icon.

A checkmark indicates that the chime is enabled.

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, press on the **Calibration** button.

Trouble limits, raw and calibrated data is displayed.

NOTES

14 Configuring Parameters Specific to a Water Meter Type

Topics Covered in this Chapter

- Selecting the Sensor Volume Unit of Measure
- Entering the Sensor's Measure Per Pulse
- Configuring the Zone for a Line Flush
- Selecting Line Flush Zones
- Configuring the Start Period
- Entering the High Water Alert Limit
- Entering the Low Water Alert Limit
- Entering the Water Trouble Limits

Selecting the Sensor Volume Unit of Measure

Selecting the correct unit of measure for the input helps the reading of an alert threshold at a glance.

1. In edit mode, under the **General** tab, press on the edit field next to**Sensor unit**.

   A message alerting you the water consumption will be reset is displayed. Press on yes to confirm.

2. Select the unit of measure according to the input connected to the zone.

Entering the Sensor's Measure Per Pulse

1. In edit mode, under the **General** tab, press on the edit field next to**Sensor measure**.

   A message alerting you the water consumption will be reset is displayed. Press on yes to confirm.

2. Enter the sensor's measure per pulse.

Configuring the Zone for a Line Flush

1. In edit mode, under the **General** tab, press on the edit field next to**Line flush**.
2. Put a checkmark to make the zone a line flush zone.

Selecting Line Flush Zones

1. In edit mode, under the **General** tab, press on the edit field next to**Line flush zone**.
2. Select the zones you want to be line flush zones.

   NOTE: *Only the dry contact zones configured as water meter zones are available for selection.*

   NOTE: *If the dry contact is in a trouble state, the water meter zone still records water consumption.*

Configuring the Start Period

Water consumption alerts are calculated based on a 24 hour period. You can choose a convenient time at which an alert is set off.

1. In edit mode, under the **Limits** tab, press on the edit field next to **Period start at**.
2. Enter the time at which the system compares the last 24 hours of water consumption to the high and low alert thresholds and sets off an alert if the readings are not within range.

   NOTE: *After the activation of the zone, you might receive an alert related to low consumption if the very first period is not a complete 24 hours.*

Entering the High Water Alert Limit

1. In edit mode, under the **Limits** tab, press on the edit field next to the red bell.
2. Enter the high alert limit.

Entering the Low Water Alert Limit

1. In edit mode, under the **Limits** tab, press on the edit field next to the blue bell.
2. Enter the Low alert limit.

Entering the Water Trouble Limits

In edit mode, under the **Limits** tab, set the following parameters:

Water spill	Enter the high water trouble limit
Low trouble	Enter the low water trouble limit
Night period Start at:	If the **Night period** is checked, enter the time at which the night period begins
Night period End at:	If the **Night period** is checked, enter the time at which the night period ends

NOTE: *The night period is used to suspend monitoring of the low limit trouble.*

15 Configuring Parameters Specific to a Pulse Speed Zone Type

Topics Covered in this Chapter

- Resetting the Daily Minimum and Maximum
- Selecting the Sensor Unit of Measure
- Viewing the Pulses Detected
- Selecting the Trouble Thresholds

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, press on **Reset min/max**.

The minimum and maximum values are reset.

Selecting the Sensor Unit of Measure

Selecting the correct unit of measure for the input helps the reading of an alert threshold at a glance.

1. In edit mode, under the **General** tab, press on the edit field next to **Sensor unit**.

   A message alerting you the water consumption will be reset is displayed. Press on yes to confirm.

2. Select the unit of measure according to the input connected to the zone.

Viewing the Pulses Detected

In edit mode, press on the calibration tab.

The number of pulses detected is displayed.

Selecting the Trouble Thresholds

In edit mode, under the **Calibration** tab, adjust the high and low trouble thresholds.

NOTES

16 Configuring Parameters Specific to an AA-CS Zone Type

Topics Covered in this Chapter

- Resetting the Daily Minimum and Maximum
- Selecting the Number of Windings
- Entering Maximum Values for an Input
- Viewing Zone Calibration

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, press on **Reset min/max**.

The minimum and maximum values are reset.

Selecting the Number of Windings

Selecting the correct number of windings for the input indicates how the signal has been amplified.

1. In edit mode, under the **General** tab, press on the edit field next to **Windings**.
2. Enter the number of windings according to the input connected to the zone.

Entering Maximum Values for an Input

1. In edit mode, under the **General** tab, press in the edit field next to the **Max** button.
2. Enter the maximum value measured by your input using the keypad.

Viewing Zone Calibration

In edit mode, under the **Calibration** tab, trouble limits, and raw and calibrated data is displayed.

NOTES

17 Animal inventory

Topics Covered in this Chapter

- Viewing Animal Inventory

Viewing Animal Inventory

The animal inventory menu keeps track of mortality in different rooms of the site. you can create up to 32 different rooms to monitor, and record the death toll for each room.

1. Press on **menu→Animal Count.**.
2. In edit mode, enter the room name and room type.
3. Enter the animal count.
4. Enter the mortality if desired.
5. Enter the age of the animals if already in progress.
6. Press the **Start** button to start the period.

   NOTE: *Once thew period is started, you can only edit numbers with the + or - button. The system calculates the totals.*

   A report is generated including animal count, time stamp and mortality rate every day at midnight.
7. When the period is over, press the **End** button to clear all fields for the next period.

   NOTE: *Only the current period can be viewed in the history log. All previous periods can be consulted by exporting the log files.*

NOTES

18 Test Report

Topics Covered in this Chapter

- Configuring a Test Report
- Test Report Status

Configuring a Test Report

The test report keeps track of the availability of a list of contacts. You can build the list by picking from the pool of contacts declared in the System/Contacts menu and configure the periodicity of the test. At the time configured for the test report, the Agri Alert calls every contact on the list and prompts them to enter a valid pin to acknowledge the test. The controller records whether or not the contact responded.

1. Press on menu –> Test report
2. In edit mode, configure the periodicity of the test report (hour and interval)
3. Build the list of contacts and if they have to be called to the primary telephone, the secondary telephone or both.
4. Check the **Periodic test report** to enable the feature or trigger a test call manually by pressing on the **Start** button.

   NOTE: *While a test is running, the **Start** button toggles to **Cancel**.*
5. A new line will be added in the Report tab for every test call.

Test Report Status

- **Idle**. The telephone line is idle.
- **Locked**. The controller has an unacknowledged alarm. The test report feature is locked until all alarms are acknowledged.
- **Periodic test report**. The controller is calling the contacts to fill a test report.
- **Periodic test report: Postponed**. The test report was suspended because new alarms were triggered. When all alarms are acknowledged, the controller will resume the test report.

NOTES

19 Maintenance

Topics Covered in this Chapter

- Inspecting and Cleaning the Controller
- Replacing a Fuse
- Inspecting and tightening the connections
- Replacing the Battery
- Replacing the Coin Battery
- Replacing the Internal Fan

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

> **CAUTION** ***Disconnect supply before servicing or performing any maintenance operations.***

> **CAUTION** ***Unplug the phone cord while installing or servicing the phone card.***

> **WARNING** ***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.***

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

  If you simply want to wipe the controller and its screen without powering off the unit, go to **Menu→System→Settings→Status and ID** to disable the touchscreen.

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

Replacing a Fuse

Before You Begin
Only service personnel is authorized to replace a fuse.

CAUTION

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

WARNING

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.

Inspecting and tightening the connections

At some point, the connections must be verified to ensure they are not loose and that the installation is safe. The inspection ensures that no overheating occurs on the tightening connections. GSI Electronics recommends verifying the connections on power and control terminals every 3-12 Months. The torques are stated in the manual where tightening torque is required according to the specific terminal.

Replacing the Battery

The system battery has a life expectancy of approximately four (4) years in regular conditions (25°C). At a certain point, the battery must be replaced. Since v4.4.0, the system calculates the remaining useful life of the battery (RUL) based on the mean temperature in the battery box and the number of full discharges that the battery has endured. It is strongly recommended that you replace the battery when a “Battery End of Life” alarm is triggered.

Before You Begin

WARNING

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.

Resetting Battery Statistics

Before You Begin

After installing a new battery, the battery statistics must be reset for the system to estimate the RUL.

1. Press **Menu > System > Settings > General settings**.
2. Press **Reset statistics**.

   “The battery must be disconnected for the “Reset statistics” button to have an effect.”

Replacing the Coin Battery

At some point, the coin battery will need to be changed. Correctly changing the coin battery ensures the system continues to function correctly.

What You Should Know

Installation must only be performed by qualified service personnel.

Before servicing the system, disconnect the main sector voltage and disconnect the battery wires from the lead-acid 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 from the Battery Box.
3. Locate the coin battery at BAT1 on the PCB-400.
4. Remove the coin battery from the PCB-400
5. Install a new coin battery on the PCB-400.
6. Install the red wire to the positive battery terminal.
7. Close the circuit of the main sector voltage to reactivate the controller.
8. Adjust your date and your hour on your Agri Alert 128 Touch.

Replacing the Internal Fan

Approximately once a year, the fan needs to be changed. Correctly replacing the internal fan ensures the system functions correctly.

What You Should Know

WARNING

Installation must only be performed by qualified service personnel.

CAUTION

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

WARNING

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 from the Battery Box.

   The following steps are to be performed in the Base Assembled, Agri Alert 128 Touch.
3. Locate the fan connector on the PCB-391 (Item 4) .
4. Remove the fan plug from the fan connector on the PCB-391.
5. Use a Philip screw driver #2 to unscrew the screws (Item 2) from the metal fan support (Item 7) to the metal plate base Agri Alert 128 Touch (Item 9).
6. Remove the fan support with the fan from the Agri Alert 128 Touch enclosure.
7. Use a Philip screw driver #2 and a plate key to unscrew the jammed nuts (Item 6) and the screws (Item 8) from the fan support and the fan (Item 5).
8. Install a new internal fan on the fan support by screwing the jammed nuts and the screws to attach the fan to the fan support.
9. Use a Philip screw driver #2 to screw the fan support in the Agri Alert 128 Touch.
10. Re-install the fan plug to the fan connector on the PCB-391.
11. .. Install the red wire to the positive battery terminal.
12. Close the circuit of the main sector voltage to reactivate the controller.

20 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 diconnected	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 .
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 (1.5kΩ,½ W) or you can disable the siren output .
	If the siren impedance is too high, add a 1,5K Ω, ½W 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 prop¬erly 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

21 Executing software recovery procedure

If the software is corrupted (cannot boot), follow these steps to recover the software:

Steps:

1. Remove the terminal block plug-in named “Power (J13)” to the AA-128.

   NOTE: *This removes the power from the power supply and from the battery at the same time.*

2. Insert a USB stick with GZ file on the USB port of the AA-128.
3. Power-up the AA-128 by re-inserting the terminal block named “Power (J13).
4. When you see the AA-128 logo at the power-up, reset the AA-128 (power OFF then ON) by removing and putting the terminal block plug-in named “Power (J13).
5. It should detect the GZ file on the USB stick and the AA-128 will install it automatically.

NOTE: *The installation can take a few minutes.*

NOTES

22 VUI Navigation

The phone interface is useful to get information about the status of the zones and the system. When calling the system, you enter a menu and navigate using your phone keypad.

Identification	Only users with a PIN are allowed to browse and take actions through the VUI
VUI options	Press 1 to get a complete zone status report. Only zone that are configured are reported. Press # to skip zone, press 0 to hang up.
	Press 2 to get a specific zone status report. You are prompted to enter the zone number and press the # key to validate. Once the report is done, system gives a status of the next zone. You can press the # key to skip zone. Once all zones report have been given, you are redirected to the main menu. At any time, pressing any other key redirects you to the main menu.
	Press 3 to get a system status report.
	Press 4 to activate or deactivate an output Enter the module ID followed by the **#** key. Enter the output number followed by the **#** key. Press 4 to activate the output or 6 to deactivate the output. **NOTE:** *You are informed of the result of the operation. Depending on the configuration of the output, the system might not be able to complete the request.*
	Press 5 to activate or bypass a zone. Enter the zone number followed by the **#** key Press 4 to activate or 6 to bypass the zone. **NOTE:** *You are informed of the result of the operation. Depending on the state of the system and the zone type, the system might not be able to complete the request.*

IMPORTANT: *The system can't detect that the end user has hung up. it is important to press the **0** once you completed all your interactions with the system.*

NOTES

A LED meanings

Base I/O (PCB-391)

LED identification	Description
SIREN	Led activates when the Siren output is activated
28VDC	Led activates when the 28VDC output is activated
12VDC	Led activates when the 12VDC output is activated
SBI	Led activates when the SBI is activated
DBG1	Debug LEDs
DBG2	
PVX_TX	Led blinks when there is activity on PVX Bus - TX
PVX_RX	Led blinks when there is activity on PVX Bus - RX
SBI_TX	Led blinks when there is activity on SBI Bus - TX
SBI_RX	Led blinks when there is activity on SBI Bus - RX
RL1	Led activates when the relay RL1 is activated
RL2	Led activates when the relay RL2 is activated

Power supply board (PCB-401)

LED identification	Description
28V	Led activates when there is 28VDC
12V	Led activates when there is 12VDC
Charger – Chrg.	During a battery charging cycle, if required charge current is greater than 1/10 of the programmed maximum current (C/10), the led will be activated. A temperature fault can activate this led.
Charger – Fault	Led activates when fault conditions occurs during a battery charging cycle. A temperature fault can activate this led. A timeout charging for battery termination can activate this led. A bad battery fault can activate this led.

Phone board (PCB-402)

LED identification	Description
3.3V	Led active when the 3.3Vdc bus is present
Line Seizure	Led active when there is Line Seizure

Agri Alert 128 Touch top (PCB-400)

LED identification	Description
12V	Led active when the 12Vdc is present
5V	Led active when the 5Vdc is present

SYS5V	Led active when the 5Vdc system is present
3.3V1	Led active when the 3.3Vdc bus 1 is present
3.3V2	Led active when the 3.3Vdc bus 2 is present
ETHERNET - SPEED	Led active when 100 Base-Tx is used
ETHERNET - LINK/ACTIVITY	Led active when the link is present; Led blinks off during activity
USB ON	Led active when USB port is available
DBG1	Debug LEDs
DBG2	
DBG3	
DBG4	

Interface board (PCB-398)

LED identification	Description
3.3V	Led active when the 3.3Vdc bus is present

B 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 B-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 –		
COMM A		Communication bus.
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 –		
RELAY 1 NO		Relay 1 output. You can select from a normally open or a normally closed contact.
RELAY 1 COM		

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

Terminal	Terminal Board	Description
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 B-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 –		

C Battery Wire Specifications

Use twisted pair wires and shielded wires.

Item	Description
Certification and type	CSA, CMG FT4 type, 20 AWG, 600 V, 75 °C (167 °F)
	UL, AWM or CM ttype, 20 AWG, 600 V, 75 °C (167 °F)
Maximum length	36 inches

Wire specifications for battery connections to the power supply

Item	Description
Certification and type	CSA, TEW type, 10 AWG, 600 V, 105 °C (221 °F)
	UL, 1015 type, 10 AWG, 600 V, 105 °C (221 °F)
Maximum length	36 inches

NOTES

D Low Voltage Cable Specifications

Using the correct cables when installing your system ensures maximum performance.

The following requirements apply to the following low voltage devices unless otherwise stated:

- Sensor cables
- Potentiometer cables
- All other low voltage devices

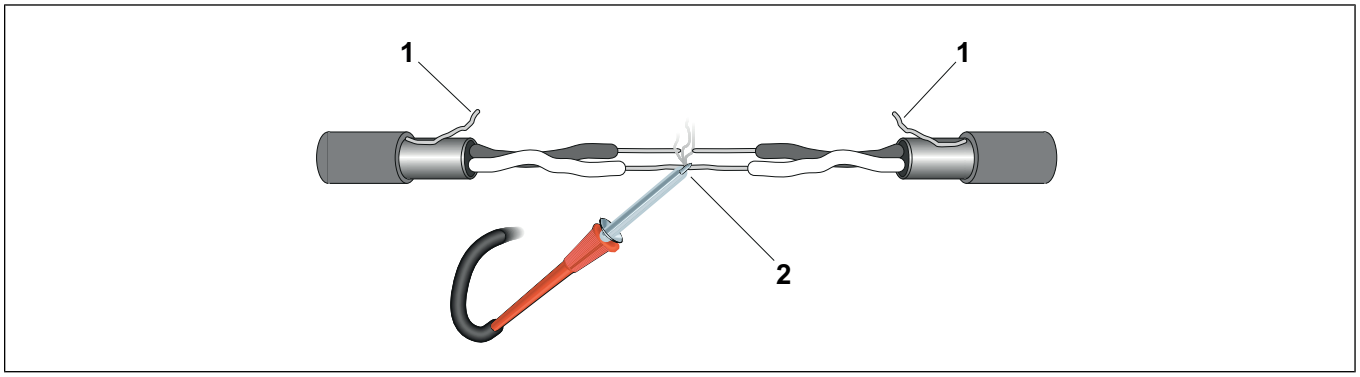
Table D-1 *Low voltage cable specifications*

Item	Description
Cable type	Twisted and shielded
Minimum gauge	1 mm^2 (18 AWG)
Maximum sensor cable length (including any cable extension)	150 m (500 feet)

When extending a cable (see figure below):

- solder all joints (2)
- use heat shrink tubing
- do not connect ground wire, cut it (1)

Figure D-1 *Soldering the joints when extending a cable*



Communication Bus

Table D-2 *Communication cables (Signal A and signal B)*

Cable Parameter	Value		
	Minimum	Typical	Maxium
Cable type	Twisted and shielded		
Minimum gauge	18AWG (*diameter of 1.02mm or cross sectional area of 0.82mm²)*		
Maximum cable length (including cable extensions)	1200 meters (4000 feet)		
Certification and type	CSA,CMG FT4 type, 18AWG, 600V, 194˚F 90˚C) UL,AWM or CM type, 18AWG, 600V, 194˚F 90˚C) If DC power is used in the same cable use TC-ER type (600V, 194°F (minimum 90°C))		
Characteristic Impedance	73 Ω	120 Ω	140 Ω
Inductance	—	0.258 µH/ft, Nominal	0.3 µH/ft
Mutual Capacitance	—	12 pF/ft	30 pF/ft
Velocity of propagation	66%	75%	—
Conductor DCR	—	6.9Ω/1000ft @ 20°C, Nominal	8Ω/1000ft Max @ 20°C
OA Shield DCR	—	1.8Ω/1000ft @ 20°C, Nominal	7Ω/1000ft
Attenuation (Max dB/100ft)		0.13 @ 125 kHz 0.25 @ 500 kHz 0.36 @ 1 MHz	
Pair Lay Length	—	2.50” LHL	2.75” LHL
Jacket Diameter*	—	0.414 inch	0.449 inch

* Some products are provided with strain reliefs. If the cable diameter goes over this diameter value, the strain reliefs may not work properly.

Table D-3 *DC Power cables (Signal 24V and signal GND)*

Parameter	Wire gage when a load of 17W (max 0.7A) is connected between the source and the load				
Wire gauge	**18 AWG** *(diameter of 1.02mm or cross sectional area of 0.82mm²)*	**16* AWG** *(diameter of 1.29mm or cross sectional area of 1.30mm²)*	**14 AWG** *(diameter of 1.62mm or cross sectional area of 2.08mm²)*	**12 AWG** *(diameter of 2.05mm or cross sectional area of 3.30mm²)*	**10 AWG** *(diameter of 2.58mm or cross sectional area of 5.26mm²)*
	1 pair twisted shielded	1 pair twisted shielded	1 pair twisted shielded	1 pair twisted shielded	1 pair twisted shielded
Max. length	150m (500 ft.)	300m (1000 ft.)	600m (2000 ft.)	900m (3000 ft.)	1200m (4000 ft.)
Inductance Nominal (typical)	0.17 µH/ft	0.174 µH/ft	0.16 µH/ft	0.16 µH/ft	0.14 µH/ft
Conductor DCR @20°C, Nominal (typical)	6.1 Ω/1000ft	3.6 Ω/1000ft	2.6 Ω/1000ft	1.63 Ω/1000ft	1.09 Ω/1000ft
Certification and type	CSA,CIC (TC-ER) FT4 type, 16AWG, 600V, 194˚F (minimum 90˚C) UL, TC-ER FT4 type, 16AWG, 600V, 194˚F (minimum 90˚C)				
Maximum Jacket diameter*	0.449 inch				

* Some products are provided with strain reliefs. If the cable diameter goes over this diameter value, the strain reliefs may not work properly.

WARNING ***Insulation on conductors must be rated for 600 Volts and 90°C (194°F).***

NOTICE ***SBI or AA128 Touch cables have to use class 1 load type. GSI Electronics recommends using TC-ER cable type.***

NOTICE ***Refer to the Wiring Methods and Materials section from the National Electric Code to use the correct wire for the installation.***

NOTICE ***TC-ER conductors in sizes 18 AWG and 16 AWG shall be type FFH-2, KF-2, KFF-2, PAF, PAFF, PF, PFF, PGF, PGFF, PTF, PTFF, RFH-2, RFHH-2, RFHH-3, SF-2, SFF-2, TF, TFF, TFFN, TFN, ZF, or ZFF. Conductor with other types and thicknesses of insulation shall be listed for Class 1 load circuit use.***

NOTES

E 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 E-1 *Main enclosure specifications*

Item	Description	
Enclosure material	Flame retardant ABS	
Dimensions	Width	16-11/16 inches (42.4 cm)
	Height	13- 13/16 inches (35.1 cm)
	Depth	7 inches (17.8 cm)
	Weight	5.15 kilograms (11.35 lbs)
Sensor inputs	8 inputs, self-configuring for various sensor types	
Touch screen	Size	7 inches (17.8 cm)
	Type	TFT color LCD

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

Item	Description	
	Resolution	WVGA (800 × 480 pixels)

Table E-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)	

Table E-3 *Sensor specifications for zone types*

Zone type	Sensor specifications
Internal and external temperature zones	Compliant to GSIE temperature probes (orange cap)
Analog 0-5 Volts	Sensor must be able to drive a 2k Ohms load, which means the sensor must drive at least 2.5mA to ensure correct readings
Analog 4-20mA	Sensor must be able to drive a 120 Ohms load Maximum 20.8mA, 2.5V The load =120 Ohms
Dry contact, Intrusion	Close contact resistance must be lower than 200 Ohms Open contact resistance must be higher than 100k Ohms The resistance value includes the value of wire resistance

Table E-3 *Sensor specifications for zone types (cont'd.)*

	End of line rsistor is 1.5k Ohms
Water meter, Pulse speed	Dry contact without end of line resistor Max 100Hz, pulse width minimum of 3.2ms Max 100 Ohms (close contact) and min. 100k Ohms (open contact) including the value of the wire resistance
AA-CS	Model AT1-005-000-FT only

NOTES

F Replacement Parts Specifications

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

Fuse replacement

Table F-1 *Fuse in main enclosure*

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

Table F-2 *Fuse in the battery box*

GSI Electronics part number	GSI Electronics part description	Reference	Fuse recommended by the manufacturer	Recommended fuse model
127-00030	FUSE,20A, SB,6.3X32MM	F1	Littelfuse	0326020.MXP

Lead-acid battery replacement

GSI Electronics part number	GSI Electronics part description	Battery recommended by the manufacturer	Recommended battery model
112-00011	Lead-Acid Battery, 12Vdc	B&B Battery	BC7-12, T2 and BP7-12, T2

Coin battery replacement

GSI Electronics part number	GSI Electronics part description	Reference	Battery recommended by the manufacturer	Recommended battery model
112-00010	Coin Battery 3V	BAT1 from PCB-400	Panasonic	BR-2032

Fan replacement

GSI Electronics part number	GSI Electronics part description
135-00009	Internal fan

NOTES

G 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, CAN/CSA-C22.2 nº 61010-1 third edition, EN 61010-1: 2010 (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.

These Safety EU directives were followed:

2014/35/EU The Low Voltage Directive (LVD)

2014/30/EU The Electromagnetic Compatibility Directive (EMC)

EMC characteristics – Emission standards

This controller has been designed to meet the requirements of the EMC Directive 2014/30/EU, FCC directives, Industry Canada directives. The compliance was demonstrated by meeting the test limits of the following standards:

- EN 61000-6-4 (2007/A1:2011) : Emission tests levels for industrial environment

- EN61326-1 (2013) : EMC product standard for Electrical Equipment for Measurement, Control and Laboratory Use

- FCC part 15 Subpart B, class A

- EMC certification: ICES-001 - Industrial, Scientific and Medical (ISM) Radio Frequency Generators – class A

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

EMC characteristics – Immunity standards

This controller has been designed to meet the requirements of the EMC Directive 2014/30/EU, FCC directives, Industry Canada directives. The compliance was demonstrated by meeting the test limits of the following standards:

- EN61326-1 (2013) : EMC product standard for Electrical Equipment for Measurement, Control and Laboratory Use

- EN 61000-6-2 (2006): Immunity tests levels for industrial environment

- FCC part 15 Subpart B, class A

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	Modulation: 80% AM at 1kHz, 80MHz - 1GHz: 10V/m 1.4GHz-2 GHz: 3 V/m 2GHz-2.7GHz: 1 V/m Performance: A (A)
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)
9	Surge immunity test	EN61000-4-5 : 2005	On the main sector : L-PE : ±2kV L-L : ±1kV I/O : L-PE : ±1kV L-L : ±1kV
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).
- ES 203 021 parts 1-3 (TBR21, TBR15) : Access and Terminals (AT); Harmonized basic attachment requirements for Terminals for connection to analogue interfaces of the Telephone Networks (V2.1.1 (2005-08), V2.1.2 (2006-01), V2.1.2 (2006-01))

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.

Environment characteristics

The controller was tested under IEC60068-1 (Environmental testing - Part 1: General and guidance)

Environmental characteristics

These Environmental EU directives were followed:

2011/65/EU The RoHS 2 Directive

2012/19/EU The WEEE 2 Directive

1907/2006/EU The REACH regulation

2006/66/EC The Battery Directive

94/62/EC Packaging and packaging waste Directive

97/129/EC Packaging material identification Directive

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 % (± 3%) Non condensing
	30 to 40 °C (86 to 104 °F)	95 % (± 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

NOTES

H EC Declaration of Conformity (In accordance with EN ISO 17050-1 2004)

We: GSI Electronics Inc.

Of: 5200, Armand-Frappier, Saint-Hubert (Québec), Canada, J3Z 1G5

In accordance with the following directives:

2014/35/EU The Low Voltage Directive (LVD)

2014/30/EUThe Electromagnetic Compatibility Directive (EMC)

1999/5/EC The Radio & Telecommunication Terminal Equipment Directive (R&TTE)

2011/65/EU The RoHS 2 Directive

2012/19/EC The WEEE 2 Directive

2006/66/EC The Battery Directive

1907/2006/EC The REACH regulation

97/129/EC The Packaging material identification Directive

Hereby declare that:

Equipment: The Agri Alert 128 Touch system is a farm alarm system designed to monitor temperature and power of a farm environment. Multiple temperature measuring devices can be connected to the equipment to monitor multiple environments. The equipment is designed to be connected to a phone line to allow the equipment to send out a telecommunication by cell phone or telephone. A battery module (BATTERY BOX 128) is also supplied with the equipment to maintain its function in the case of a power outage. Extension Modules (TP-8IN-1REL, KP-8IN-1REL, TR-2IN-1REL) are also supplied with the equipment to extend the Agri Alert functionality.

Model number: Agri Alert 128 Touch

is in conformity with the applicable requirements of the following documents:

Directive	Ref. No	Title	Edition/date
LVD	EN 61010-1	Safety requirements for electrical equipment for measurement, control, and laboratory use Part 1: General requirements	2010
R&TTE (phone circuit)	EN 60950-1	Information technology equipment - Safety - Part 1: General requirements	(2006)+A11 (2009)+A12 (2011)
R&TTE (phone circuit)	ES 203 021 parts 1-3 (TBR21, TBR15)	Access and Terminals (AT); Harmonized basic	V2.1.1 (2005-08)

		attachment requirements for Terminals for connection to analogue interfaces of the Telephone Networks; Update of the technical contents of TBR 021, EN 301 437, TBR 015, TBR 017;	V2.1.2 (2006-01) V2.1.2 (2006-01)
EMC	EN 61326-1	Electrical equipment for measurement, control and laboratory use - EMC requirements	
EMC	EN 61000-6-2	Immunity tests levels for industrial environment EN 61000-4-2 IEC EN 61000-4-3 EN 61000-4-4 EN 61000-4-5 EN 61000-4-8 EN 61000-4-11	2005/AC:2005 2009 2006 A1 (2007) A2 (2010) 2012 2014 2010 2004
EMC	EN 61000-6-4	Emission tests levels for industrial environment EN61000-3-2 EN61000-3-3 CISPR11 /EN 55011	2007/A1:2011 2006 +A1 (2009)+ A2 (2009) 2008 (2009)+A1 (2010)
RoHS	EN 50581	Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances	2012

GSI Electronic Inc. hereby declares that the equipment named above has been designed to comply with the relevant sections of the above referenced specifications. The unit complies with all applicable Essential Requirements of the Directives.

CE

I Noise level

Statement regarding the declared acoustical noise generated by the equipment

GSI Electronics Inc. develops, manufactures and distributes innovative technological products for the agricultural industry. Our unique expertise allows us to offer accurate, simple and diverse electronic, data processing and mechanical solutions for improving agricultural production.

GSI Electronic Inc. hereby declares that the equipment used inside has the maximum sound level at 21.5dB ± 3 dB in the frequencies range from 20Hz to 20 KHz when the speaker is used by the user on the equipment. An average acoustical noise of 26.5 dB-A is also present on the equipment.

The client can also use a siren output on the equipment. The client must select a siren according to the regulations about the sound level and the acoustical noise limitation for an external or an internal use.

NOTES

J FCC part 68 Compliance Statement

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 Agri Alert 128 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 Agri Alert 128 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.

NOTES

K FCC part 15 statement

Statement regarding the importation of radio frequency devices capable of causing harmful interference

GSI Electronics Inc. develops, manufactures and distributes innovative technological products for the agricultural industry. Our unique expertise allows us to offer accurate, simple and diverse electronic, data processing and mechanical solutions for improving agricultural production.

Electronic controllers are classed as unintentional radiators (FCC 47-part 15-Subpart B). Electronic controllers are used in a production context and in an industrial context (FCC 47-part 15-Subpart B-Class A).

GSI Electronic Inc. hereby declares that the equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case you will be required to correct the interference at his own expense.

NOTES

L FDA declaration

Statement regarding the importation of devices and public health hazard directives from FDA (U.S. Food and Drug Administration)

GSI Electronics Inc. develops, manufactures and distributes innovative technological products for the agricultural industry. Our unique expertise allows us to offer accurate, simple and diverse electronic, data processing and mechanical solutions for improving agricultural production.

GSI Electronics' controllers are shipping under 9032.89.60.30 Canada (Automatic Regulating or Controlling Instruments & Apparatus). Electronic controllers are used to monitor and to control animal environment in a barn: ventilation function; heating function; lightning function; alert system function. Electronic controllers can be used to control the food distribution and to scale animals.

Electronic controllers do not use radiation technologies or laser technologies. Electronic controllers use liquid crystal display (LCD) or Light-emitting diodes (LED). Electronic controllers do not use telecommunication wireless technologies. Electronic controllers are classed as unintentional radiators (FCC 47-part 15-Subpart B). Electronic controllers are used in a production context and in an industrial context (FCC 47-part 15-Subpart B-Class A). GSI Electronics devices are not used in contact with animal food. Electronic controllers do not manipulate vaccines or drugs.

It is important to note also that electronic controller incorporating Liquid Crystal Displays (LCD) or Light-emitting diodes (LED) are not capable of emitting x-radiation. As such these products and are not subject to the FDA standard and do not pose a public health hazard.

NOTES

M Industry Canada Compliance Statement - CS-03 Part I

This product meets the applicable Industry Canada technical specifications. / Le présent matériel est conforme aux specifications 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

NOTES

N Industry Canada Compliance Statement - ICES-003

This device complies with ICES-003 of the Industry Canada Rules. Operation of this device is subject to the following two (2) conditions:

- This device may not cause harmful interference
- This device must accept any interference received, including interference that may cause undesired operation.

Ce dispositif est conforme à la norme ICES-003 d'Industrie Canada.. Son fonctionnement est sujet aux deux conditions suivantes:

- Le dispositif ne doit pas produire de brouillage préjudiciable
- Ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable

NOTES

O Reduction of Hazardous Substances

REACH directive

The REACH directive addresses the production and use of chemical substances, and their potential impacts on both human health and the environment. On June 1, 2007, the European Commission promulgated new legislation that covers the registration, evaluation, authorization and restriction of chemical within the European Union community. This new regulation is commonly known as REACH, an acronym for **R**egistration, **E**valuation and **A**uthorization of **Ch**emicals (EC Regulation 1907/2006).

GSI Electronics supports the underlying goals of REACH, which are consistent with our own commitment to promote the responsible manufacturing, use and handling of chemicals. GSI Electronics uses and promotes components suppliers or components manufacturers who will meet the pre-registration deadline for all chemical substances in quantities greater than one metric ton. The information provided here is accurate to the best of our knowledge at the present time.

RoHS directive

The **R**estriction **o**f **H**azardous **S**ubstances Directive 2002/95/EC, RoHS, Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment, was adopted in February 2003 by the European Union. The RoHS directive took effect on 1 July 2006, and is required to be enforced and become law in each member state. This directive restricts (with exceptions) the use of six hazardous materials in the manufacture of various types of electronic and electrical equipment: Lead (Pb), Mercury (Hg), Cadmium (Cd), Hexavalent chromium (Cr6+), Polybrominated biphenyls (PBB), Polybrominated diphenyl ether (PBDE). The RoHS 2 directive (2011/65/EU) is an evolution of the original directive and became law on 21 July 2011 and took effect 2 January 2013. It addresses the same substances as the original directive while improving regulatory conditions and legal clarity.

GSI Electronics hereby certifies that all components are RoHS Compliant and fulfills the definition and restrictions defined under Directive 2011/65/EU of the European Parliament and of the Council of June 8, 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (EEE). The information provided here is accurate to the best of our knowledge at the present time.

The RoHS declaration is available, contact GSI Electronics or the European representative.

Battery directive

The Battery Directive, Directive 2006/66/EC (Previous Directive, Directive 91/157/EEC), of the European Parliament regulates the manufacture, the disposal, the recycling of batteries and accumulators in the European Union.

GSI Electronics uses Lead-acid battery and Lithium cell button in a light industrial context or industrial context. GSI Electronics encourages the batteries and accumulators recycling.

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.

P Disposal and Recycling Information

North America : Canada

As the concern for the volume of electronic waste grows, a number of Provinces in Canada have passed regulations since 2006 to divert electronics waste from the landfills and to protect the environment. These waste diversion regulations require manufacturers of covered electronic devices to participate in approved electronic product stewardship programs. The programs allow consumers and businesses to drop off eligible electronic devices for recycling, free of charge at numerous depots throughout the Province.

For more detailed information about the recycling of the device or batteries, contact your local city office, the household waste disposal service, or the retail store where you purchased this device. These collection points are accessible free of charge.

North America : United States

For more detailed information about the recycling of the device or batteries, contact your local city office, the household waste disposal service, or the retail store where you purchased this device. These collection points are accessible free of charge.

European markets – WEEE Directive

The **W**aste **E**lectrical and **E**lectronic **E**quipment Directive (WEEE Directive) is the European directive on waste electrical and electronic equipment (Directive 2002/96/EC) which, together with the RoHS Directive 2002/95/EC, became European Law in February 2003. The WEEE Directive set collection, recycling and recovery targets for all types of electrical products. And later the WEEE Recast Directive 2012/19/EU requiring producers of electronic equipment to manage and finance the collection, reuse, recycling and appropriately treat WEEE that the producer places on the EU market after 13th August 2005.

As required by the legislation, products sold in the EU are marked with the "crossed out wheelie bin" symbol. GSI Electronics uses the symbol based on the EN 50419:2005 CENELEC standard. The bottom bar certifies the product concerned was placed on the market after 13th August 2005. Cables or components and sub-assemblies contained within the in the product will not be marked.

Instructions for disposal of waste equipment by users

The "crossed out wheelie bin" symbol on the device (and any included batteries) indicates that they should not be disposed of as normal household garbage. Do not dispose of your device or batteries as unsorted municipal waste. The device (and any batteries) should be handed over to a certified collection point for recycling or proper disposal at the end of their life.

For more detailed information about the recycling of the device or batteries, contact your local city office, the household waste disposal service, or the retail store where you purchased this device. These collection points are accessible free of charge. All products with this sign must be brought to these collection points.

The disposal of this device is subject to the Waste from Electrical and Electronic Equipment (WEEE) directive of the European Union. The reason for separating WEEE and batteries from other waste is to minimize the potential environmental impacts on human health of any hazardous substances that may be present.

There are two ways available to dispose of waste:

- Public system— contact your municipality or the nearest collection site to dispose of Electrical and electronic Equipment waste
- Private system — For a Return Material Authorization for Disposal of Waste Equipment, contact customer support at 1-877-926-2777 or by e-mail at mtl_techsupport@gsiag.com.

Product material composition

Table P-1 *Basic materials used in products*

Material	Weight		Weight ratio (%)
	Lbs	Grams	
Packaging material	5,95	2 698,87	23,15
Plastic material	6,525	2 959,69	25,39
Electronic Circuits	4,5	2 041,17	17,51
Cables and wires	0,25	113,40	0,97
Metal	2,4	1 088,62	9,34
Batteries	4,95	2 245,28	19,26
Paper	1,3	589,67	5,06

Q California Proposition 65

California Proposition 65 - Statement regarding the importation of devices and public health hazard directives from The Office of Environmental Health Hazard Assessment (OEHHA)

In 1986, California voters approved Proposition 65, an initiative to address their growing concerns about exposure to toxic chemicals. That initiative is officially known as the Safe Drinking Water and Toxic Enforcement Act of 1986. The law requires California to publish a list of chemicals known to cause cancer or reproductive toxicity, and for businesses with 10 or more employees to provide warnings when they knowingly and intentionally cause significant exposures to listed chemicals.

This list currently includes more than 850 chemicals. Proposition 65 does not ban or restrict the sale of chemicals on the list. The warnings are intended to help Californians make informed decisions about their exposures to these chemicals from the products they use and the places they go.

The Office of Environmental Health Hazard Assessment (OEHHA) administers the Proposition 65 program.

In 2016, OEHHA launched a new website, *www.P65Warnings.ca.gov*, to provide the public with more information on chemicals, products, and locations associated with Proposition 65 warnings. The website is part of the state's effort to provide Californians with more useful information on chemicals they are being exposed to and ways to protect themselves.

People who read Proposition 65 warnings and want to learn more can go to the website to find additional information about chemicals and best practices for reducing or eliminating exposures. The website contains fact sheets about Proposition 65 chemicals and specific types of exposure, such as from furniture products or enclosed parking facilities. It also answers frequently asked questions about Proposition 65 and includes a glossary of Proposition 65 terms.

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GSI Electronics Inc. Hereby declare that Electronic controllers can contain chemicals listed from OEHHA Chemicals list.

NOTES

R Lithium battery statement

Based on the United Nations recommendation, regulations have been placed on the transportation of lithium metal batteries and lithium ion batteries by the International Civil Aviation Organization (ICAO), the International Air Transport Association (IATA), the International Maritime Organization (IMO). Packing and transportation are formally regulated according to the amount of lithium contained in lithium batteries. Transportation of lithium batteries must conform to these regulations.

The equipment can contain one Lithium button cell « BR-2032 » installed in the circuit boards per equipment packaging. The Lithium button cells installed in the circuit boards is classed: UN3091 - Lithium metal batteries contained in equipment. These batteries contain least that 1 gram of Lithium.

These batteries can be treated as exempt from UN3091 and shipped as non-dangerous goods.

NOTES

S Packaging characteristics

The following directives were followed during the packaging process

2011/65/EU	The RoHS 2 directive
2012/19/EU	The WEEE 2 directive
1907/2006/EU	The REACH regulation
2006/66/EC	The battery directive
94/62/EC	Packaging and packaging waste directive
97/129/EC	Packaging material identification directive

Packaging is only in cardboard to respect international standards about environment standards:

EN 13428	Packaging - Requirements specific to manufacturing and composition - Prevention by source reduction
EN 13429	Packaging - Reuse
EN 13430	Packaging - Requirements for packaging recoverable by material recycling
EN 13431	13431 Packaging - Requirements for packaging recoverable in the form of energy recovery, including specification of minimum inferior calorific value
EN 13432	Packaging - Requirements for packaging recoverable through composting and biodegradation - Test scheme and evaluation criteria for the final acceptance of packaging

Packaging was tested under ISTA 3A (Packaged Products for Parcel Delivery System Shipment weighing 150 lbs or less – is a test used for simulating courier companies shipping environments).

Shipping, packaging and Lithium battery: packaging shall be capable of withstanding a 1.2 m drop test in any orientation without damage to cells or batteries contained therein according to the International Civil Aviation Organization (ICAO), the International Air Transport Association (IATA), the International Maritime Organization (IMO) requirements.

Handling symbols on packaging: the standard is ISO R/780 (Packaging - Pictorial marking for handling of goods).

NOTES

T Agri Alert 128 Touch Main System End of Life Disassembly Instructions

This disassembly and recycling guidance provides general guidance for the disassembly of the referenced product to remove components and materials requiring selective treatment, as defined by EU directive 2002/96/EC and, Waste Electrical and Electronic Equipment (WEEE).

Agri Alert 128 Touch

Table T-1 *Listing of product disassembly instructions included in this section*

Marketing name (GSI Electronics part number)	Description
AGRI ALERT 128 TOUCH (075-10974, 075-10984)	Master enclosure with the main unit controller

Table T-2 *Required tools*

Description	Size
Philips screw driver	#1
Philips screw driver	#2
Flat-head screw driver	Small
Flat-head screw driver	Large
Side cutters	—

Figure T-1 *Assembly of Agri Alert 128 Touch (075-10974, 075-10984) base assembled, Agri Alert 128 Touch (065-11080, 065-11088)*

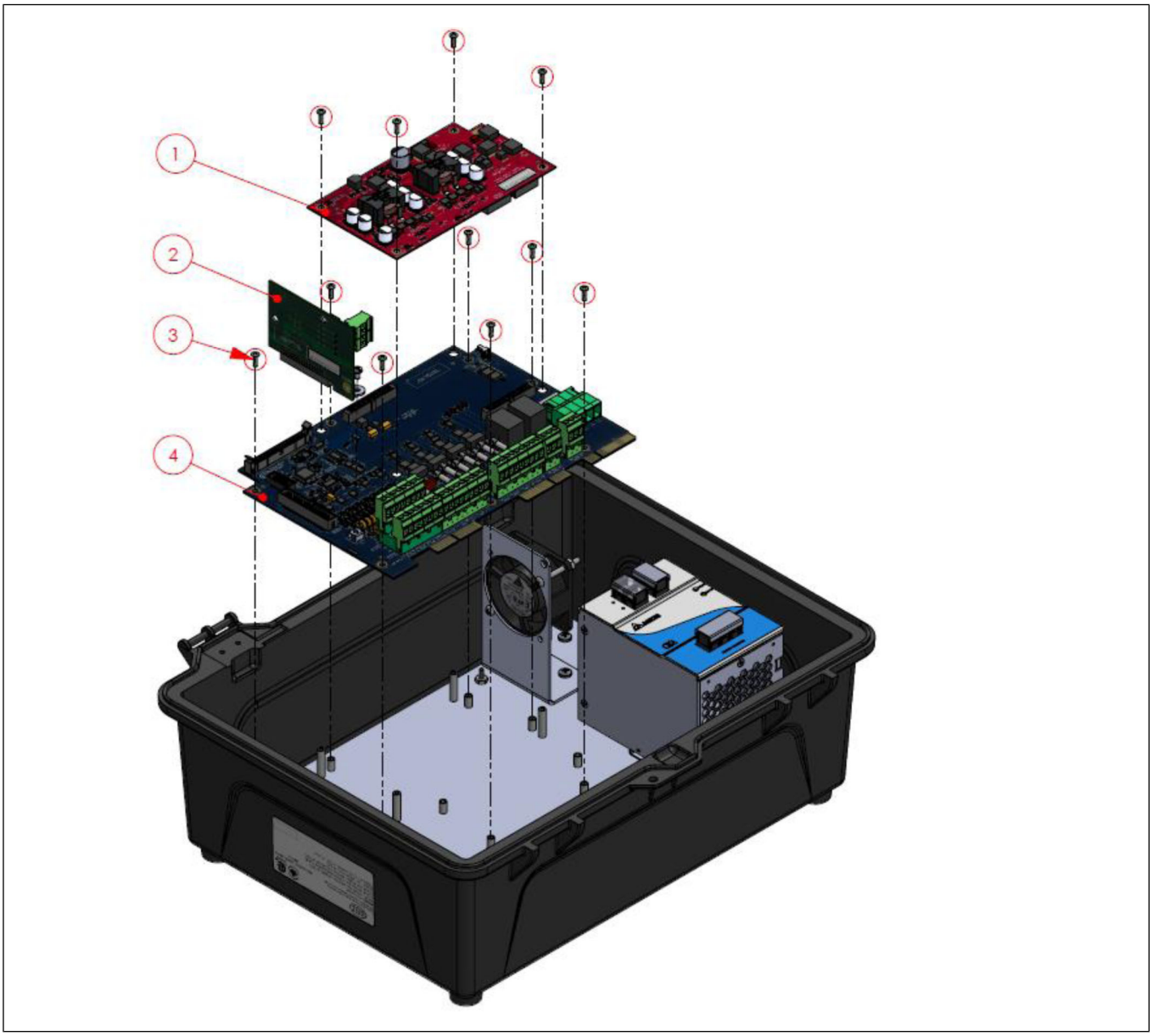

Table T-3 *Assembled base*

Item number	GSI Electronics part number	Description	Item number	GSI Electronics part number	Description
1	300-00318	PCB-401 : PSU 12V-28V-SLA CHARGER BOARD	3	550-00229	SCREW, #4-40, 3/8PO
2	300-00319	PCB-402 : PHONE MODEM BOARD	4	300-00317	PCB-391 : AA128 BASEIO BOARD

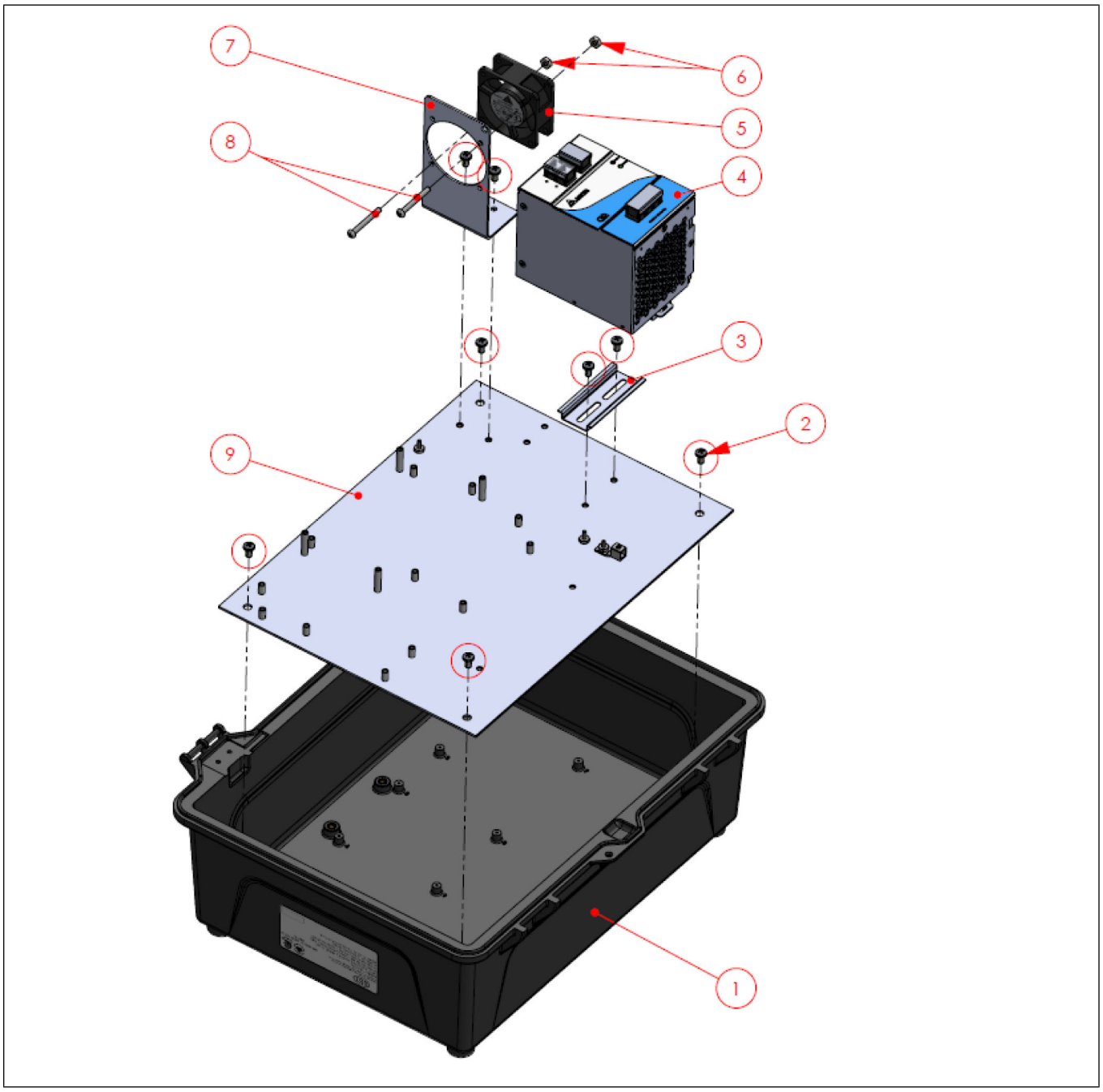

Table T-4 *Base*

Item number	GSI Electronics part number	Description	Item number	GSI Electronics part number	Description
1	028-00414	PLASTIC BASE AGRI ALERT 128 TOUCH	6	550-00240	NUT #8-32
	028-00266	METAL BRACKET MB MBI			
2	550-00230	SCREW, #10-24, 3/8PO	7	540-00194	METAL FAN SUPPORT

Table T-4 *Base (cont'd.)*

3	550-00238	DIN RAIL	8	550-00245	SCREW, #8-32, 1.5PO
4	135-00010	PANEL MOUNT POWER SUPPLY, 85-264VAC, 24VDC, 10A	9	540-00196	METAL PLATE BASE AGRI ALERT 128 TOUCH
5	135-00009	INTERNAL FAN			

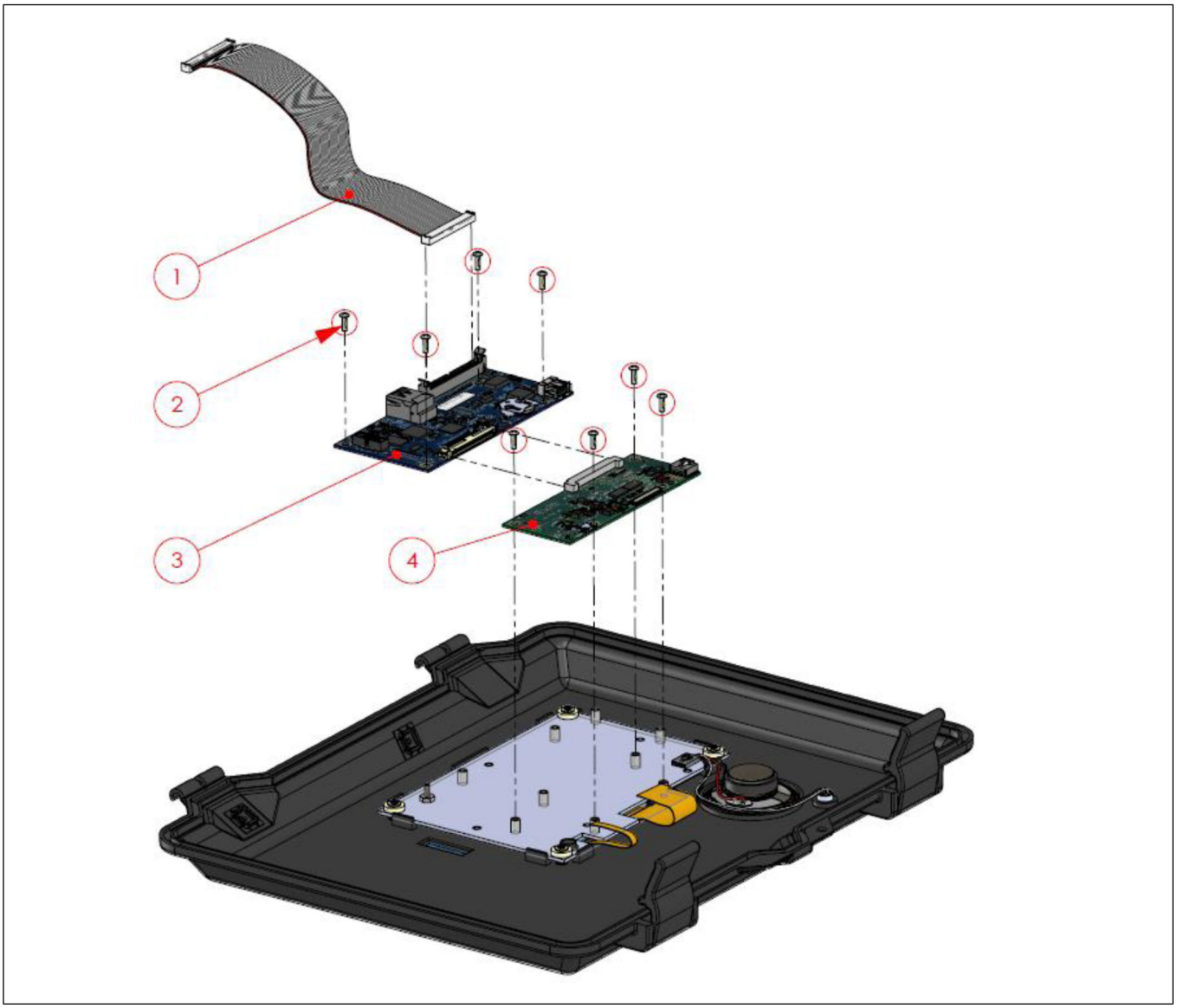

Table T-5 *Top*

Item number	GSI Electronics part number	Description	Item number	GSI Electronics part number	Description
1	511-00108	FLAT CABLE	3	300-00321	PCB-400 : MAIN MPU BOARD
2	550-00229	VIS, #4-40, 3/8PO	4	300-00322	PCB-398 : INTERFACE BOARD

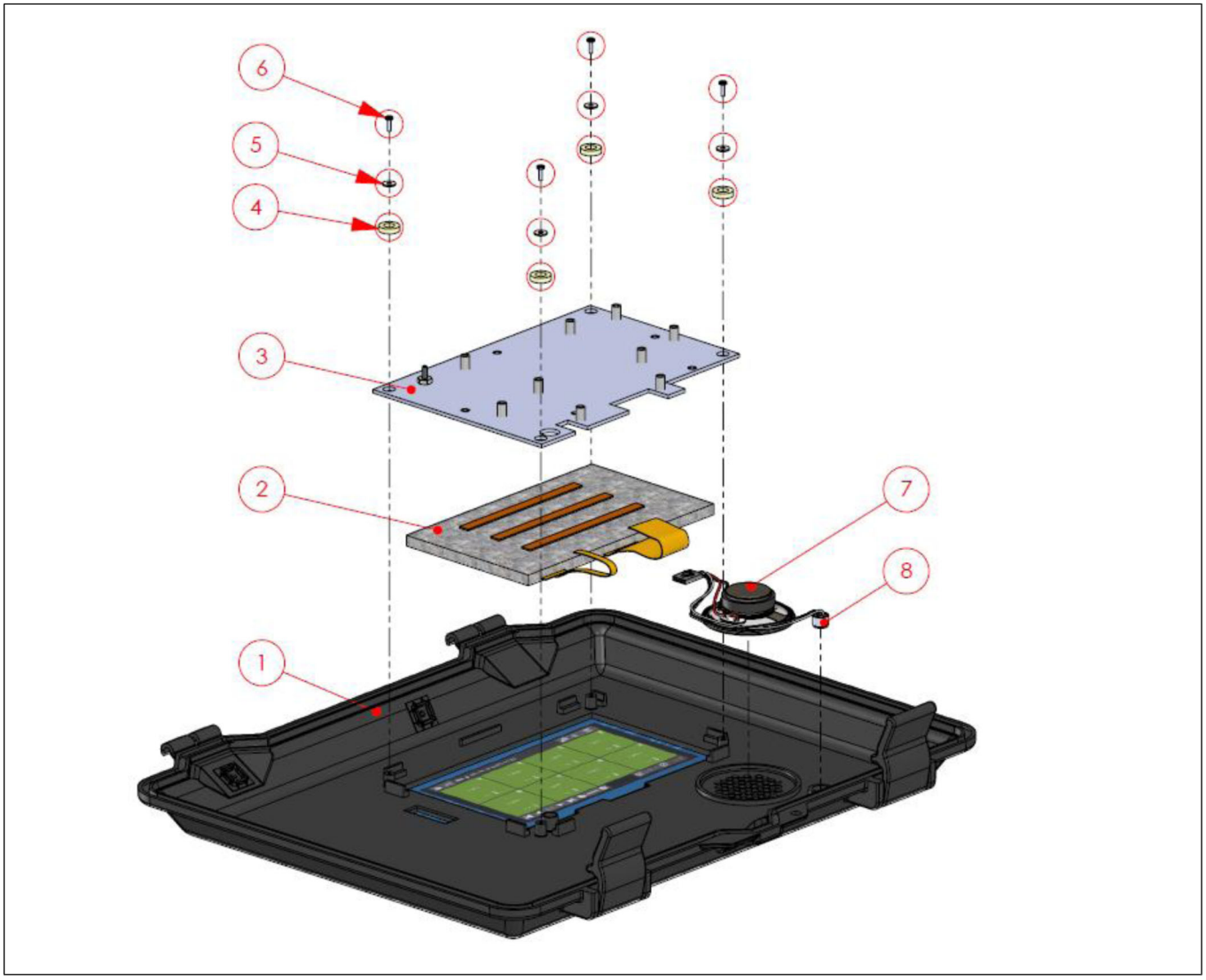

Table T-6 *Top*

Item number	GSI Electronics part number	Description	Item number	GSI Electronics part number	Description
1	028-00413	PLASTIC TOP AGRI ALERT 128 TOUCH	5	550-00237	WASHER M2.5-18.8

Table T-6 *Top (cont'd.)*

	500-00427	LEXAN AGRI ALERT 128 TOUCH	6	550-00017	SCREW, #4-24, 5/16PO
2	123-00042	LCD GRAPHC, 800X480	7	115-00009	SPEAKER
3	540-00195	METAL PLATE TOP AGRI ALERT 128 TOUCH		511-00116	CABLE, 4 WIRES, 24AWG, 150mm
4	550-00236	NYLON SPACER	8	115-00010	MICRO
				511-00116	CABLE, 4 WIRES, 24AWG, 150mm

Items requiring selective treatment

Item Description	Notes	Qty. of Items Included in the product	Location
Printed Circuit Boards (PCB) or Printed Circuit Assemblies (PCA)	With a surface greater than 10 square cm	5	Locate the BASE ASSEMBLED, AGRI ALERT 128 TOUCH (065-11080, 065-11088) : PCB-400 (300-00321), item 3 PCB-398 (300-00322), item 4 PCB-401 (300-00318), item 1 PCB-391 (300-00317), item 4 PCB-402 (300-00319), item 2
Batteries	All types including standard alkaline and lithium coin or button style batteries.	1	Locate on the TOP ASSEMBLED, AGRI-ALERT 128 (065-11079): PCB-400 (300-00321), item 3 The Lithium coin or button style battery is located on BAT1
Mercury containing components	For example, mercury in lamps, display backlights,	none	

	scanner lamps, lamps, lightning application, switches, batteries.		
Liquid Crystal Displays (LCD)	With a surface greater than 100 square cm and all those back-lighted with gas discharge lamps.	1	Locate on the TOP ASSEMBLED, AGRI-ALERT 128 (065-11079) The Item 2 (GSI Electronics part number: 123-00042, LCD GRAPHC,800X480)
Cathode Ray Tubes (CRT)		none	
Capacitors / condensers	Containing polychlorinated biphenyls PCB / polychlorinated terphenyls PCT.	none	
Electrolytic Capacitors / Condensers	Measuring greater than 2.5cm in diameter or height.	Provided by another manufacturer	Locate the BASE ASSEMBLED, AGRI ALERT 128 TOUCH (065-11080, 065-11088) : The capacitors are located in the panel mount power supply (GSI Electronics part number: 135-00010) Consult WEEE instructions from the manufacturer
External electrical cables and cords		none[1]	
Gas Discharge Lamps		none	
Plastics containing Brominated Flame Retardants		none[2]	
Components and parts containing toner and ink,		none	
including liquids, semi-liquids (gel/paste) and toner			
Components and waste containing asbestos		none	
Components, parts and materials containing refractory ceramic fibres		none	

Components, parts and materials containing radioactive substances		none	
Components, parts and materials containing chlorofluorocarbons (CFC), hydrochlorofluorocarbons (HCFC), hydrofluorocarbons (HFC), hydrocarbons (HC)		none	

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Product disassembly process

Step	Process
Remove the coin battery	1. Unlock and open the enclosure cover (item 1 from TOP ASSEMBLED, AGRI ALERT 128 Touch (065-11079)). 2. Locate the PCB-400: (item 3 from TOP ASSEMBLED, AGRI ALERT 128 Touch (065-11079), GSI Electronics part number: 300-00321) 3. Remove and slide the coin battery from the battery socket.
Remove External Electrical cables and internal Electrical cables	1. Unlock and open the enclosure cover (item 1 from TOP ASSEMBLED, AGRI ALERT 128 Touch (065-11079)). 2. Remove the wires from the Agri Alert 128 Touch by unscrewing terminal blocks with a small flat-head screw driver and a large flat-head screw driver.

1. GSI Electronics does not provide the external electrical cable
2. All plastics used in this product are RoHS compliant and do not contain PBBs or PBDEs

Printed Circuit Assembly	1. Unlock and open the enclosure cover (item 1 from TOP ASSEMBLED, AGRI ALERT 128 Touch (065-11079)). 2. Locate these PCBs: from TOP ASSEMBLED, AGRI ALERT 128 Touch (065-11079) : PCB-400 (item 3, GSI Electronics part number: 300-00321) PCB-398 (item 4, GSI Electronics part number: 300-00322) from BASE ASSEMBLED, AGRI ALERT 128 TOUCH (065-11080, 065-11088) : PCB-401 (item 1, GSI Electronics part number: 300-00318) PCB-391 (item 4, GSI Electronics part number: 300-00317) PCB-402 (item 2, GSI Electronics part number: 300-00319) 3. Unscrew with a Philips screw driver #1 and remove the screws (items 2 and 3) from the PCBs 4. Remove the PCBs from the AGRI ALERT 128 TOUCH
Remove Electrolytic Capacitors / Condensers Measuring greater than 2.5cm in Diameter or height	1. Unlock and open the enclosure cover (item 1 from TOP ASSEMBLED, AGRI ALERT 128 Touch (065-11079). 2. Locate the PANEL MOUNT POWER SUPPLY (item 4 from BASE ASSEMBLED, AGRI ALERT 128 TOUCH (065-11080, 065-11088), GSI Electronics part number: 135-00010) 3. Use a large flat-head screw driver to unfasten the PANEL MOUNT POWER SUPPLY from the DIN RAIL (item 3, GSI Electronics part number : 550-00238) by pulling the lock of the PANEL MOUNT POWER SUPPLY. 4. Remove the PANEL MOUNT POWER SUPPLY from the enclosure. 5. Consult instructions from PANEL MOUNT POWER SUPPLY manufacturer to dissamble it and to remove the capacitors from the PANEL MOUNT POWER SUPPLY.

NOTES

U Battery Box End of Life Disassembly Instructions

This disassembly and recycling guidance provides general guidance for the disassembly of the referenced product to remove components and materials requiring selective treatment, as defined by EU directive 2002/96/EC and, Waste Electrical and Electronic Equipment (WEEE).

Agri Alert 128 Touch battery box

Table U-1 *List of product for which disassembly instructions are provided*

Marketing name (GSI Electronics Part number)	Description
BATTERY BOX AA128 (075-10973)	Auxiliary enclosure with the 12Vdc lead-acid battery for backup supply

Table U-2 *Required tools*

Tool Description	Tool size
Philips screw driver	#1
Flat-head screw driver	Small
Side cutters	—

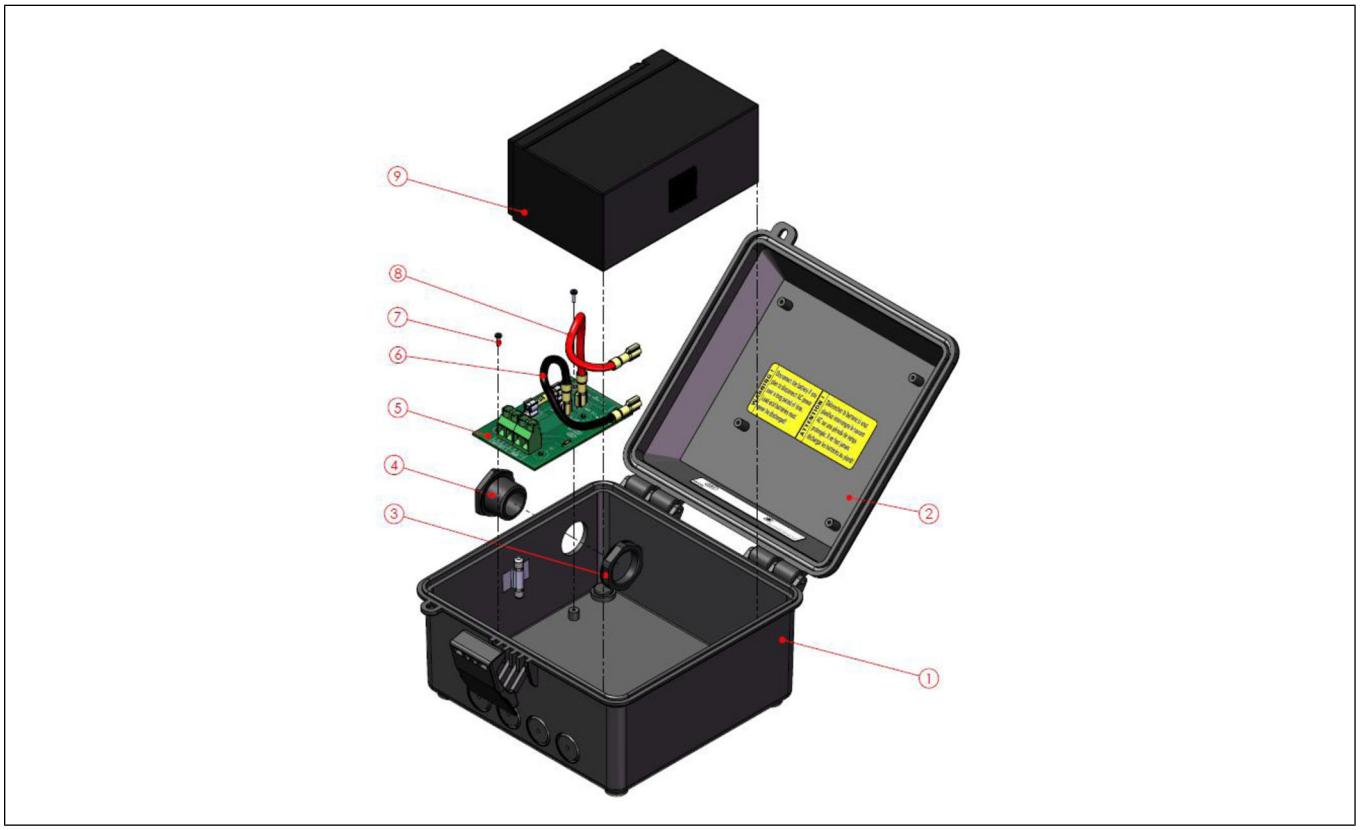

Table U-3 *Battery box assembly*

Item number	GSI Electronics part number	Description	Item number	GSI Electronics part number	Description
1	028-00416	PLASTIC BATT. BOX BASE	6	510-00077	WIRE, 10AWG, BLACK
2	028-00415	PLASTIC BATT. BOX TOP	7	550-00017	SCREW, #4-24, 5/16PO
	500-00428	LEXAN AGRI ALERT 128 BATT BOX	8	510-00078	WIRE, 10AWG, RED
3	570-00069	NUT, 3/4 NPT, BLACK	9	112-00011	LEAD-ACID BATTERY, 12Vdc
4	570-00068	FILTER 3/4 NPT, BLACK		550-00207	BLACK VELCRO
5	300-00327	PCB-407: BATT BOX AA128 BOARD		127-00030	FUSE, 20A, SB, 6.3X32MM

Item Description	Notes	Quantity of Items Included in the product	Location
Printed Circuit Boards (PCB) or Printed Circuit Assemblies (PCA)	With a surface greater than 10 square cm	1	Locate the printed circuit board in the Battery Box AA128 PCB-407 (300-00327) GSI Electronics part number: 300-00327 (Item 5)
Batteries	All types including standard alkaline and lithium coin or button style batteries.	1	GSI Electronics part number: 112-00011 (Item 9)
Mercury containing components	For example, mercury in lamps, display backlights, scanner lamps, lamps, lightning application, switches, and batteries.	none	
Liquid Crystal Displays (LCD)	With a surface greater than 100 square cm and all those back-lighted with gas discharge lamps.	none	
Cathode Ray Tubes (CRT)		none	
Capacitors / condensers	Containing polychlorinated biphenyls PCB /	none	

	polychlorinated terphenyls PCT.		
Electrolytic Capacitors / Condensers	Measuring greater than 2.5cm in diameter or height.	none	
External electrical cables and cords		none[1]	
Gas Discharge Lamps		none	
Plastics containing Brominated Flame Retardants		none[2]	
Components and parts containing toner and ink, including liquids, semi-liquids (gel/paste) and toner		none	
Components and waste containing asbestos		none	
Components, parts and materials containing refractory ceramic fibres		none	
Components, parts and materials containing radioactive substances		none	
Components, parts and materials containing chlorofluorocarbons (CFC), hydrochlorofluorocarbons (HCFC), hydrofluorocarbons (HFC), hydrocarbons (HC)		none	

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Product disassembly process

Step	Process
Remove the battery	1. Unlock and open the enclosure cover (item 2) 2. Disconnect the red wire (item 8) from the positive battery terminal (item 9). 3. Disconnect the black wire (item 6) from the negative battery terminal (item 9). 4. Remove the battery (item 9) from the Battery Box AA128 (take note that the battery is retained by a Velcro fastener)

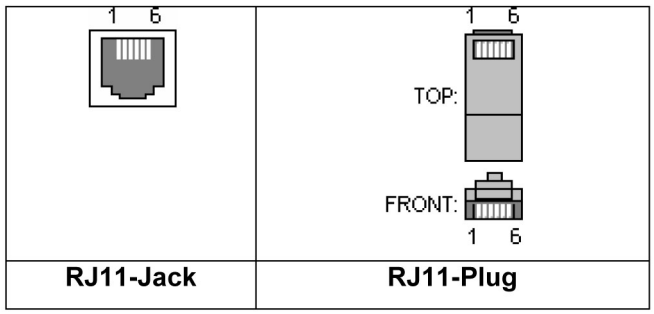
3. GSI Electronics does not provide the external electrical cable
4. All plastics used in this product are RoHS compliant and do not contain PBBs or PBDEs

Remove External Electrical cables	1. Unlock and open the enclosure cover (item 2) 2. Cut the tie wrap from the base tie wrap with a Side cutter if tie wrap is used. 3. Remove the wires from the Battery Box AA128 by unscrewing terminal blocks with a small flat-head screw driver.
Remove internal Electrical cables	1. Unlock and open the enclosure cover (item 2) 2. Disconnect and pull the red wire (item 8) from the PCB-407 (item 5). 3. Disconnect and pull the black wire (item 6) from the PCB-407 (item 5).
Printed Circuit Assembly	1. Unlock and open the enclosure cover (item 2) 2. Unscrew with a Philips screw driver #1 and remove the screws (item 7) from the PCB-407 (item 5). 3. Remove the PCB-407 (item 5).

V International Phone Wirings

RJ11 connector, six positions

The next table gives the TIA-1096-A standard, Connector Requirements for Connection of Terminal Equipment to the Telephone Network.



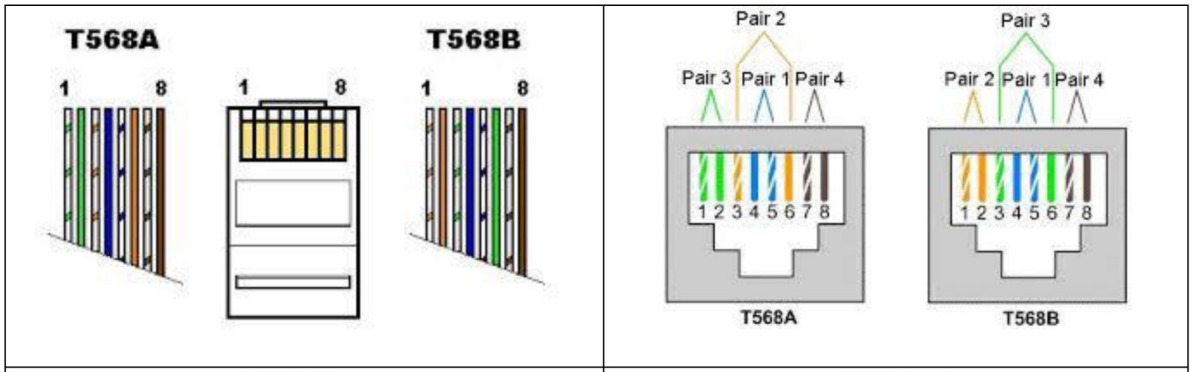
Position	RJ11 (6P-2C) Contact pin	RJ14 (6P-4C) Contact pin	RJ25 (6P-6C) Contact pin	±	RJ11 (6P-2C)	RJ14 (6P-4C)	RJ25 (6P-6C)	25-pair color code	U.S. Bell System color wire
1			1	+			Tip 3	white/ green stripe	White or orange
2		1	2	+		Tip 2	Tip 2	white/ orange stripe	black
3	1	2	3	-	Ring 1	Ring 1	Ring 1	blue/ white stripe	red
4	2	3	4	+	Tip 1	Tip 1	Tip 1	white/ blue stripe	green
5		4	5	-		Ring 2	Ring 2	orange/ white stripe	yellow
6			6	-			Ring 3	green/ white stripe	blue

The next table gives the Agri Alert 128 Touch wiring (terminal blocks) according to the TIA-1096-A standard.

Posi-tion	RJ11 (6P-2C) Contact pin	RJ14 (6P-4C) Contact pin	RJ25 (6P-6C) Contact pin	±	RJ11 (6P-2C)	RJ14 (6P-4C)	RJ25 (6P-6C)	25-pair color code	U.S. Bell System color wire
1			1	+					
2		1	2	+					
3	1	2	3	-	Terminal block position J	Terminal block position J	Terminal block position J	blue/ white stripe	red
4	2	3	4	+	Terminal block position I	Terminal block position I	Terminal block position I	white/ blue stripe	green
5		4	5	-					
6			6	-					

RJ connector, eight positions

The next table gives the EIA/TIA 568 Standards for Telephone Wiring.



T568-Plug | T568-Jack

Position	±	T568A Pair (8P8C)	T568B Pair (8P8C)	T568A Color (not imple-mented in Europe)	T568B Color wire
1	+	Tip 3	Tip 2	white/green stripe	white/orange stripe
2	-	Ring 3	Ring 2	green solid	orange solid
3	+	Tip 2	Tip 3	white/orange stripe	white/green stripe
4	-	Ring 1	Ring 1	blue solid	blue solid

5	+	Tip 1	Tip 1	white/blue stripe	white/blue stripe
6	-	Ring 2	Ring 3	orange solid	green solid
7	+	Tip 4	Tip 4	white/brown stripe	white/brown stripe
8	-	Ring 4	Ring 4	brown solid	brown solid

The next table gives the Agri Alert 128 Touch wiring (terminal blocks) according to the EIA/TIA 568 Standards for Telephone Wiring.

Position	±	T568A Pair (8P8C)	T568B Pair (8P8C)	T568A Color (not implemented in Europe)	T568B Color wire
1					
2					
3					
4	-	Terminal Block position J	Terminal Block position J	blue solid	blue solid
5	+	Terminal Block position I	Terminal Block position I	white/blue stripe	white/blue stripe
6					
7					
8					

RJ31x connector, eight positions

The next table gives the TIA-1096-A standard, Connector Requirements for Connection of Terminal Equipment to the Telephone Network.

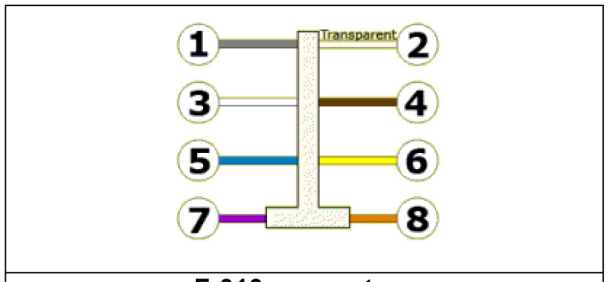
Position	±	RJ31x signal	U.S. Bell System color wire
1	-	Ring 1	Black or grey
2			
3			
4	-	Ring	Red
5	+	Tip	Green
6			
7			
8	+	Tip 1	Brown or Yellow

The next table gives the Agri Alert 128 Touch wiring (terminal blocks) according to the TIA-1096-A standard.

Position	±	RJ31x signal	U.S. Bell System color wire
1	-	Terminal block position L	Black or grey
2			
3			
4	-	Terminal block position J	Red
5	+	Terminal block position I	Green
6			
7			
8	+	Terminal block position K	Brown or Yellow

F-010 (T connector)

The next table gives the F-010 connector from France Telecommunication standard.



F-010 connectors

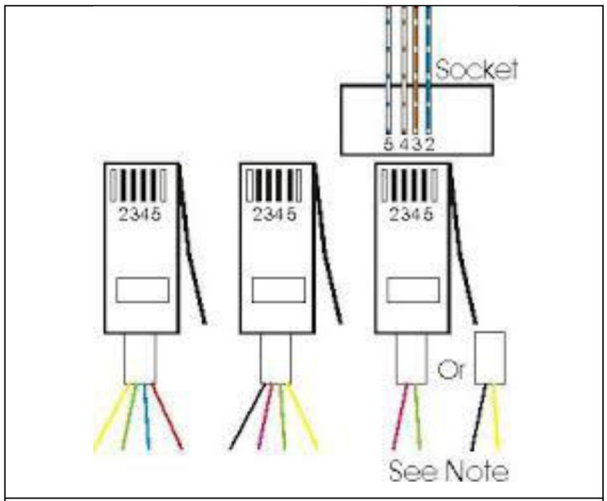
Pin number (Jack)	Pin number (Plug at 3 pins)	Pin number (Plug at 6 pins)	Pin number (Plug at 8 pins)	±	F-010 signal Name	Color wire
1	1	1	1	+	Line A pair 1	Grey
2	2	2	2		Shunt wire pair 1	Colorless
3	3	3	3	-	Line B pair 1	White
4		4	4		Not used	Brown
5		5	5		Not used	Blue
6		6 (Not used)	6	+	Line A pair 2	Yellow
7			7		Shunt wire pair 2	Purple
8			8	-	Line B pair 2	Orange

The next table gives the Agri Alert 128 Touch wiring (terminal blocks) according to the connector F-010.

Pin number (Jack)	F-010 signal to Agri Alert 128 Touch	±	Color wire
1	Terminal block position I	+	Grey
2			
3	Terminal block position J	-	White
4			
5			
6			
7			
8			

BS6312 standard (BT connector)

The next table gives the BS6312 standard.



BT connectors

Pin number (Jack)	Pin number (Plug 431A)	Pin number (Plug 631A)	±	BS6312 signal Name	Color wire (Jack)	Color wire (Plug BT)	Color wire (Plug non BT)
1		6		not used, reserved	Green/ white stripe	Orange	
2	5	5	+	A-wire	Blue/white stripe	Red	Yellow

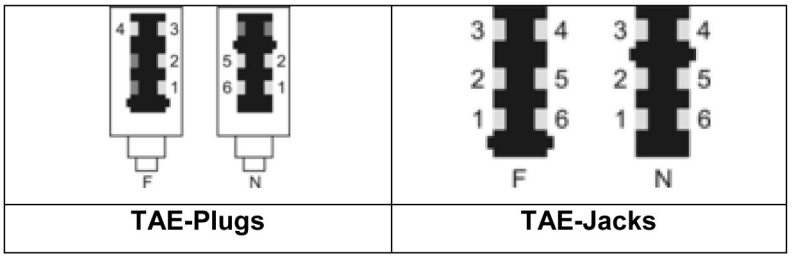
3	4	4		earth (when provided	Orange/ white stripe	Blue	Green
4	3	3		ringer-wire (3-wire only)	White/ orange stripe	Green	Red
5	2	2	-	B-wire	White/blue stripe	White or Yellow	Black
6		1		not used, reserved	White/ green stripe	Black	

The next table gives the Agri Alert 128 Touch wiring (terminal blocks) according to the connector BT.

Pin number (Jack)	**Pin number (Plug 431A)**	**Pin number (Plug 631A)**	**±**	**BS6312 signal to Agri Alert 128 Touch**	**Color wire (Jack)**	**Color wire (Plug BT)**	**Color wire (Plug non BT)**
1		6					
2	5	5	+	Terminal block position I	Blue/white stripe	Red	Yellow
3	4	4					
4	3	3					
5	2	2	-	Terminal block position J	White/blue stripe	White or Yellow	Black
6		1					

TAE connector

The next table gives the TAE connector (DIN 41715).



TAE-Plugs | **TAE-Jacks**

Pin number	Name	Used for	Color of the wire
1	La	Exchange line a	White
2	Lb	Exchange line b	Brown

3	W	Line for external bell (obsolete since mid-1990s)	Green
4	E	Line for ground connection, used to request an external connection in very old telephone installations	Yellow
5	b2	Line b, looped through the telecommunication device	Pink
6	a2	Line a, looped through the telecommunication device	Gray

The next table gives the Agri Alert 128 Touch wiring (terminal blocks) according to the connector TAE.

Pin number	**TAE connector (DIN 41715) to Agri Alert 128 Touch**	**Color of the wire**
1	Terminal Block position J	White
2	Terminal Block position I	Brown
3		
4		
5		
6		

NOTES

W E-mail Providers

Gmail

Host	smtp.gmail.com		
	Port #		587
Authentification	Yes	SSL Enable	Yes

Username: email address

Password: required

Yahoo

Host	smtp.mail.yahoo.com		
	Port #		465
Authentification	Yes	SSL Enable	Yes

Username: email address

Password: required

Hotmail

Host	smtp.live.com		
	Port #		25 or 465
Authentification	Yes	SSL Enable	Yes

Username: email address

Password: required

AOL

Host	smtp.aol.com		
	Port #		587
Authentification	Yes	SSL Enable	Yes

Username: email address

Password: required

Me.com / icloud.com

Host	smtp.mail.me.com		
	Port #		25 or 465
Authentification	Yes	SSL Enable	Yes

Username: email address

Password: required

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Limited Warranty — N.A. Grain Products

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 from the date of shipment (or, if shipped by vessel, 14 months from the date of arrival at the port of discharge). If, in GSI’s sole judgment, a product is found to have a defect in materials and/or workmanship, GSI will, at its own option and expense, repair or replace the product or refund the purchase price. This Limited Warranty is subject to extension and other terms as set forth below.

Warranty Enhancements: The warranty period for the following products is enhanced as shown below and is in lieu of (and not in addition to) the above stated warranty period. (Warranty Period is from date of shipment.)

	Product	Warranty Period
Storage	Grain Bin Structural Design ▪ Roof, doors, platforms and walk arounds ▪ Flooring (when installed using GSI specified floor support system for that floor) ▪ Hopper tanks	5 Years
Conditioning	Dryer Structural Design – (Tower, Portable and TopDry) ▪ Includes (frame, portable dryer screens, ladders, access doors and platforms)	5 Years
	All other Dryer parts including: ▪ Electrical (controls, sensors, switches & internal wiring)	2 Years
	Bullseye Controllers	2 Years
Material Handling	Bucket Elevators Structural Design	5 Years
	Towers Structural Design	5 Years
	Catwalks Structural Design	5 Years
	Accessories (stairs, ladders and platforms) Structural Design	5 Years

Conditions and Limitations:

THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE LIMITED WARRANTY DESCRIPTION SET FORTH HEREIN; SPECIFICALLY, GSI DISCLAIMS ANY AND ALL OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE IN CONNECTION WITH: (I) ANY 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.

The sole and exclusive remedy for any claimant is set forth in this Limited Warranty and shall not exceed the amount paid for the product purchased. This Warranty only covers the value of the warranted parts and equipment, and does not cover labor charges for removing or installing defective parts, shipping charges with respect to such parts, any applicable sales or other taxes, or any other charges or expenses not specified in this Warranty. GSI shall not be liable for any other direct, indirect, incidental or consequential damages, including, without limitation, loss of anticipated profits or benefits. Expenses incurred by or on behalf of a claimant without prior written authorization from the GSI warranty department shall not be reimbursed. 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. Prior to installation, the end-user bears all responsibility to comply with federal, state and local codes which apply to the location and installation of the products.

This Limited Warranty extends solely to products sold by GSI and does not cover any parts, components or materials used in conjunction with the product, that are not sold by GSI. GSI assumes no responsibility for claims resulting from construction defects, unauthorized modifications, corrosion or other cosmetic issues caused by storage, application or environmental conditions. Modifications to products not specifically delineated in the manual accompanying the product at initial sale will void all warranties. 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.

Notice Procedure:

In order to make a valid warranty claim a written notice of the claim must be submitted, using the RMA form, within 60 days of discovery of a warrantable nonconformance. The RMA form is found on the OneGSI portal.

Service Parts:

GSI warrants, subject to all other conditions described in this Warranty, Service Parts which it manufactures for a period of 12 months from the date of purchase unless specified in Enhancements above.

(Limited Warranty - N.A. Grain Products_ revised 19 October 2018)

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.

Agri-Alert

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Printed in Canada