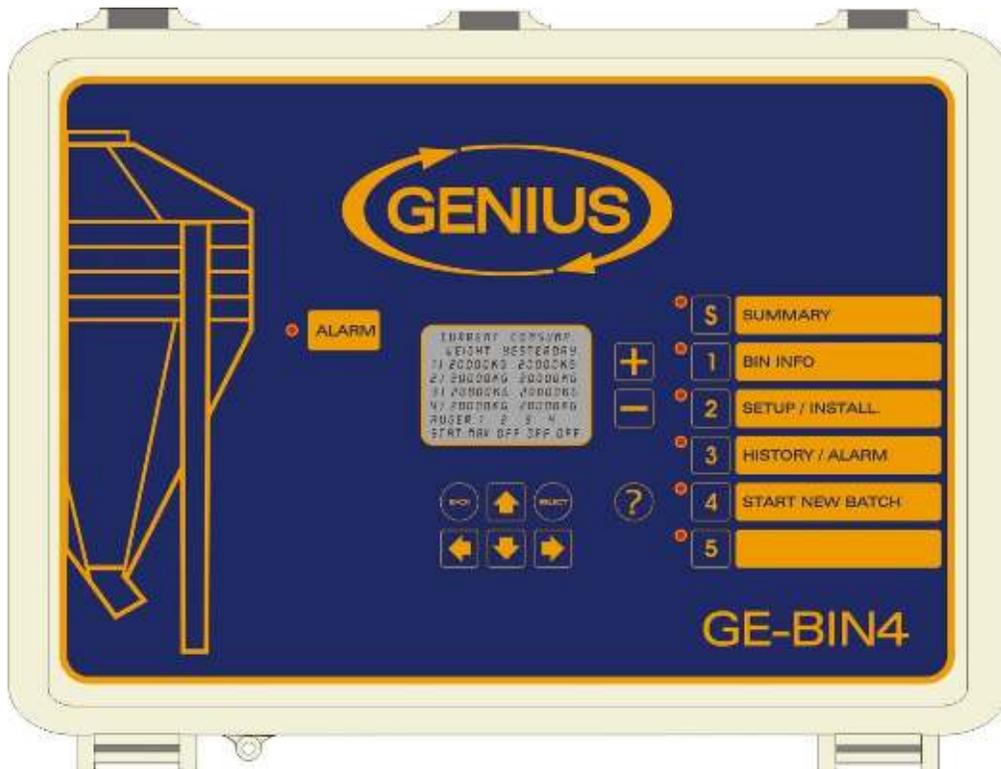


# GE-BIN4 MANUAL



## Installation / User's Guide

ATTENTION ELECTRICIAN  
SEE WIRING DETAILS ON PAGES A-3 TO A-6 AND  
ADDITIONAL INFORMATION IN SECTION B

WIRING DIAGRAM

SECTION A

INSTALLATION

SECTION B

USER'S GUIDE

SECTION C

INDEX / WARRANTY

SECTION D

## **WARNINGS AND PRECAUTIONS**

Although the manufacturer has made every effort to ensure the accuracy of the information contained herein, this document is subject to change without notice due to ongoing product development.

### **WARNINGS AND PRECAUTIONS**

Equipment, probe failure, blown fuses and/or tripped breakers may prove harmful to the contents of the building. Therefore it is strongly recommended to install backup devices and alarm or warning devices. Spare equipment should also be available at the owner's site. Equipment manufactured by the manufacturer is protected against normal line surges. High surges caused by thunderstorms or power supply equipment may damage this equipment. For added security against line voltage surges it is recommended that surge and noise suppression devices be installed at the electrical distribution panel. Use of shielded cable for probes is recommended for protection against lightning. These devices are available from most electrical supply distributors.

### **RECOMMENDATIONS**

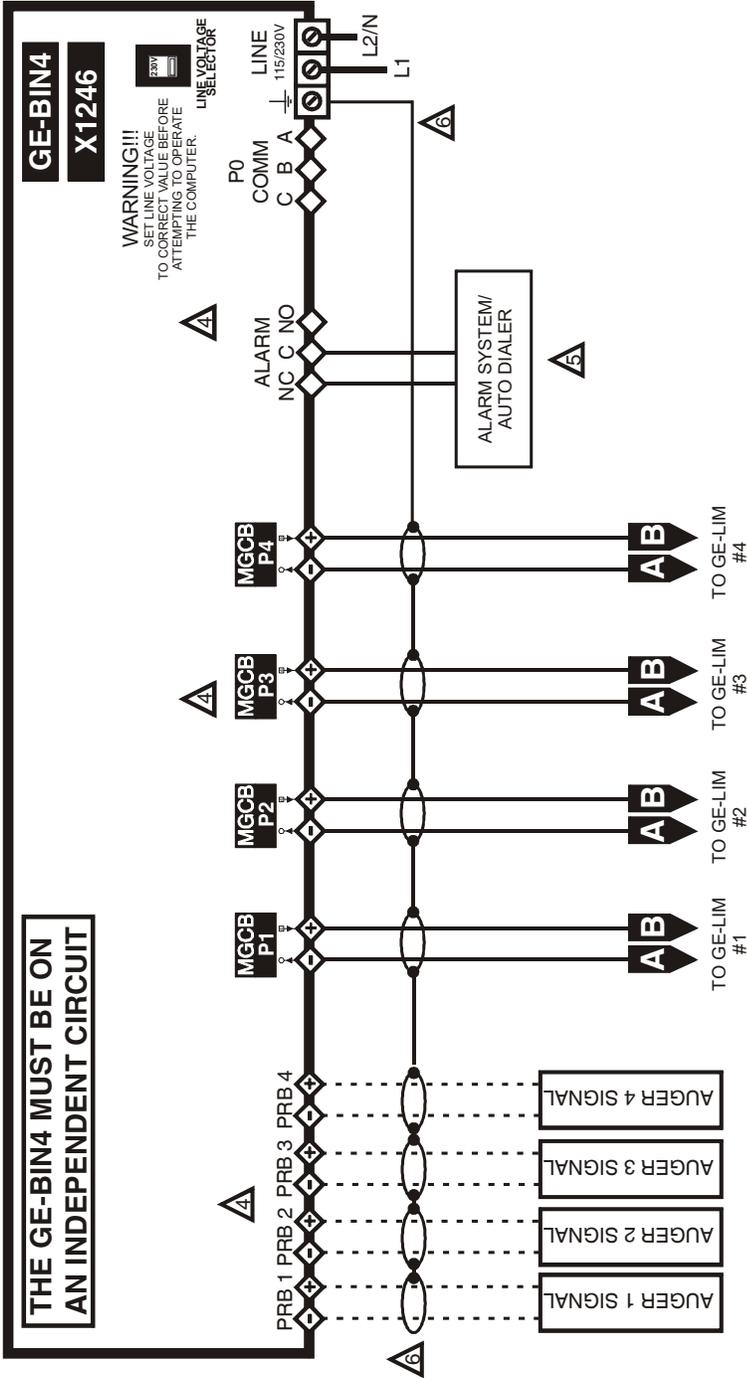
The manufacturer recommends that all installation procedures described herein be performed by a qualified electrician or installation technician. Furthermore the manufacturer recommends testing all the functions and equipment connected to the GE controller, including the alarm system and backup devices, after installation, after changes to the installation and every month after that.

Fuse verification and replacement, as well as the proper setting of control values shall be the responsibility of the owner of this equipment.

**WIRING  
DIAGRAM &  
LAYOUT  
GE-BIN4  
SECTION A**

GE-BIN4 WIRING DIAGRAM & LAYOUT

WIRING DIAGRAM GE-BIN4

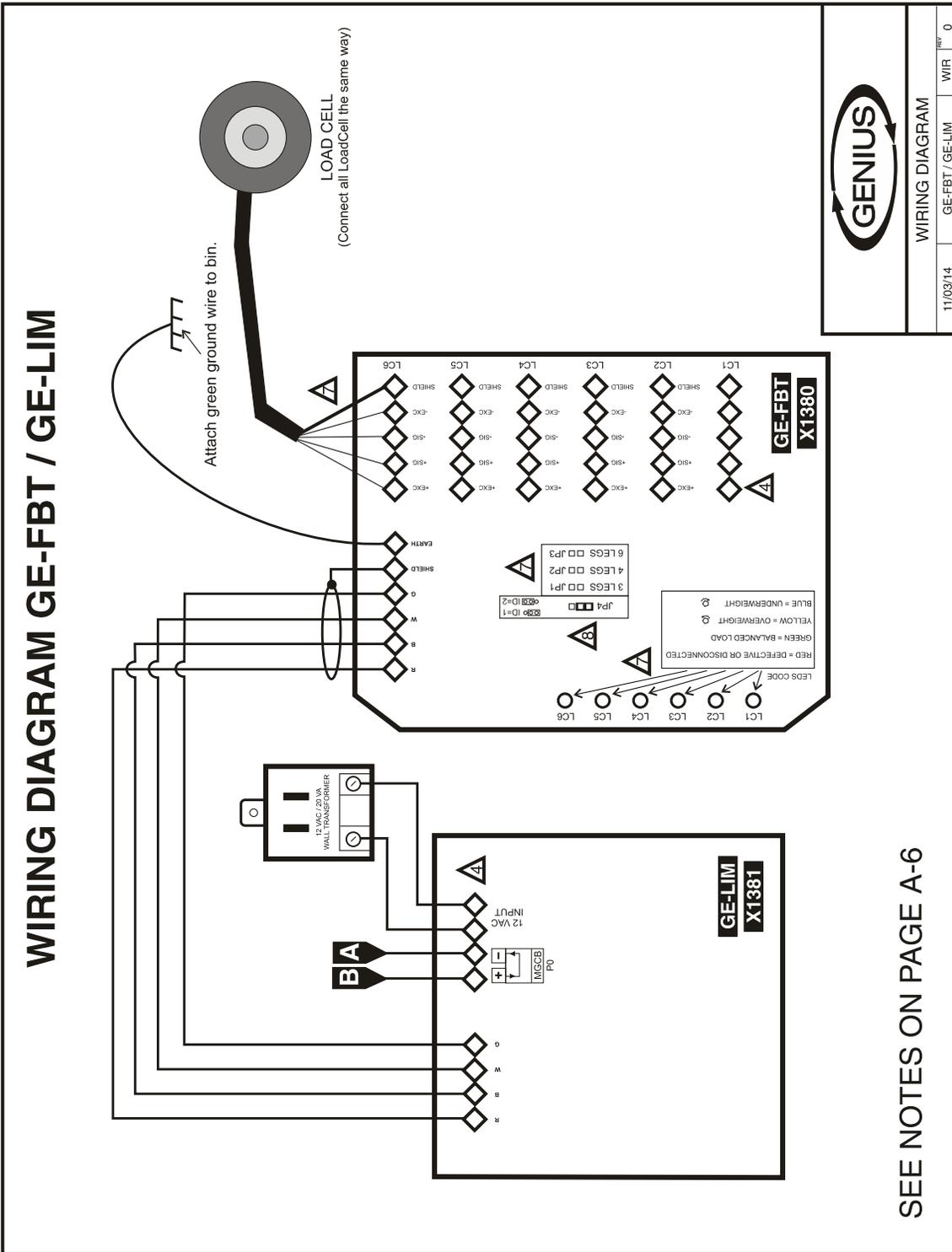


WIRING DIAGRAM

07/02/12 GE-BIN4 WIR 0

SEE NOTES ON PAGE A-6

# GE-BIN4 WIRING DIAGRAM & LAYOUT



# SECTION A

# GE-BIN4

## ELECTRICIAN'S NOTES

1  (COMMUNICATION WIRING) SHIELDED LOW CAPACITANCE WIRE, (Capacitance between conductors @ 1Khz = 24pF/ft), TWISTED PAIR (8 twist/ft), AWG #22, 820ft (250m) MAX LENGTH (Ex.: BELDEN 8761).

2  HIGH VOLTAGE WIRE INSTALLED ACCORDING TO LOCAL WIRING CODE.

3 INSTALL LOW VOLTAGE WIRES (COMMUNICATION OR COMPUTER LINK) AT LEAST 30cm (12 INCHES) AWAY FROM HIGH VOLTAGE WIRES (120/230VAC, 24VDC). ALWAYS CROSS HIGH AND LOW VOLTAGE WIRES AT A 90-DEGREE ANGLE.



1 WIRE ONLY PER GREEN TERMINAL. USE WIRE CONNECTOR IF YOU WANT TO CONNECT MORE THAN 1 WIRE, NO BIGGER THAN AWG #12, NO SMALLER THAN AWG #28.



CHECK INSTALLATION GUIDE FOR ALARM WIRING.



USE SHIELD FOR SHIELDING PURPOSE ONLY. CONNECT THE SHIELD TO THE CONTROL CIRCUIT COMMON END ONLY ⊕. NEVER LEAVE THE SHIELD UNCONNECTED AT BOTH ENDS. NEVER CONNECT BOTH ENDS OF THE SHIELD TO COMMON ⊕.

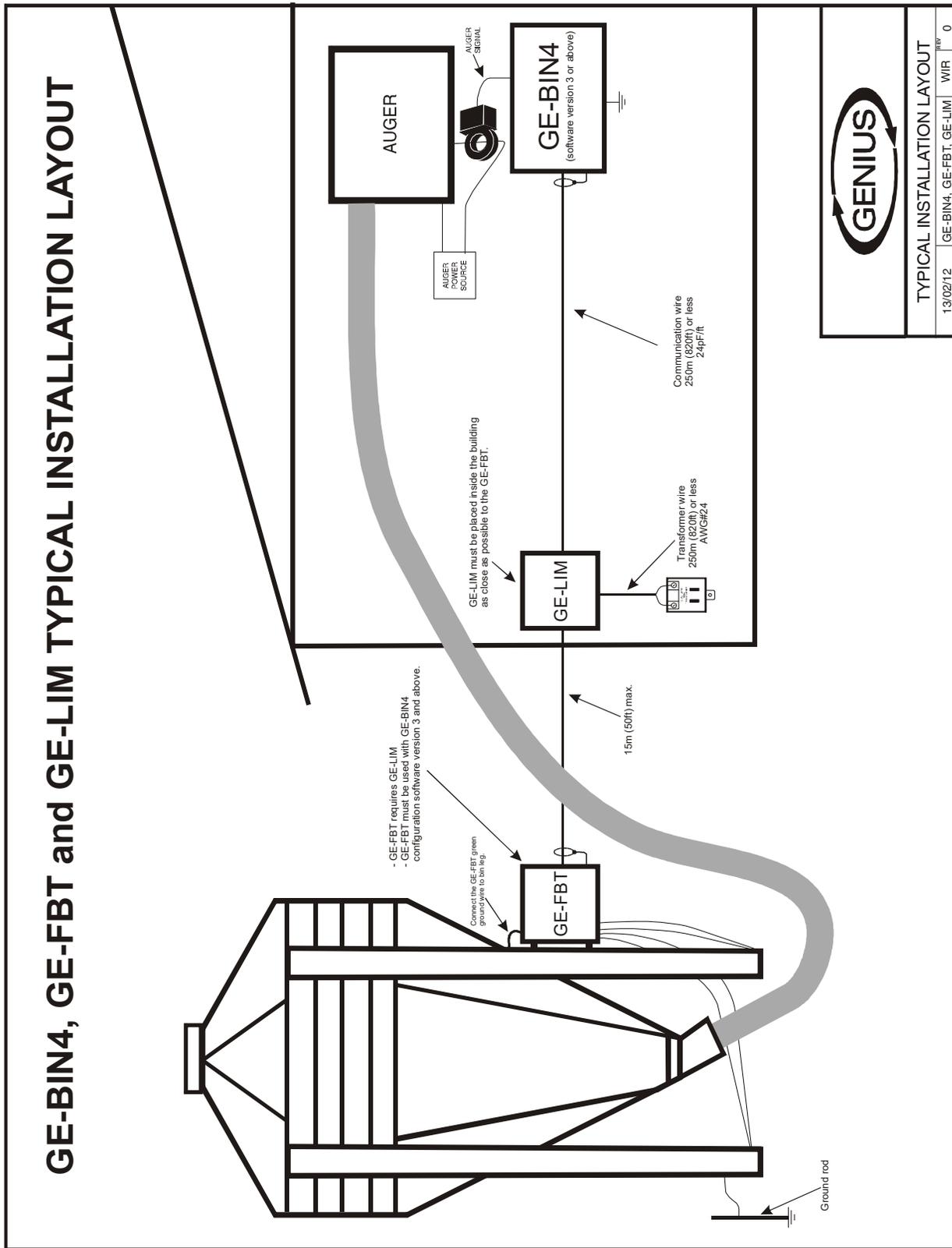


REFER TO THE FEED BIN SCALE INSTALLATION MANUAL FOR MORE DETAILS OF THE FEED BIN TRANSMITTER MODULE.



A JUMPER MUST BE PLACED ON POSITION 1-2 (ID=1) AT JP4.

# GE-BIN4 WIRING DIAGRAM & LAYOUT



<b>TYPICAL INSTALLATION LAYOUT</b>			
13/02/12	GE-BIN4, GE-FBT, GE-LIM	WIR	0

## SECTION A

**INSTALLATION  
GE-BIN4  
SECTION B**

This section will inform the electrician on proper wiring and installation procedures for the GE controller.

The manufacturer recommends that the following installation instructions be followed to as closely as possible, and that all work be performed by a certified electrician. Failure to do so may void the warranty.

### Unpacking

Unpack the GE controller and inspect contents for damage. Should the contents appear to be damaged, contact your local distributor to return the equipment.

The package should contain the following standard items:

- 1 GE-BIN4 Control
- 4 Brackets / 4 Screws
- 1 Installation / User's Guide

### Mounting hardware required

This is the list of the mounting hardware needed, which is not included with the product:

- Shielded two-wire twisted pair cable, AWG #22 (used for communication) see electrician note for capacitance selection.
- 4 screws (to hang the unit onto the wall)
- Screwdrivers
- Soldering iron kit or approved sealed connectors
- Drill and hole saw kit

## General installation guidelines

### GE Controller

- It is recommended to install the unit in a hallway to limit the GE controller exposure to noxious gases.
- In order to avoid condensation problems inside the controller, it is recommended to install the GE controller on an inside wall. If it is not possible, use spacers to have an air gap between the wall and the GE controller.
- It is required to install the GE controller right side up with the cable entry holes facing down.
- The enclosure is watertight, but do not spray water or submerge the GE controller in water. Cover it carefully with plastic when cleaning the room.
- The GE controller should be installed in easy-access location but away from damaging elements (heat, cold, water, direct sunlight, ...).
- Do not drill the face, the side, the top or the underside of the control.
- Do not install the GE controller near high-voltage equipment, power supply or transformer.

### Electrical cables

- All electrical cables must be installed according to local wiring codes.
- All cable shields must be connected to the shield terminal on the cord to which the cable is connected, except for the cable connected to the optional PC interface. The shield is needed to protect the GE controller and the modules against any electromagnetic interference generated by lightning or nearby operating machinery.
- Never use the shield as a conductor.
- Connect only one end of the shield to the GE controller.
- Use separate conduits for the low voltage cables (communication) and the high voltage cables. There must be at least 1 foot (30 cm) between low-voltage and high-voltage conduits.
- If a low voltage cable has to cross over a high voltage cable, make this crossing at 90°.
- All cable connections must be soldered or done with approved sealed connectors.
- Communication cables must be 820' (250m) or less.
- It is prohibited to use overhead cables outside the building.

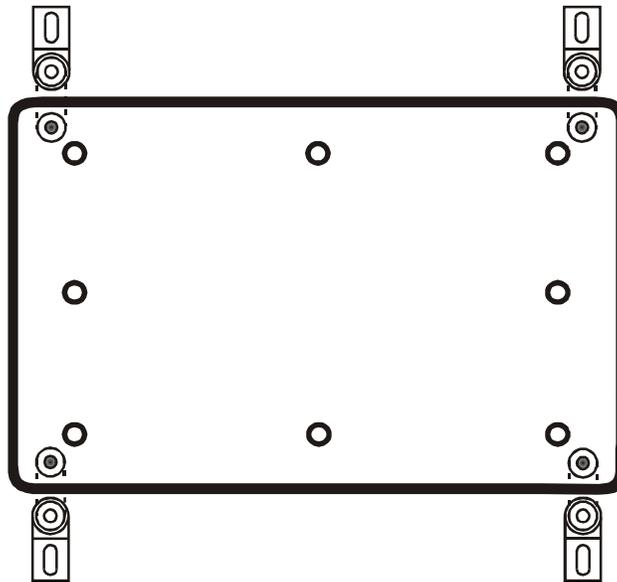
### Electrical power

- Protection from electrical surges should be included in the planning of each installation.
- It is strongly recommended to have a backup power (see figure 3).
- The backup system and alarm must be thoroughly tested and verified as working properly before using the feed bin monitoring system.

## Mounting

- The enclosure must be mounted in a location that will allow the cover to be completely opened.
- Fasten the four brackets to the four mounting holes on the back of the enclosure using the four screws provided with the brackets.
- Then mount the enclosure on the wall by inserting screws through the brackets' adjustment slots, into the wall. Make sure to position the enclosure so that all wires extend out of the bottom section of the enclosure.
- The bracket slots serve to adjust the position of the controller.
- Once you have adjusted the controller position, tighten the four mounting screws. (see figure 1).

FIGURE NO. 1 Mounting Position and Devices



## Connection procedure

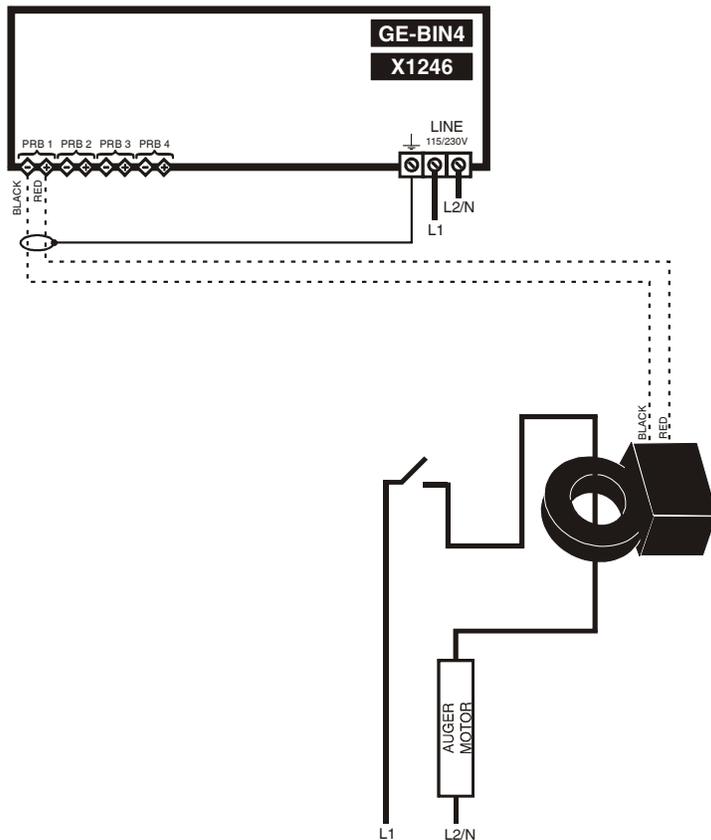
### Detailed wiring diagrams

#### Typical Auger Signal Wiring

Auger signal sensors (ex.: CSD-1 Current Switch Detector) should be mounted inside the controller enclosure with the auger power wire running through the sensor loop. If a single sensor monitors multiple auger circuit, run the wires from all auger groups the same direction through the sensor loop.

The best use for a single auger sensor is monitoring your bin auger motor. This provides a clear indication of all feed entering the building and it provides an alarm when the bin is empty.

FIGURE NO. 2 Typical Auger Signal Wiring

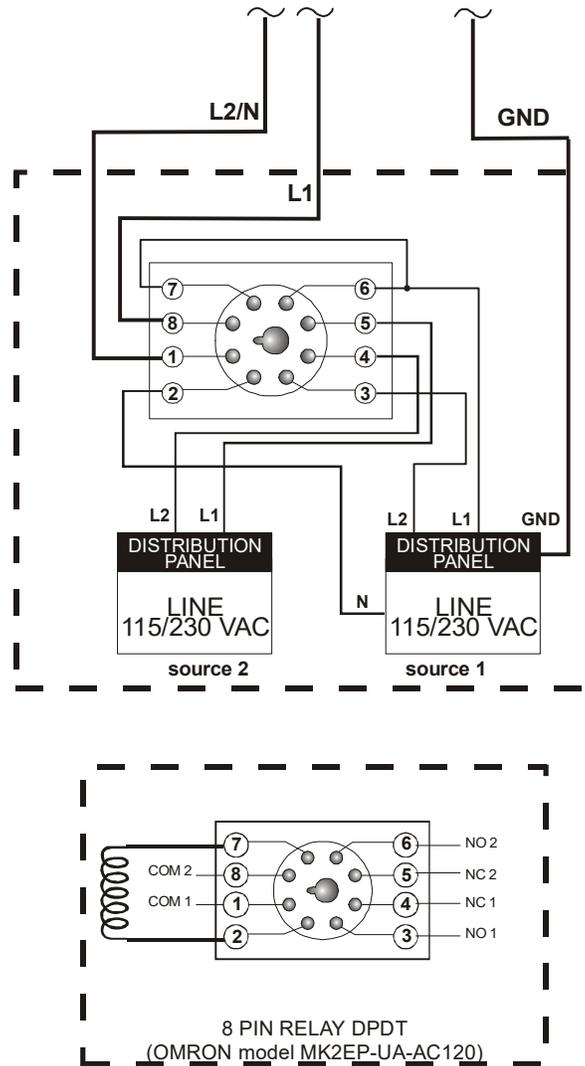


SECTION B

Typical Power Backup Wiring

A backup relay (DPDT) connects to the power source 1 in normal operation but will switch to the power source 2 if source 1 is disabled. The backup relay should be selected to ensure it is able to support the required power load.

FIGURE NO. 3 Typical Power Backup Wiring



**SECTION B**

## GE-BIN4 INSTALLATION

### Typical alarm connection wiring

The GE controller provides a normally open and normally closed dry contact to set off an alarm if the auger runs too long or if a bin weight goes below a set limit condition occurs. Moreover, this same contact can be used to signal a power failure or other malfunctions. It may be connected to an alarm system or directly to a siren and/or auto-dialer.

Make the normally closed (NC) or normally open (NO) connections as indicated in figures 4 and 5.

The relay will activate about 30 seconds after an alarm is triggered.

FIGURE NO. 4 Typical Alarm Connection Wiring

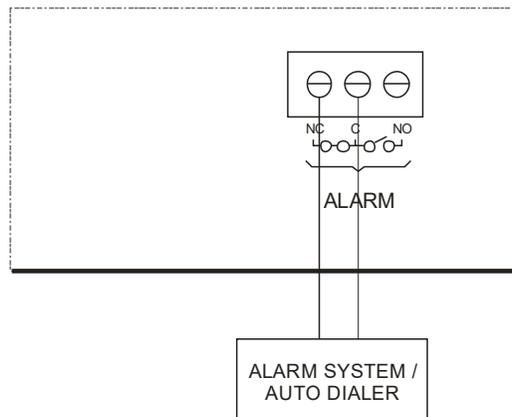
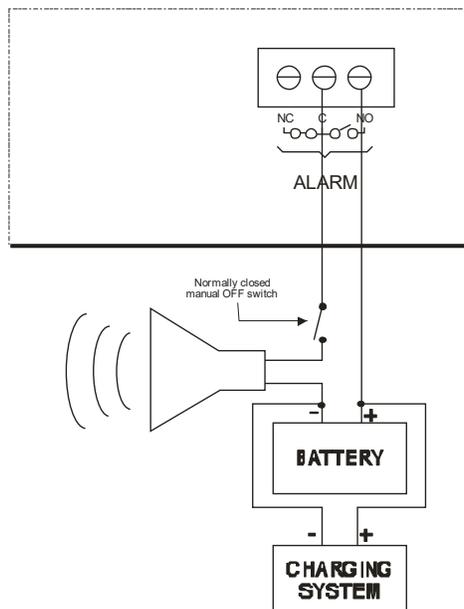


FIGURE NO. 5 Siren Connection Wiring



## Powering up procedure

Once the GE controller is properly mounted on the wall and all modules are connected to the terminal block, perform the following steps:

### Adjust the Line Voltage Selection Switch

This switch is located on the bottom electronic board and adapts the GE-BIN4 to 115 VAC or 230 VAC line voltage.

Set the line voltage switch (115VAC/230VAC) inside the GE-BIN4 to the correct value before powering up the GE-BIN4 control.

### Verify all connections

Seal all cable entry holes.

### Hermetically close the GE Controller

Close the front panel and the lower access cover.

### Put the power on

### Secure the front panel with a lock

## GE Controller compatible modules

This is the list of all the compatible modules that can be connected with the GE controller with a short description of their function.

#### Weighing module

- **GE-FBT** (Feed Bin Transmitter module that allow the GE-BIN4 to measure the bin weight)

#### Lightning Isolator module

- **GE-LIM** (Lightning Isolator Module that protects the GE-BIN4 against lightning)

#### GE computer interface

- **Communication card** (X1152 card inserted into the GE controller to communicate with the computer interface)
- **RF-IN2 Communication Module** (Module inserted into the controller for a wireless communication with the computer interface)

# GE-BIN4 INSTALLATION

## Specifications

### Master Control

Storage temperature	-4°F to 131°F (-20°C to 55°C)
Operating temperature	32°F to 122°F (0°C to 50°C)
Humidity	90% maximum Non-condensing
Weight	3.52 lb (1.6 kg)
Size	12 1/4" x 11" x 4 3/4" (32 cm x 28.8 cm x 11.5 cm)
Protection index	IP 66
Warranty	2 years
<b>POWER SUPPLY</b>	
Operational voltage range (SW1 on 115 V)	92 to 125 V
Operational voltage range (SW1 on 230 V)	184 to 250 V
Operational frequency range	45 to 65 Hz
Power supply circuit consumption (CPU board)	20 W maximum
Input fuse	125mA, 250V
<b>PROBE INPUTS</b>	
Input measuring range	0 Ohm, open circuit 0-5000 mV
Maximum wire length	500 feet (150 m)
Recommended wires	2 strands, shielded, AWG #22
<b>ALARM RELAY</b>	
Maximum current	1 A at 30 VDC
Delay before switching	30 seconds (approximate)
Fuse	1A 250VAC
<b>COMMUNICATIONS PORTS</b>	
Maximum wire length	820 feet (250 m)
Recommended wire	2 strands, twisted pair, low capacity, shielded, AWG #22

### Important Notice:

- It is important to have a backup system in case of a system failure.
- Low-voltage and high-voltage wires must be passed through different conduits at least 1 foot (30 cm) apart. If low-voltage and high-voltage conduits must be crossed, the crossing must be at a 90-degree angle.
- All wiring must be made by a certified electrician and conform to local electrical regulations.

## Troubleshooting

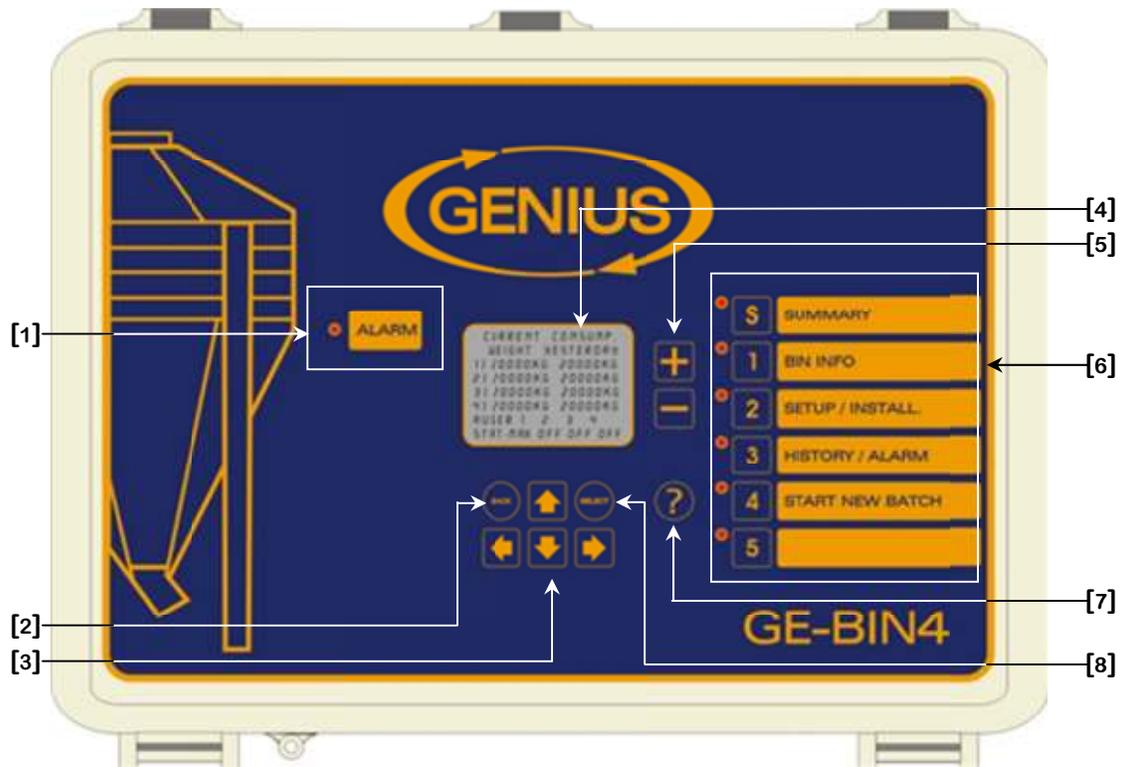
<b>SYMPTOM</b>	<b>CAUSE</b>	<b>RECOMMENDED ACTION</b>
Screen is blank	Voltage selector setting is inaccurate. GE-BIN4 is not powered. The flat cable between the main and the top boards of the GE-BIN4 is disconnected.	Make sure the line voltage selector switch is properly set. Make sure the control is powered. Make sure the flat cable is connected.

# USER'S GUIDE

## GE-BIN4

### SECTION C

Control Description



SECTION C

### 1. Alarm LED

On the left-hand side of the faceplate appears an alarm LED. This LED comes ON whenever the control is in alarm.

### 2. Back Button

The round BACK button allows the users to return to the preceding screen.

### 3. Navigation Buttons

The navigation buttons are represented by 4 squares with arrows on them.

### 4. LCD Display

The LCD display is a user-friendly device which allows users to visualize and modify settings rapidly and efficiently.

### 5. Value Setting Buttons (◻ and ⊕)

The value buttons appear as 2 squares with a + and - sign on them. These are used to increase or decrease the value on the screen. Press the button once and release it to increase or decrease the value by one increment. The value may be changed quickly by keeping your finger on either button.

### 6. Settings Group List

On the right-hand side of the faceplate appear 6 vertically aligned LED and, to their right, a list of the parameter groups. The LED that is lit indicates which parameter group is selected.

### 7. ? Button

This button is used to change the language used by the controller.

### 8. Select Button

This button can return up to 10 screens back. The round SELECT button allows the users to select a parameter or activate an option.

**Standard Equipment**

Quantity	Description
1	Main Board
1	Display Board

**Additional Equipment**

Quantity	Description
1	PC Com. Board
1	PC Interface
4	GE-FBT (Feed Bin Transmitter)
4	GE-LIM (Lightning Isolator Module)
1	RF-IN2

**Configuration Versions**

Version	Minimum Processor Version	Date	Modification
C2V15V0	1	10/20/2010	New.
C2V15V1	2	12/14/2010	Add French language support.
C2V15V2	9	08/30/2011	Add wireless communication support. Add code 6 alarm.
C2V15V3	9	11/01/2011	Add load cell error alarm. Change auger input location. Max weight must be entered by user to have a fill percentage. Add a non-erasable alarm history screen, which is accessible by TechParam. Increase maximum number of alarm logs to 200. Change PC history names. Change auger run time history format. Add data validation check for GE-FBT modules. Consumption set to 0 instead of “---” on a date change. Read all scale data every minute for FarmQuest and diagnostics.
C2V15V4	9	04/30/2012	Add weight validation management on reset of the GE-FBT module. Add an alarm for invalid weight reading.
C2V15V5	9	02/20/2014	Add maximum weight calibration. Make load cell gain and maximum weight adjustable.
C2V15V6	9	04/29/2014	Correction on weight calculation with maximum calibration.
C2V15V7	9	09/20/2017	Added option to display either the current weight or today's consumption on the summary screen. Correction on copy of language when doing an upload / download.

## GE-BIN4 USER'S GUIDE

C2V15V8	9	11/23/2017	Modification of the default value of the Gain and the maximum weight load cell
C2V15V9	9	03/18/2020	- Add support for 8 load cell bin scale modules. - Remove maximum weight calibration.

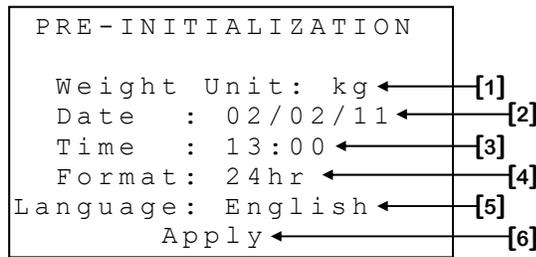
**System overview**

The GE-BIN4 can be used to monitor up to 4 GE-FBT (Feed Bin Transmitter) bin measuring modules. Each bin will be monitored for consumption, fills, auger run time and weight. The controller will automatically detect when the bin is filled and use the auger to measure consumption, even when the bin is being filled. The GE-BIN4 will sound the alarm if the auger runs too long or if a bin weight goes below a set limit.

Other features, including history for bins and alarms, are included in the GE-BIN4 controller.

**PRE-INITIALIZATION**

**SCREEN**



This screen appears only the first time the control is powered up and is used to set the measuring unit, language, date, time and their respective formats. These options may be changed after the initialization.

1. This parameter is used to choose the weight-measuring unit that will be used by the control. This unit may be either the kilogram or the pound.
2. This parameter is used to adjust the actual date. To change the date, position the cursor on this parameter and use the  and  buttons to change the value.
3. This parameter is used to adjust the actual time of day. To change the time of day, position the cursor on this parameter and use the  and  buttons to change the value.
4. This parameter is used to choose the time format that all clock-type parameters will use. The time format may be 24hr or AM/PM.
5. This parameter is used to choose the language that will be used. The language can be English or French.
6. This parameter is used to proceed with the initialization of the configuration using the above adjustments. The initialization screen will appear once the  button has been pressed while the cursor is positioned on this parameter.

**SUMMARY**

**SCREEN**

**S**

	Current Weight	Consump. Yesterday	
1)	20000kg	20000kg	[3]
2)	20000kg	20000kg	
3)	20000kg	20000kg	
4)	20000kg	20000kg	
Auger	1	2	3
Stat:	MAX	OFF	OFF

[1] → [2] → [3] → [4]

Some parameters may not appear if their corresponding option is not activated. To verify these options, refer to the **BIN SETUP (2.1)** and **BIN {1-4} SETUP (2.1.1-4)** screens.

1. These parameters are used to access the respective **BIN {1-4} INFO (1.1-4)** screen.
2. These parameters display the current weight measured for the respective bin. The current weight is the gross weight of the bin, minus the tare weight of that bin. If the tare weight has never been established, this value will be equal to the gross weight. When measuring the tare weight of the bin, this reading will alternate with “Tare”. When the bin’s module detects a fill, this reading will alternate with “Fill”. If there is a communication problem with the bin’s module, the associated parameter will display “---”. These parameters are displayed to the nearest 1kg (1lb) and have a maximum display value of 30000kg (67000lb).
3. These parameters display yesterday’s consumption for the respective bin. If there was no consumption recorded for yesterday, the associated parameter will display “---”. These parameters are displayed to the nearest 1kg (1lb) and have a maximum display value of 30000kg (67000lb).
4. These parameters display the state of the auger of the respective bin. When the auger has run continuously for more than **MAX RUN TIME [3]**<sup>1</sup>, this parameter will display “MAX” and be selectable. In this situation, pressing the **[SELECT]** button when the cursor is on this parameter will reset the auger maximum run time alarm.

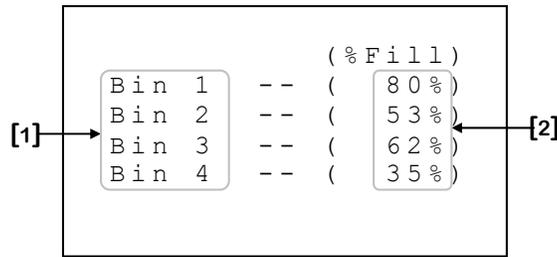
SECTION C

<sup>1</sup> Refer to the **AUGER {1-4} SETUP (2.2.1-4)** screen for more information on this parameter.

**BIN INFO MENU**

**SCREEN**

**1**



Some parameters may not appear if their corresponding option is not activated. To verify these options, refer to the **BIN SETUP (2.1)** screen.

1. These parameters are used to access to the respective **BIN {1-4} INFO (1.1-4)** screen.
2. These parameters display the fill percentage of each bin. This percentage is calculated by dividing the actual weight of the bin by its **MAX WEIGHT [5]**<sup>2</sup> parameter. If there is a communication problem with the bin's module or if the **MAX WEIGHT [5]**<sup>2</sup> value is set to “---”, the associated parameter will display “---”.

<sup>2</sup> Refer to the **BIN {1-4} SETUP (2.1.1-4)** screen for more information on this parameter.

**BIN {1-4} INFO**

**SUB SCREENS**

**1.1-4**

Bin 1	Details	[1]
Current Wt.:	20000kg	[2]
Today's		
Consumption:	20000kg	[3]
Auger Status:	OFF	[4]
Last Filled:	03/09/11	[5]
Amount:	20000kg	[6]

Some parameters may not appear if their corresponding option is not activated. To verify these options, refer to the **BIN {1-4} SETUP (2.1.1-4)** screens.

1. These parameters are used to access to the respective **BIN {1-4} DETAILS (1.1-4.1)** screen.
2. This parameter displays the current weight measured for the bin. The current weight is the gross weight of the bin, minus the tare weight of that bin. If there is a communication problem with the bin's module, this parameter will display "----". This parameter is displayed to the nearest 1kg (1lb) and has a maximum display value of 30000kg (67000lb).
3. This parameter displays today's consumption for the bin. If there was no consumption recorded for today, this parameter will display "----". This parameter is displayed to the nearest 1kg (1lb) and has a maximum display value of 30000kg (67000lb).
4. This parameter displays the state of the auger of the bin. If there is a communication problem with the bin's module, this parameter will display "----".
5. This parameter displays the date at which the last fill occurred. If no fill has been detected since the last initialization, this parameter will display "--/--/--".
6. This parameter displays the total amount that has been measured for all fills that were done at the **LAST FILLED DATE [5]**. If no fill has been detected since the last initialization, this parameter will display "----".

**BIN {1-4} DETAILS**

**SUB SCREENS**

**1.1-4.1**

Bin 1 Details	
LC1:	( 10 %)
LC2:	( 32 %)
LC3:	( 21 %)
LC4:	( 10 %)
LC5:	( 10 %)
LC6:	( 17 %)
LC7:	( 10 %)
LC8:	( 17 %)
LC Gain:	50 mV
LC Max Weight:	26070 kg

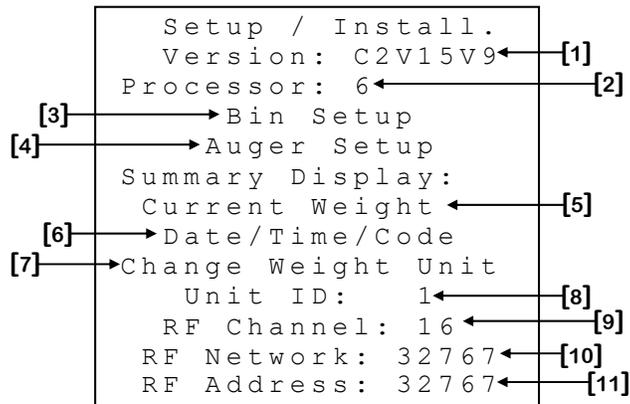
Some parameters may not appear if their corresponding option is not activated. To verify these options, refer to the Feed Bin Scale Installation manual.

1. These parameters display the percentage of the weight measured on each load cell. If there is a communication problem with the bin's module or one of the load cells in not operating properly, the concerned parameters will display "---".
2. These parameters are used to set the gain of the load cells of the respective bin scale. This value is the gain in mV for each Volt of excitement and must correspond to the load cell manufacturer's specifications. These parameters are adjusted in 1mV increments from 0mV to 781mV.
3. These parameters are used to set the maximum weight of the load cells of the respective bin scale. This value is the greatest weight the load cell can read and must correspond to the load cell manufacturer's specifications. These parameters are adjusted in 1kg increments from 0kg to 32767kg.

SETUP/INSTALL.

SCREEN

2



Some parameters may not appear if their corresponding option is not activated. To verify these options, refer to the **BIN {1-4} SETUP (2.1.1-4)** and **DATE/TIME/CODE (2.3)** screens.

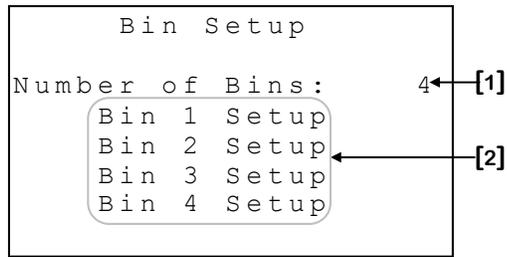
1. This parameter displays the version of the configuration.
2. This parameter displays the version of the processor.
3. This parameter is used to access to the **BIN SETUP (2.1)** screen.
4. This parameter is used to access to the **AUGER SETUP (2.2)** screen.
5. This parameter is used to select whether the Current Weight or Today's Consumption should be displayed on the summary screen.
6. This parameter is used to access to the **DATE/TIME/CODE (2.3)** screen.
7. This parameter is used to access to the **CHANGE WEIGHT UNIT (2.4)** screen. This parameter will only appear if **PARAMETERS [4]**<sup>3</sup> are set to "Unlocked".
8. This parameter is used select the identification number that will be used when communicating with the remote access software. Each controller must have a unique identification number. This parameter will only appear if **RF CHANNEL [8]** is set to "OFF". This parameter may be adjusted to any value from 1 to 250.
9. This parameter is used to select one of the 16 frequencies of the WiFarm network or deactivates wireless communication mode. If this parameter is set to "OFF", other wireless communication parameters will disappear. This parameter can be adjusted to "OFF", 1 to 16.

<sup>3</sup> Refer to the **DATE/TIME/CODE (2.3)** screen for more information on this parameter.

- 10.** This parameter is used to identify a WiFarm network. A WiFarm network is formed when the **RF NETWORK [9]** is set to the same value as the **RF ADDRESS [10]** of its RF communication card of the controller designated as the network master (ex. WebGate in most installations). Other controllers can join the existing network by adjusting **RF NETWORK [9]** to the **RF ADDRESS [10]** of that same network. To adjust this parameter, place the cursor on the digit you wish to change and use the  and  buttons to change the value. When **RF CHANNEL [8]** is set to "OFF", this parameter will disappear. This parameter can be adjusted to any value from 00000 to 39999.
- 11.** This parameter displays the number (address) associated to the RF communication card inserted in the controller. A unique number is given to each RF communication card of the WiFarm network. There is a unique **RF ADDRESS [10]** associated to each RF communication card. The **RF ADDRESS [10]** also appears on the sticker present on the RF card. When **RF CHANNEL [8]** is set to "OFF", this parameter will disappear. The address can be any value from 0 to 32767.

**BIN SETUP**  
**SUB SCREEN**

**2.1**

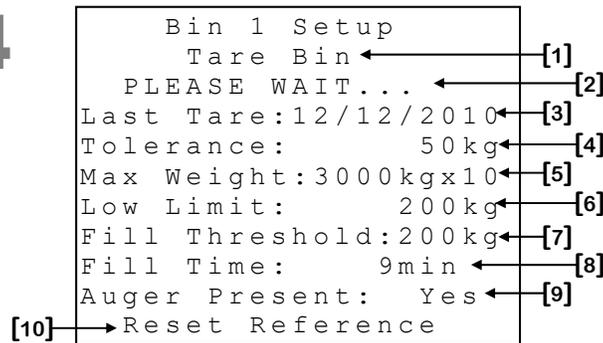


1. This parameter is used to set the number of bins the controller will monitor. Unused bins will not appear throughout the configuration. The number of bins can be set to any value from 1 to 4.
2. These parameters give access to the respective **BIN {1-4} SETUP (2.1.1-4)** screen. An unused bin's parameters will disappear.

**BIN {1-4} SETUP**

**SUB SCREENS**

**2.1.1-4**



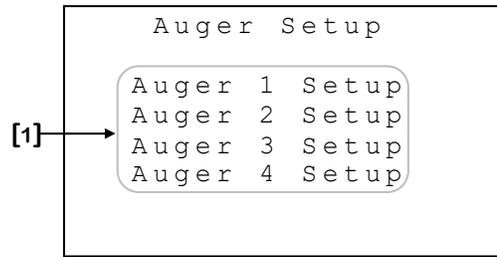
1. This parameter is used to activate the tare sequence. If the SELECT button is pressed while the cursor is positioned on this parameter, the tare sequence will begin. When the tare sequence has successfully been completed, the tare weight will be recorded in the controller and used to calculate the actual weight of the contents of the bin.
2. This parameter displays the state of the tare sequence. When the tare sequence begins, this message will appear and display “PLEASE WAIT...”, indicating that the tare sequence is being performed. If a communication error occurs during the tare sequence this message will display “ERROR(Comm.)”. If a load cell is defective during the tare sequence this message will display “ERROR(LC)”. When the tare sequence ends, this message will display “ERROR(Tol.)”, if the weight variation was too great during the tare sequence, or “SUCCESS”, if the tare sequence has successfully been completed. This message will remain displayed 10 seconds after the tare sequence ends.
3. This parameter displays the date of the last tare sequence. When a tare sequence has been successfully completed, this parameter will display the date at which it was performed. If an error occurred during the last tare sequence, this parameter will display “ERR(Comm.)”, “ERR(LC)”, or “ERR(Tol.)”, depending on the nature of the error.
4. This parameter is used to set the tolerance of the bin. The tolerance is the value used to validate a tare sequence, to end a fill sequence and accept an unexpected weight increase. This parameter is adjusted in 1kg (1lb) increments from 10kg (10lb) to 999kg (999lb).

5. This parameter is used to set the maximum weight the bin can hold. This value will be used to calculate the fill percentage of the bin. If this value is set to “---”, **%FILL BIN {1-4} [2]**<sup>4</sup> will not be calculated and will also display “---”. This parameter is adjusted in 10kg (10lb) increments from “---”, 100kg (100lb) to 30000kg (70000lb).
6. This parameter is used to set the low weight limit for the bin. When the weight measure for the bin is less than this value, the low limit alarm will activate. Adjusting this value to “OFF” will deactivate the low limit alarm. This parameter is adjusted in 1kg (1lb) increments from “OFF”, 1kg (1lb) to 30000kg (30000lb).
7. This parameter is used to set the weight increase that will trigger a fill sequence. When the weight of the bin increases by this value within a time period of **FILL TIME [8]**, the fill sequence will begin. This parameter is adjusted in 1kg (1lb) increments from 50kg (50lb) to 999kg (999lb).
8. This parameter is used to set the time within which the weight must increase to trigger a fill sequence, or remain stable to end the fill sequence. When the weight of the bin increases by **FILL THRESHOLD [7]** within this time period, the fill sequence will begin. When the weight of the bin does not increase by **TOLERANCE [4]** within this time period, the fill sequence will end. This parameter is adjusted in 1-minute increments from 1 to 10 minutes.
9. This parameter is used to indicate to the controller if the auger is present or not present for the bin. If this parameter is set to “Yes”, the auger will be used to calculate fill amounts and consumptions during a fill sequence. Auger run time will also be recorded in its history and be monitored for the maximum auger run time alarm. If this parameter is set to “No”, all auger-related parameters will disappear and the auger will not be used in any calculation. Furthermore, the auger will not be monitored for the maximum auger run time alarm.
10. This parameter is used to reset the consumption reference to the actual weight. If the **SELECT** button is pressed while the cursor is positioned on this parameter, the actual weight will be re-evaluated without considering **TOLERANCE [4]** and that weight will be used as reference for future consumption reference. If a communication error occurred during the operation, the message will change to “Error (Comm)”. If a problem with a load cell occurred during the operation, the message will change to “Error (Load Cell)”. If no problem occurred during the operation, the message will change to “Reset Done”.

<sup>4</sup> Refer to the **BIN INFO MENU (1)** screen for more information on this parameter.

**AUGER SETUP**  
**SUB SCREEN**

**2.2**



Some parameters may not appear if their corresponding option is not activated. To verify these options, refer to the **BIN {1-4} SETUP (2.1.1-4)** screen.

1. These parameters give access to the respective **AUGER {1-4} SETUP (2.2.1-4)** screen.

## AUGER {1-4} SETUP

### SUB SCREENS

# 2.2.1-4

```

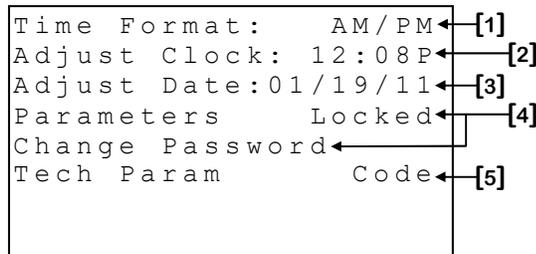
Auger 1 Setup
lb per minute:      5 ← [1]
Max Run Time Alm: Yes ← [2]
Max Run Time:      1:00 ← [3]
    
```

1. This parameter is used to set the weight measured by the auger for every minute of activation. For every minute for which the auger is activated, the controller will consider that the amount adjusted here is consumed. This consumption is used mainly for the fill sequence evaluations. This parameter is adjusted in 1kg (1lb) from 1kg (1lb) to 999kg (999lb).
2. This parameter is used to activate or deactivate the auger maximum run time alarm monitoring. If this parameter is set to “Yes”, the auger maximum run time alarm will occur when the auger has been continuously activated throughout the time period adjusted at **MAX RUN TIME [3]**. If this parameter is set to “No”, no auger maximum run time alarm will occur.
3. This parameter is used to set the time period throughout which the auger can be activated without triggering the alarm. If the auger is activated for more than the time set at this parameter and the **MAX RUN TIME ALM [2]** option is set to “Yes”, the alarm will be activated. This parameter can be adjusted to any value from 0:00 to 500:59 hours.

DATE/TIME/CODE

SUB SCREEN

2.3

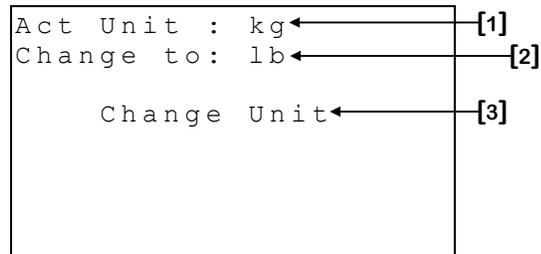


1. This parameter is used to change the time format for all clock-type parameters. The format may be either 24-hour or AM/PM. When this value is changed, all clock type parameters will be modified to reflect the new time format.
2. This parameter is used to adjust the actual time of day. To change the time of day, position the cursor on this parameter and use the  and  buttons to change the value.
3. This parameter is used to adjust the actual date. To change the date, position the cursor on this parameter and use the  and  buttons to change the value.
4. These parameters allow the user to lock or unlock access to parameters. They also indicate the parameter status (Locked or Unlocked). To modify the parameter status, press the  when the cursor is positioned on “Locked/Unlocked” and then enter the first alphanumerical value. When the first value of the code is entered, press  once again to access the next value. Repeat these steps for each value that must be entered. It is possible to change the code by pressing the  button while the cursor is positioned on “Change Code”. The new code may now be entered following the same procedure as mentioned above.
5. This parameter is used by the manufacturer’s technical support personnel.

## CHANGE WEIGHT UNIT

### SUB SCREEN

# 2.4

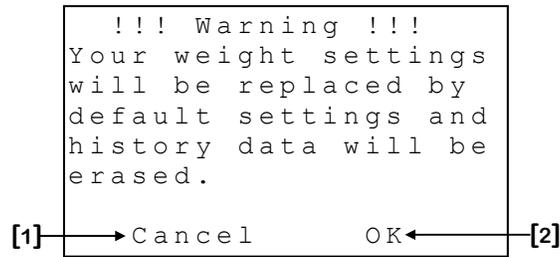


1. This parameter displays the weight unit actually used by the controller.
2. This parameter displays the weight unit to which the controller will change if the change weight unit sequence is completed.
3. This parameter is used to access the **CONFIRM CHANGE WEIGHT UNIT (2.4.1)** screen.

## CONFIRM CHANGE WEIGHT UNIT

### SUB SCREEN

# 2.4.1

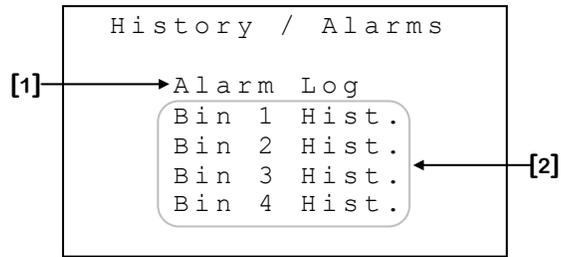


1. This parameter is used to cancel the weight unit change. Pressing the  button while the cursor is positioned on this parameter will return to the previous screen without changing the weight measuring unit.
2. This parameter is used to confirm the weight unit change. Pressing the  button while the cursor is positioned on this parameter will return to the previous screen and change the weight measuring unit. All histories will be erased and default values will replace all weight settings.

**HISTORY / ALARMS**

**SCREEN**

**3**



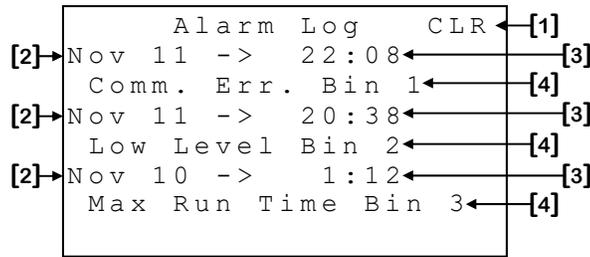
Some parameters may not appear if their corresponding option is not activated. To verify these options, refer to the **BIN SETUP (2.1)** screen.

1. This parameter is used to access the **ALARM LOG (3.1)** screen.
2. These parameters are used to access the respective **BIN {1-4} HIST. (3.2-5)** screen.

**ALARM LOG**

**SUB SCREEN**

**3.1**

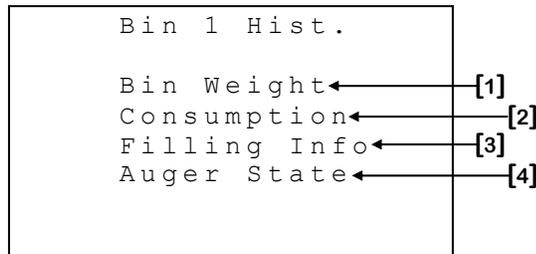


This screen can contain up to 200 alarms. Communication errors, system errors, auger alarms and weight alarms will be recorded in this history. Once the 200 alarms have been recorded, the history will continue recording data replacing the oldest history alarms by the new ones.

1. This parameter is used to clear the alarm history. If the **SELECT** is pressed while the cursor is positioned on this parameter, a confirmation question will appear. If the confirmation is positive, the alarm history and all alarm conditions will be cleared.
2. These parameters indicate the date at which the alarm (mentioned immediately below these parameters) was triggered.
3. These parameters indicate the time at which the alarm (mentioned immediately below these parameters) was triggered.
4. These parameters indicate the alarm that was triggered at the date and time displayed immediately above these parameters. Refer to the **Alarm message table** at page 50 for a description of all possible alarm messages.

**BIN {1-4} HIST.  
SUB SCREENS**

**3.2-5**



Some parameters may not appear if their corresponding option is not activated. To verify these options, refer to the **BIN {1-4} SETUP (2.1.1-4)** screen.

1. This parameter is used to access the **BIN {1-4} WEIGHT (3.2-5.1)** screen.
2. This parameter is used to access the **BIN {1-4} CONSUMPTION (3.2-5.2)** screen.
3. This parameter is used to access the **BIN {1-4} FILLING INFO (3.2-5.3)** screen.
4. This parameter is used to access the **BIN {1-4} AUGER STATE (3.2-5.4)** screen.

**BIN {1-4} WEIGHT  
SUB SCREENS**

**3.2-5.1**

Bin	1	Weight	CLR
<0>	10	20 30 40	50
Date		kg	
Nov	11	1 2 4 1	
Nov	10	9 4 3 2	
Nov	9	1 2 9 6	

This screen displays 10 days of history at a time. There may be up to 60 history days recorded for each bin. The values are displayed according to the date from the most recent date to the oldest date recorded.

1. This parameter is used to clear the history currently displayed. When the **SELECT** button is pressed, a confirmation question will appear. When the question is confirmed, the history will be cleared.
2. These parameters are used to navigate throughout the different history days by pressing the **SELECT** button when the cursor is placed on “0”, “10”, “20”, “30”, “40” or “50”. The number selected represents the first day that will be displayed. The days actually viewed will be indicated by the brackets “<” and “>”. History values are displayed in groups of ten entries.
3. These parameters display the date of the history entry.
4. These parameters display the weight the bin had at the end of the mentioned day. If there is a communication problem with the bin’s module when the day changes, the associated parameter will display “---”. These parameters are displayed to the nearest 1kg (1lb) and have a maximum display value of 30000kg (67000lb).

**BIN {1-4} CONSUMPTION**

**SUB SCREENS**

**3.2-5.2**

Bin 1	Consump.	CLR
<0>	10 20 30 40 50	
Date	kg	
Nov 11	1 2 4 1	
Nov 10	3 4 3 2	
Nov 9	2 2 9 6	

This screen displays 10 days of history at a time. There may be up to 60 history days recorded for each bin. The values are displayed according to the date from the most recent date to the oldest date recorded.

1. This parameter is used to clear the history currently displayed. When the **SELECT** button is pressed, a confirmation question will appear. When the question is confirmed, the history will be cleared.
2. These parameters are used to navigate throughout the different history days by pressing the **SELECT** button when the cursor is placed on “0”, “10”, “20”, “30”, “40” or “50”. The number selected represents the first day that will be displayed. The days actually viewed will be indicated by the brackets “<” and “>”. History values are displayed in groups of ten entries.
3. These parameters display the date of the history entry.
4. These parameters display the consumption of the bin for the mentioned day. If no consumption was recorded for the day, the associated parameter will display “---”. These parameters are displayed to the nearest 1kg (1lb) and have a maximum display value of 30000kg (67000lb).

**BIN {1-4} FILLING INFO**

**SUB SCREENS**

**3.2-5.3**

Bin1	Fill	Info	CLR
<0>	10	20	30 40 50
Date	Time	kg	
Nov 11	12:30A	1241	
Nov 10	13:50A	9432	
Nov 9	13:26A	1296	

This screen displays 10 days of history at a time. There may be up to 60 history days recorded for each bin. The values are displayed according to the date from the most recent date to the oldest date recorded.

1. This parameter is used to clear the history currently displayed. When the **SELECT** button is pressed, a confirmation question will appear. When the question is confirmed, the history will be cleared.
2. These parameters are used to navigate throughout the different history days by pressing the **SELECT** button when the cursor is placed on “0”, “10”, “20”, “30”, “40” or “50”. The number selected represents the first day that will be displayed. The days actually viewed will be indicated by the brackets “<” and “>”. History values are displayed in groups of ten entries.
3. These parameters display the date of the history entry.
4. These parameters display the time at which a fill sequence occurred for the mentioned day. If no fill sequence was recorded for the day, the associated parameter will display “---”. If more than one fill sequence was recorded for the day, the last fill sequence time will be displayed here. These parameters are displayed to the nearest minute from 0:00 (12:00A) to 23:59 (11:59P).
5. These parameters display the fill amount of the bin for the mentioned day. If no fill sequence was recorded for the day, the associated parameter will display “---”. If more than one fill sequence was recorded for the day, the amount displayed will be the total of all fill amounts for the day. These parameters are displayed to the nearest 1kg (1lb) and have a maximum display value of 30000kg (67000lb).

**BIN {1-4} AUGER STATE**

**SUB SCREENS**

**3.2-5.4**

Bin 1 Auger CLR	
<0>10 20 30 40 50	[1] ← [2]
Date	TimeOn
Nov 11	12:41
Nov 10	12:41
Nov 9	12:41

[3] → [4]

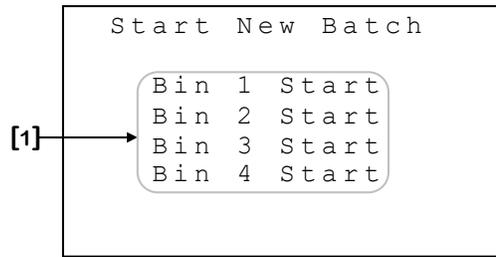
This screen displays 10 days of history at a time. There may be up to 60 history days recorded for each bin. The values are displayed according to the date from the most recent date to the oldest date recorded.

1. This parameter is used to clear the history currently displayed. When the **SELECT** button is pressed, a confirmation question will appear. When the question is confirmed, the history will be cleared.
2. These parameters are used to navigate throughout the different history days by pressing the **SELECT** button when the cursor is placed on “0”, “10”, “20”, “30”, “40” or “50”. The number selected represents the first day that will be displayed. The days actually viewed will be indicated by the brackets “<” and “>”. History values are displayed in groups of ten entries.
3. These parameters display the date of the history entry.
4. These parameters display the time for which the auger has run for the mentioned day. These parameters are displayed to the nearest minute from 0:00 to 23:59 hours.

## START NEW BATCH

### SCREEN

4



Some parameters may not appear if their corresponding option is not activated. To verify these options, refer to the **BIN SETUP (2.1)** screen.

1. These parameters are used to access the respective **BIN {1-4} START (4.1-4)** screen.

**BIN {1-4} START  
SUB SCREENS**

**4.1-4**

```

*** WARNING ***
This will erase the
history for the bin.
Recent past history
can be available via
FarmQuest/FarmSite.
[1] Cancel      Start Batch [2]
    
```

1. This parameter is used to cancel the start batch procedure. Pressing the  button while the cursor is positioned on this parameter will return to the previous screen without starting the batch.
2. This parameter is used to confirm the start batch procedure. Pressing the  button while the cursor is positioned on this parameter will return to the previous screen and start the batch. All histories and actual data of the bin will be reinitialized.

**MCHIP DETECTED**

**SCREEN**

**U/D**

```

-- Upload/Download --
** MCHIP Detected ***
[1]→ DNLD Config. Sure?Y
[2]→ UPLD Config. Sure?N
UPLOAD STATUS:OK ← [3]

Remove the MCHIP
when finished
    
```

This screen will be displayed when a CM-512 is inserted in the appropriate socket.

**Notes :-** The compatible MCHIP for this configuration is: CM-512.

- This screen will not appear if the **RF CHANNEL [8]**<sup>5</sup> parameter is not set to « OFF ».

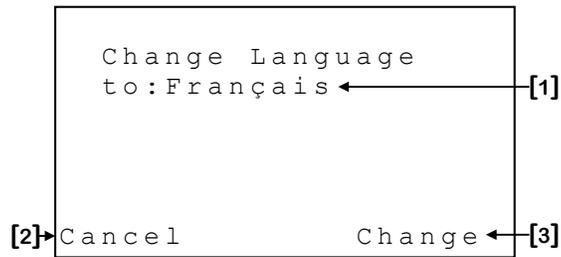
1. This parameter is used to trigger a download of the configuration from the MCHIP to the controller. When the  button is pressed while the cursor is positioned on this parameter, a confirmation question will appear and, if the confirmation is positive, the download will begin.
2. This parameter is used to trigger an upload of the configuration from the controller to the MCHIP. When the  button is pressed while the cursor is positioned on this parameter, a confirmation question will appear and, if the confirmation is positive, the upload will begin.
3. This parameter appears only after an upload has been performed. It indicates the upload status. If the upload was successful, the message “OK” will appear. If an error occurred during the upload, the message “ERROR” will appear indicating that the configuration was not successfully uploaded in the MCHIP. The upload process will have to be repeated.

If the configuration chip (CM-512) is not removed after the downloading procedure, the controller will reload the factory set values each time it is reset or each time the power is turned off and back on, erasing the values entered by the customer. At this point, the control awaits an intervention of the user to activate the configuration, which is potentially dangerous for your breeding. The alarm will activate if the chip remains in the socket for 5 minutes or more.

<sup>5</sup> Refer to the **SETUP/INSTALL (2)** screen for more information on this parameter.

## CHANGE LANGUAGE

### SCREEN



1. This parameter displays the language that will be used if the language change is performed.
2. This parameter is used to cancel the language change. Pressing the  button while the cursor is positioned on this parameter will return to the previous screen without changing the language.
3. This parameter is used to confirm the language change. Pressing the  button while the cursor is positioned on this parameter will return to the previous screen and change the language.

### Alarm message table

Messages	Probable Causes
“Comm. Err. Bin {1-4}”	- The mentioned bin module is activated and has not communicated with the GE-BIN4 controller for a 5-minute period.
“Check GE-FBT Mod{1-4}”	- The mentioned bin’s GE-FBT module cannot provide a stable weight value.
“Low Level Bin {1-4}”	- The mentioned bin’s measured weight is lower than <b>LOW LIMIT [6]</b> <sup>6</sup> .
“Max Run Time Bin {1-4}”	- The mentioned bin’s auger has run continuously for more than <b>MAX RUN TIME [3]</b> <sup>7</sup> .
“LC {1-8} Bin {1-4} Defect”	- The mentioned load cell of the mentioned bin is defective or unplugged for a 5-minute period.
“Error Code 1”	- The system has rebooted 5 times within a 3-minute period or 10 times within a 15-minute period. This situation will be considered resolved if system does not reboot for 15 minutes. If this situation persists, contact your distributor.
“Error Code {2-5}”	- If one or more errors of these types occur, contact your distributor.
“Error Code 6”	- The MCHIP has remained in the socket for five or more minutes.

<sup>6</sup> Refer to the **BIN {1-4} SETUP (2.1.1-4)** screen for more information on this parameter.

<sup>7</sup> Refer to the **AUGER {1-4} SETUP (2.2.1-4)** screen for more information on this parameter.

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WARRANTY  
GE-BIN4  
SECTION D**

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SECTION D

## **Limited Warranty**

The manufactured equipment and supplied components have gone through rigorous inspection to assure optimal quality of product and reliability. Individual controls are factory tested under load, however the possibility of equipment failure and/or malfunction may still exist.

For service, contact your local retailer or supplier. The warranty period shall be for two years from manufacturing date. Proof of purchase is required for warranty validation.

In all cases, the warranty shall apply only to defects in workmanship and specifically exclude any damage caused by over-voltage, short circuit, misuse, acts of vandalism, lightning, fortuitous events, acts of God, flood, fire, hail or any other natural disaster. Any unauthorized work, modification or repair on this product automatically voids the warranty and disclaims the manufacturer from all responsibility.

The manufacturer assumes only those obligations set forth herein, excluding all other warranties or obligations. This warranty stipulates that in all cases the manufacturer shall be liable only for the supply of replacement parts or goods and shall not be liable for any personal injury, damages, loss of profits, interrupted operations, fines for infringement of the law or damages to the production of the PURCHASER and the PURCHASER shall take up the defence and hold the manufacturer faultless regarding any legal or extra legal proceedings, notice, or claim by the customer or by a third party, and regarding any legal and extra legal expenses and fees brought forward on by such damages.



GE-BIN4 VER:1.9  
March 18, 2020