

MANUAL GE-NUTRI



Installation / User's Guide

ATTENTION ELECTRICIAN
SEE WIRING DETAILS ON PAGES A-3 TO A-7 AND
ADDITIONAL INFORMATION IN SECTION B

WIRING DIAGRAM

SECTION A

INSTALLATION GUIDE

SECTION B

USER'S GUIDE

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GE-NUTRI WIRING DIAGRAM

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.

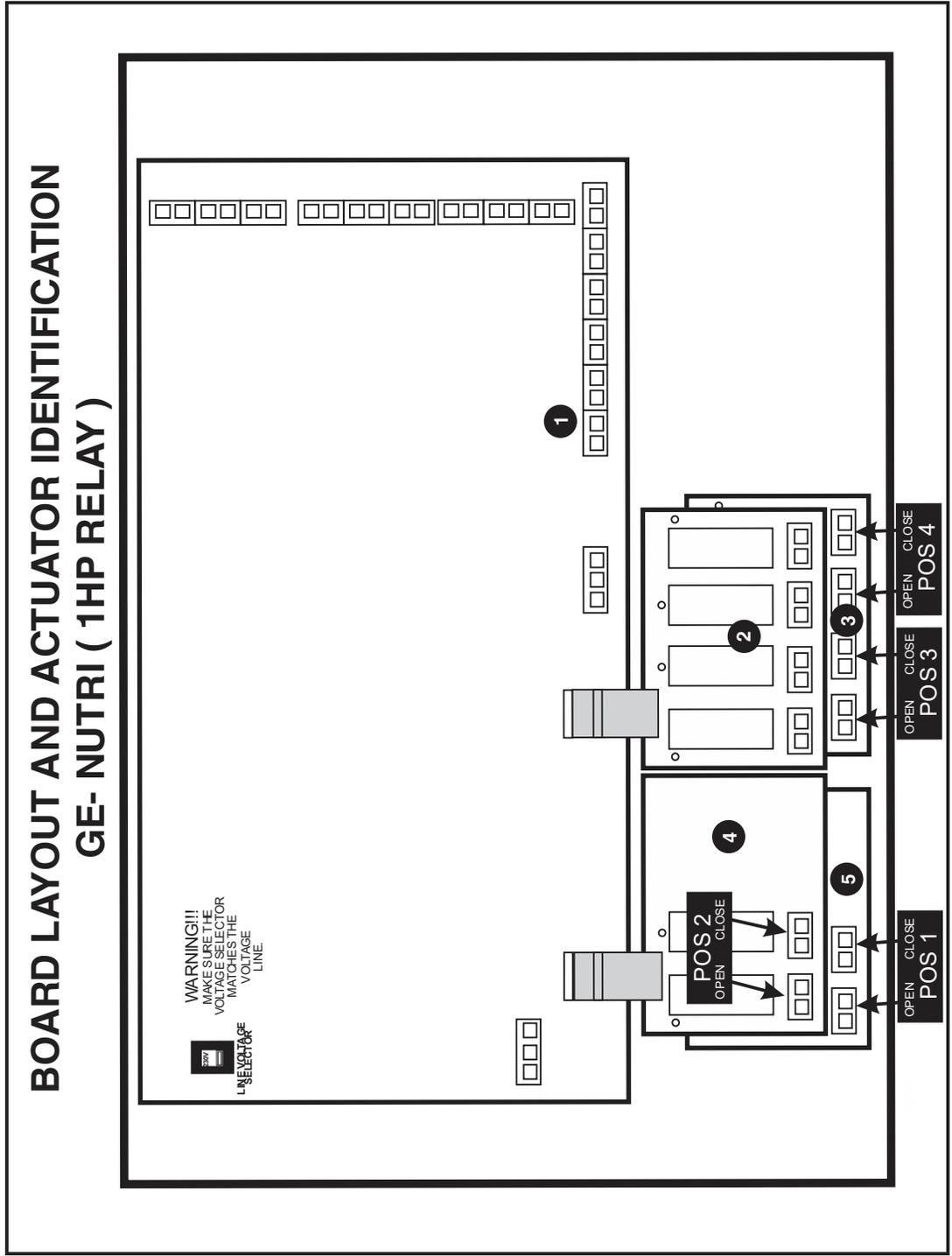
RECOMMENDATIONS

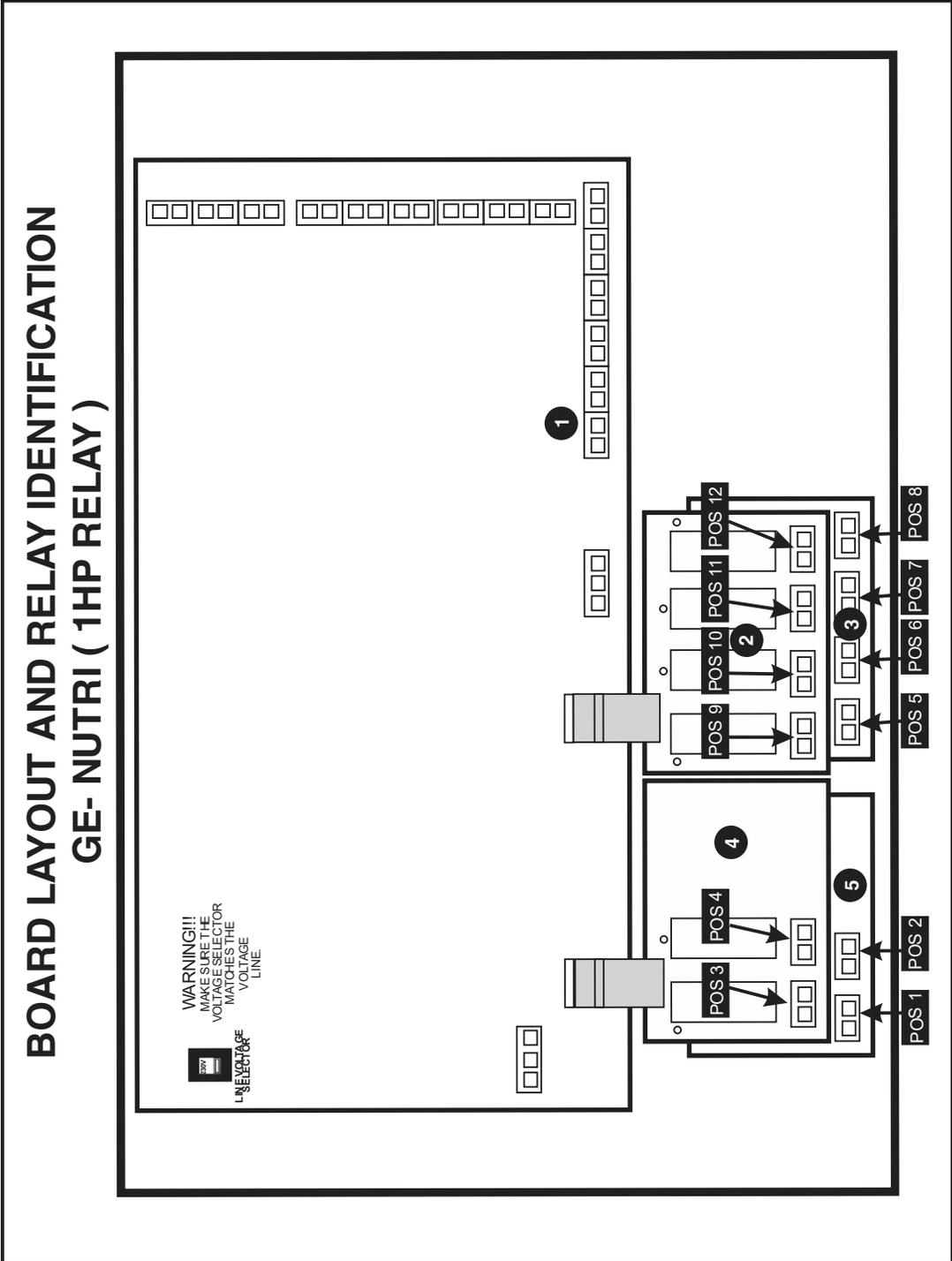
The manufacturer recommends that all installation procedures described herein be performed by a qualified electrician or installation technician. Furthermore the manufacturer recommends testing all the functions and equipment connected to the GE-NUTRI Controller, including the alarm system and backup 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 GE-NUTRI SECTION A

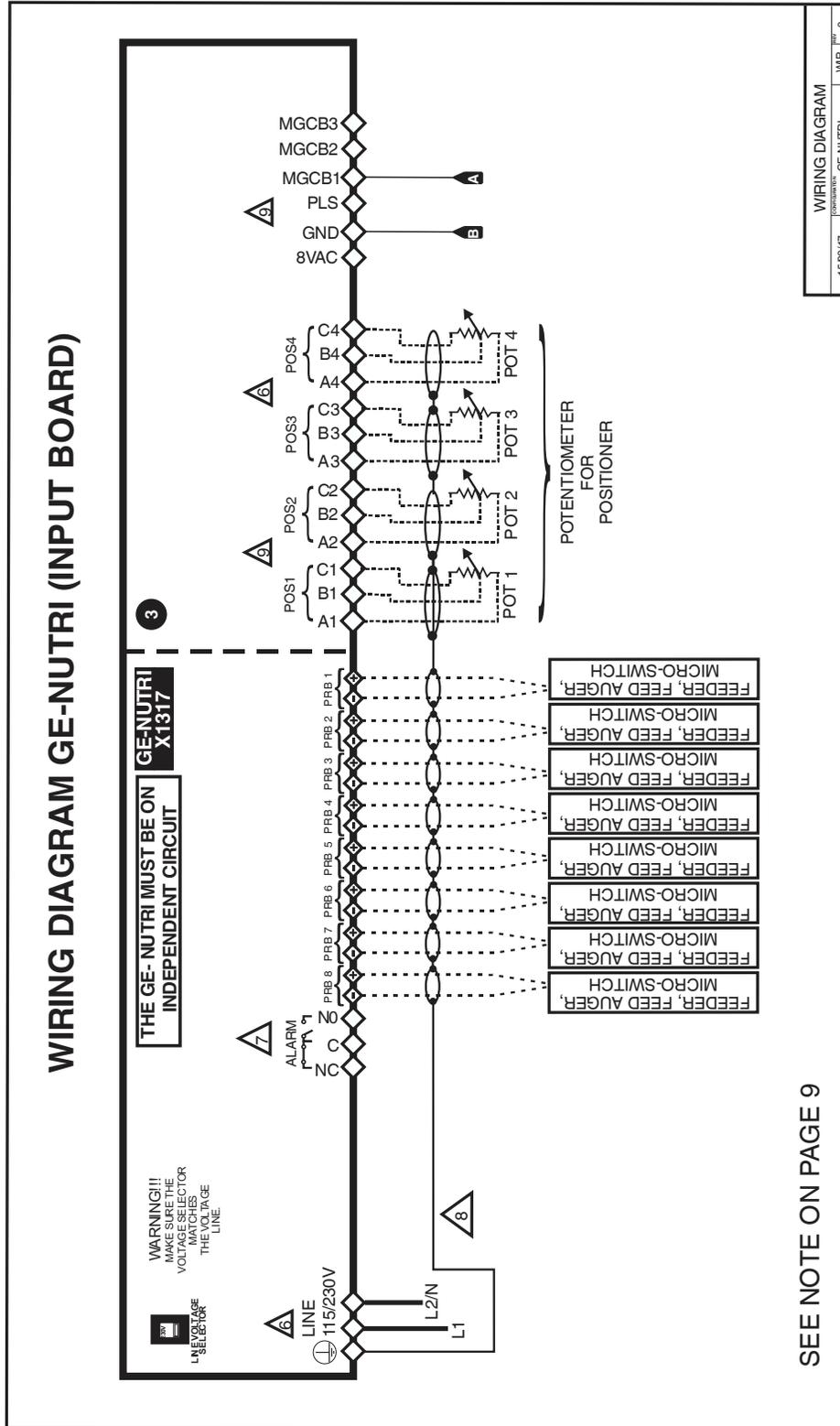
GE-NUTRI WIRING DIAGRAM



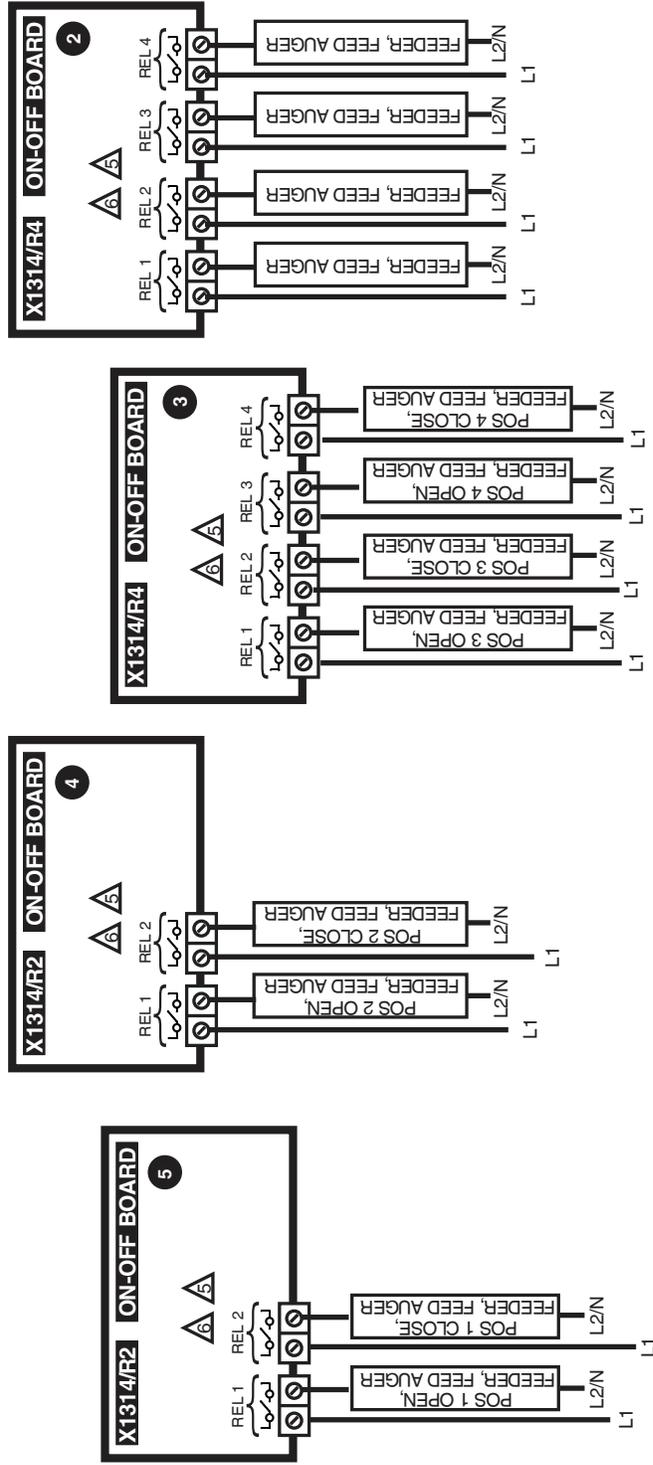


SECTION A

GE-NUTRI WIRING DIAGRAM



WIRING DIAGRAM GE-NUTRI (1 HP RELAY)

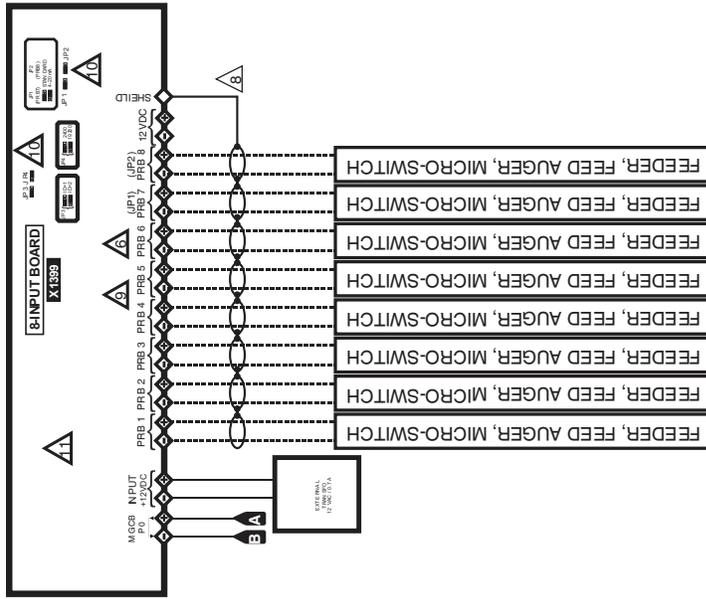


SEE NOTE ON PAGE 9

15/09/17	GE-NUTRI	WR	0
WIRING DIAGRAM			

GE-NUTRI WIRING DIAGRAM

WIRING DIAGRAM GE-NUTRI (8 INPUT BOARD MGCB)



SEE NOTE ON PAGE 9

15/08/17	WIRING DIAGRAM	WR	0
	GE-NUTRI		

Electrician's notes

1 ----- (PROBE WIRING) SHIELDED WIRE AWG #22 WITH 16/30 STRANDING, 500ft (150m) MAXIMUM LENGTH (Ex.: DECA 73-310).
For other probe, refer to specific probe manual for appropriate maximum length and wire size or use AWG #22, 500ft (150m) MAXIMUM LENGTH.

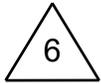
2 ————— (COMMUNICATION WIRING) SHIELDED, TWISTED PAIR (8 TWIST/FT). MAX LENGTH FOR 350PF/M CABLE : 500FT (150M). MAX LENGTH FOR 89PF/M CABLE : 820FT (250M).

3 ————— HIGH VOLTAGE WIRE INSTALLED ACCORDING TO LOCAL WIRING CODE.

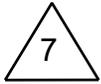
4 INSTALL LOW VOLTAGE WIRES (PROBES, COMPUTER LINK OR POTENTIOMETER WIRES) AT LEAST 12 INCHES (30cm) AWAY FROM HIGH VOLTAGE WIRES (120/230VAC, 24VDC). ALWAYS CROSS HIGH AND LOW VOLTAGE WIRES AT A 90-DEGREE ANGLE.



RELAYS: 12A @ 240VAC RESISTIVE, MOTOR 1HP @ 240VAC, 1/2HP @ 120VAC AT EACH OUTPUT.



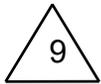
1 WIRE ONLY PER GREEN TERMINAL. USE WIRE CONNECTOR IF YOU WANT TO CONNECT MORE THAN 1 WIRE, NO BIGGER THAN AWG #12, NO SMALLER THAN AWG #28.



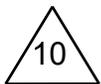
CHECK INSTALLATION SECTION FOR ALARM WIRING.



USE SHIELD FOR SHIELDING PURPOSE ONLY. CONNECT 1 END AND 1 END ONLY OF THE SHIELD TO THE CONTROL CIRCUIT COMMON END⊕. NEVER LEAVE BOTH ENDS OF THE SHIELD UNCONNECTED. NEVER CONNECT BOTH ENDS OF THE SHIELD TO COMMON⊕. THE USE OF A SHIELD FOR ALL PROBES AND POTENTIOMETERS IS MANDATORY.



COMMUNICATION WIRING SHIELDED, TWISTED PAIR (8 TWIST/FT). MAX LENGTH FOR 350PF/M CABLE : 160FT (50M). MAX LENGTH FOR 89PF/M CABLE : 650FT (200M).



JP1 – JUMPER MUST BE INSTALLED ON PIN 1-2 (STANDARD)
JP2 – JUMPER MUST BE INSTALLED ON PIN 1-2 (STANDARD)
JP3 – JUMPER MUST BE INSTALLED ON PIN 1-2 (ID 1)
JP4 – JUMPER MUST BE INSTALLED ON PIN 2-3 (19200bp)



X1399 BOARD PROGRAM VERSION MUST BE V4 OR HIGHER.

INSTALLATION GE-NUTRI SECTION B

This section will inform the electrician on proper wiring and installation procedures for the GE-NUTRI 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-NUTRI 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-NUTRI 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 cable, AWG #22 (to extend probes)
- 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-NUTRI Controller

- It is recommended to install the unit in a hallway to limit the GE-NUTRI Controller exposure to noxious gases.
- In order to avoid condensation problems inside the controller, it is recommended to install the GE-NUTRI Controller on an inside wall. If it is not possible, use spacers to have an air gap between the wall and the GE-NUTRI Controller.
- It is required to install the GE-NUTRI Controller right side up with the cable entry holes facing down.
- The enclosure is watertight, but do not spray water or submerge the GE-NUTRI Controller in water. Cover it carefully with plastic when cleaning the room.
- The GE-NUTRI 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-NUTRI 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-NUTRI 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-NUTRI Controller.
- Use separate conduits for the low voltage cables (communication and probes) 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.
- Probe cables must be 500' (150m) or less.
- Communication cables must be 820' (250m) or less.
- It is prohibited to use overhead cables outside the building.

Electrical power

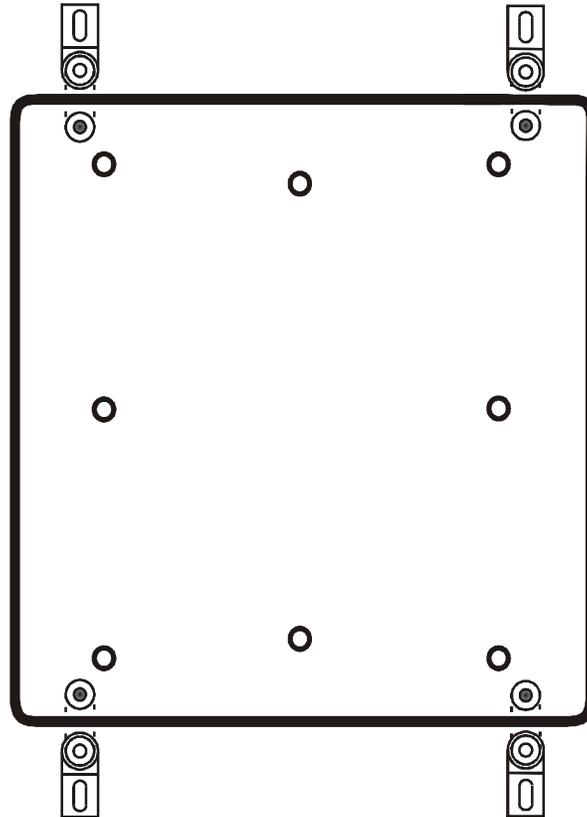
- Protection from electrical surges should be included in the planning of each installation.
- Every module should have a separate breaker to avoid unwanted consequences.

- The backup system and alarm must be thoroughly tested and verified as working properly before using the ventilation 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



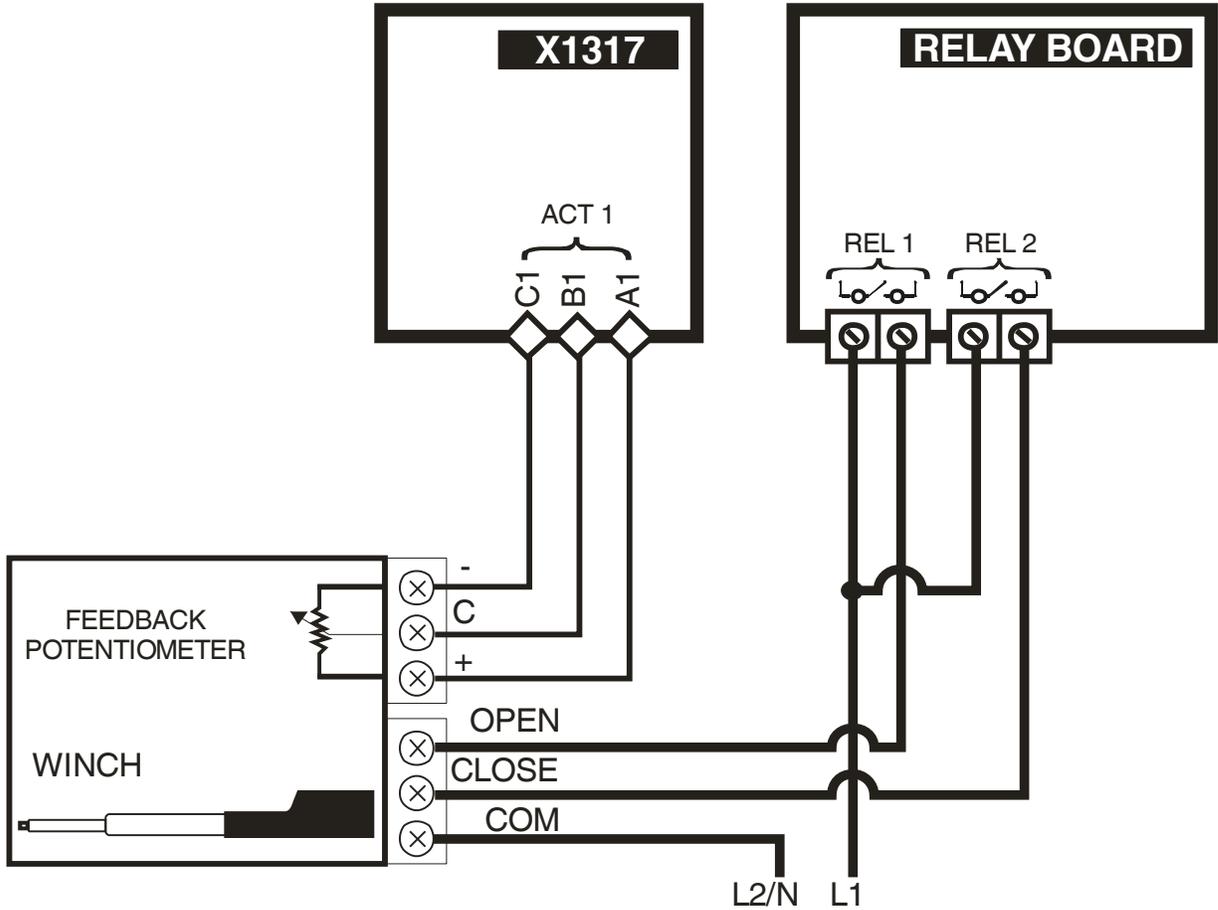
Connection procedure

Detailed wiring diagrams

Typical positioner wiring

Follow the calibration procedure in the user guide, otherwise the positioner
positioning will be erratic.

FIGURE NO. 2 Typical 115V-Positioner Wiring

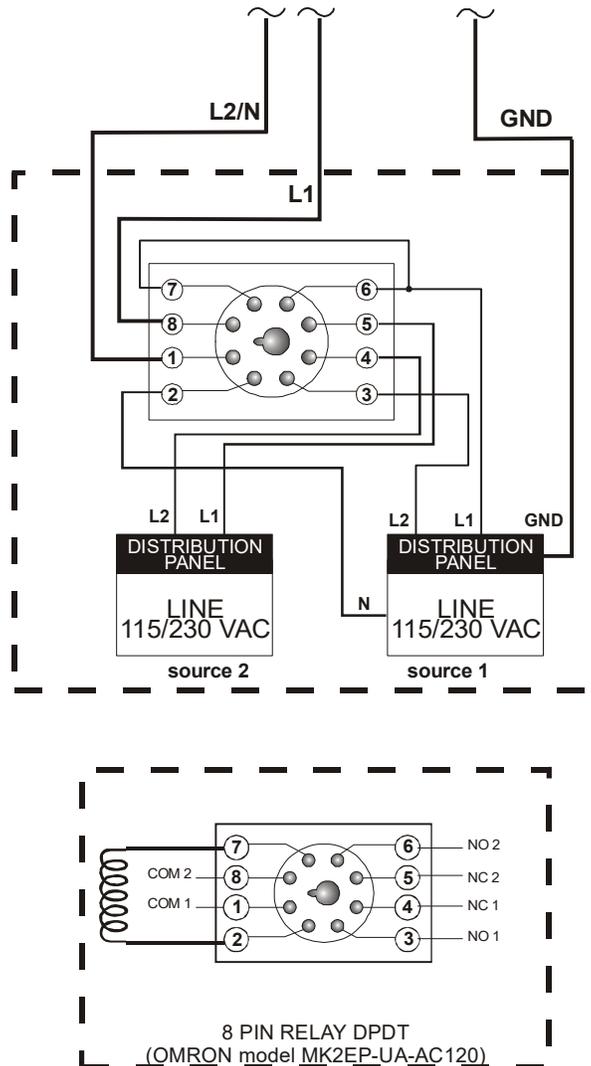


SECTION B

Typical power backup wiring

A backup relay (DPDT) is connected 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-NUTRI INSTALLATION

Typical alarm connection wiring

The GE-NUTRI Controller provides a normally open and normally closed dry contact to set off an alarm in case low or high temperature 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 10 and 11.

FIGURE NO. 4 Typical Alarm Connection Wiring

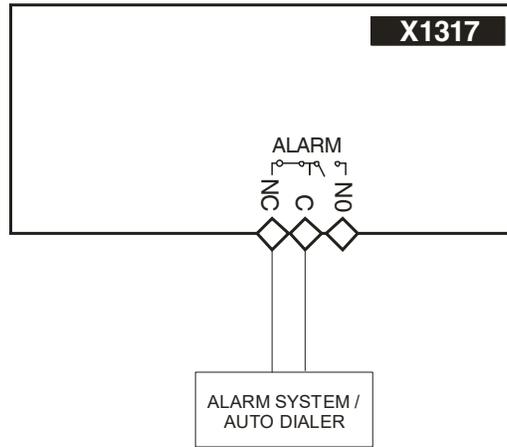
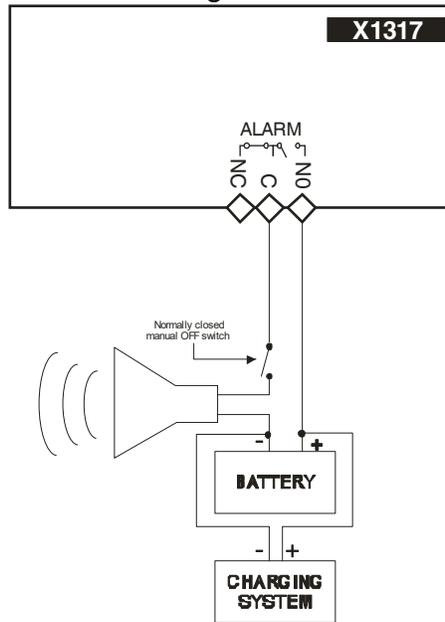


FIGURE NO. 5 Siren Connection Wiring



Powering up procedure

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

Verify all connections

Seal all cable entry holes.

Hermetically close the GE-NUTRI Controller

Close the front panel and the lower access cover.

Put the power on

Secure the front panel with a lock

GE-NUTRI Controller compatible probes

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

- **Micro Switch**

On/off switch read by the controller

- **CSD-1**

Current detector for feed augers.

GE-NUTRI Controller compatible modules

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

GE-NUTRI computer interface

- **Communication card** (card inserted into the Genius Controller to communicate with the computer interface)
- **RF-IN2 Communication Module** (Module inserted into the Genius Controller for a wireless communication with the computer interface)
- **PC interface** (Separate box allowing different communication options to a PC interface)

Additional Probes

- **8 Inputs Board** (X1399)

GE-NUTRI INSTALLATION

Specifications

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	9 lb (4.1 kg)
Size	14 1/2" x 13 1/4" x 5.5" (36 cm x 33 cm x 13.9 cm)
Protection index	IP 66
Warranty	2 years
POWER SUPPLY	
Operational voltage range	90 to 250 VAC
Operational frequency range	45 to 65 Hz
Power supply circuit consumption (CPU Board)	65 W maximum
SOURCE 8VAC	
Voltage Range	6.5 to 13VAC
Maximum current allowed	50mA
PROBE INPUTS	
Input measuring range	0 Ohm, open circuit 0-5000 mV 0-20 mA (PRB 7 and 8)
Maximum frequency for the water counter (50% cycle)	4 Hz
Maximum wire length	500 feet (150 m)
Recommended wires	2 strands, shielded, AWG #22
8-INPUT MGCB BOARD (X1276)	
PROBE INPUTS (PRB1-PRB8)	
Input measuring range	0 Ohm, open circuit 0-5000 mV 0-20 mA (PRB 7 and 8)
Maximum frequency for the water meter (50% cycle)	4 Hz
Maximum wire length	150 m (500 feet)
Recommended wires	2 strands, shielded, AWG #22
SOURCE 12 VDC (12VDC)	
Maximum current allowed	100mA
ALARM RELAY	
Maximum current	1 A at 30 VDC
Fuse	1A 250VAC
COMMUNICATIONS PORTS (MGCB)	
Maximum wire length (2400 bps)	820 feet (250 m)
Maximum wire length (19200 bps)	6.5 feet (2 m)
Recommended wire	2 strands, twisted pair, low capacity, shielded, AWG #22
OUTPUT RELAYS (1HP)	
Maximum Load	1HP @ 240VAC, 1/2HP @ 120VAC, 12A@240VAC
Notice	These relays are rated by UL and CSA at 1HP @ 240VAC, 1/2HP @ 120VAC. However, for outputs requiring frequent activation (ex: minimum ventilation fans working on a timer) it is recommended not to use more than 1/2HP @ 240VAC, 1/4HP @ 120VAC per relay.

GE-NUTRI INSTALLATION

OUTPUT RELAYS (2HP)	
Maximum Load	2HP @ 240VAC, 1HP @ 120VAC, 12A@240VAC
Notice	These relays are rated by UL and CSA at 2HP @ 240VAC, 1HP @ 120VAC. However, for outputs requiring frequent activation (ex: minimum ventilation fans working on a timer) it is recommended not to use more than 1HP @ 240VAC, 1/2HP @ 120VAC per relay.
VARIABLE OUTPUTS	
Maximum Allowable Current (Fuse value)	15A, 250VAC
Recommended maximum current for fans	12A, 120 / 208 / 240VAC
Minimum load	300mA @ 230VAC
PLS OUTPUTS	
Recommended wires	2 conductors, twisted pair (8 twist /ft), AWG #22
Maximum wire length (350pF/m cable)	160ft (50m)
Maximum wire length (89pF/m cable)	650ft (200m)

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.

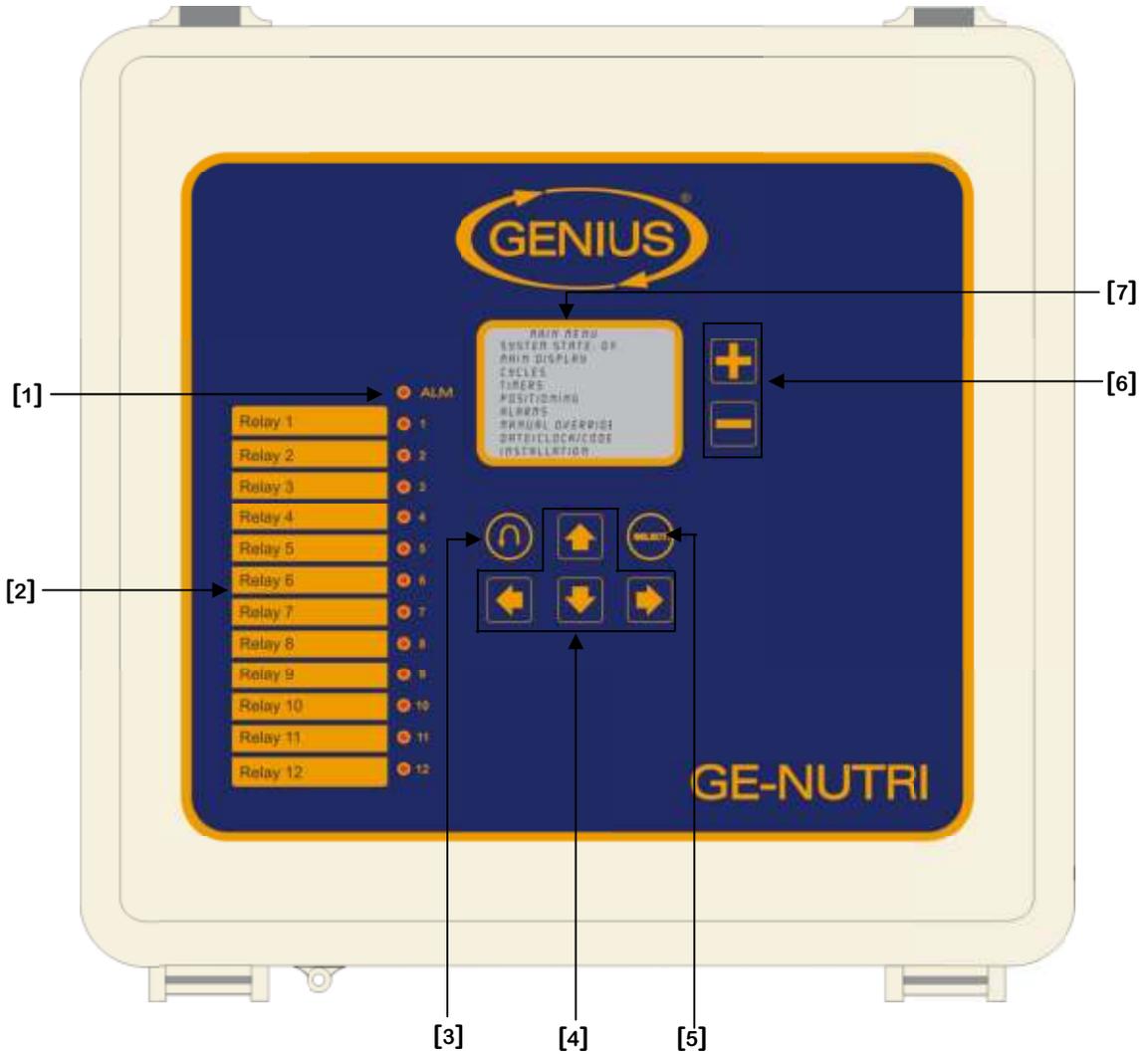
Troubleshooting

SYMPTOM	CAUSE	SOLUTION
Screen is blank	GE-NUTRI Controller is not powered. The connector between the top and the main boards or between the relay control and the main boards of the GE-NUTRI Controller is disconnected.	Make sure the control is powered. Make sure both connectors are properly connected.

**USER'S GUIDE
GE-NUTRI
SECTION C**

Control Description

SECTION C



1. Alarm LED

The Alarm LED will come ON whenever an alarm situation occurs.

2. Stage List with LED

On the left-hand side of the faceplate appears a list of multi-purpose outputs vertically aligned, next to that is a LED list. A LED comes ON whenever the respective stage is active.

3. Back Button

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

4. Navigation Buttons

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

5. Select Button

The SELECT button allows the users to select a parameter, activate an option or access a screen.

6. Value Setting Buttons (+) and (-)

The value buttons appear as 2 squares with a + and - sign on them. They 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.

7. LCD Display

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

GE-NUTRI USER'S GUIDE

Required Equipment

Quantity	Description
1	GE-NUTRI Controller

Optional Equipment

Quantity	Description
1	PC Com. Board
1	PC Interface
Up to 16	CSD-1A
1	RF-IN 2
1	8 Input Board (x1399)

Versions Configuration

Version	Minimum Processor Version	Date	Modification
C2V27V0	9	06/15/2017	- New.
C2V27V1	9	07/17/2017	- Add English language. - Correction on feeder's alarm. - Correction on certain parameters' visibility. - Modification on alarm reset parameter's position. - Increase the maximum time limit of minimum alarm and maximum alarm.
C2V27V2	9	09/13/2017	- Correction on actuator 3 in manual mode. - Correction on time mode actuator initialization. - Add protection against conflicts between actuator relays and feed auger/feeder relays.

GE-NUTRI USER'S GUIDE

C2V27V3	9	04/20/2018	<ul style="list-style-type: none"> - Reformat main menu. - Reformat settings screens to include cycle parameters. - Reformat manual operation screen. - Change “output” for “relay”. - Add message when a backup feed auger is activated. - Add stop by proximity switch for feed auger activated in manual mode. - Correction on screens in program 3 and 4. - Add transmission chain input. - Adjust used programs and cycles visibilities. - Add feed association to feed auger in MF, FA and FAD mode. - Add feed selection for each cycle instead of feed auger selection in MF, FA and FAD mode. - Add an option to stop active cycle.
C2V27V4	9	06/25/2018	<ul style="list-style-type: none"> - Modification on program state control. - Modification on proximity switch influence on feed auger activated manually in multi-feed mode. - Add stop on manually activated feeder by transmission chain. - Add screen for cycle option.
C2V27V5	9	01/25/2019	<ul style="list-style-type: none"> - Add Feed Summary. - Add a parameter that shows which feed is actually being distributed. - Modification on program state control. - Modification on feed assignation to feed auger to feed auger assignation to feed. - Modification of feed auger activation times to feed activation times. - Modification on maximum time alarm which modify empty bin option to yes the alarm is triggered.
C2V27V6	9	06/10/2019	<ul style="list-style-type: none"> - Correction on drop logic. - Correction on actuators' current demand display.

GE-NUTRI USER'S GUIDE

C2V27V7	9	08/23/2019	<ul style="list-style-type: none">- Modification of feed backup logic for feed auger backup logic.- Add feeding alarm for chain feeder, feed auger, chain feeder drop and feed auger drop mode.- Reduce the maximum proximity switch to 4.- Modification on default values.- Change in terminology for the drop phase.- Modification on the starting and stopping time of the drop phase for relative values when no potentiometers are used.- Add an activation delay for feed auger at the start of the feeding phase.
C2V27V8	9	11/01/2019	<ul style="list-style-type: none">- Add four cycles for each program for a total of 10 cycles per program.
C2V27V9	9	04/09/2020	<ul style="list-style-type: none">- Correction on feed auger backup transition.- Correction on feed number of each feed auger in Actual State screen.

SECTION C

General Characteristics

The GE-NUTRI automatic system can distribute several type of feed to animals. The GE-NUTRI can handle up to 4 different programs simultaneously. Each program can distribute feed up to 10 times a day (10 cycles). An alarm is there to detect if a bin is empty or one of the feed auger has a problem. When a problem occurs, a backup feed auger can be used instead of the faulty one.

The GE-NUTRI offers the following characteristics:

- Can manage 4 programs at the same time.
- There is 5 programs type : multi-feed, feed auger, chain feeder, feed auger drop and chain feeder drop.
- Alarm can detect empty bin or a default with a feed auger. When this alarm is reset, the system starts up where it let over.
- The possibility to select a backup feed auger for each feed.
- An alarm to detect positioning error. (Cool down mode and error reading the potentiometer). When this alarm situation is corrected, the system starts up where it let over.
- After a power failure, the system restarts where it let over.
- Possibility to choose which feed auger will be used for each of the 10 cycles.
- Each feed auger has a unique feeding timer. This timer works by an On time and an Off time in multi-feed mode.
- The status screens show the actual cycle, the time pas since the beginning of the cycle and when the next cycle start.
- A manual override mode that lets the user controls the feed augers, the feeders, the positioning and start cycle.

In multi-feed mode, the sequence of a cycle generally happens like this:

- At the start time of a cycle, the cycle begins by positioning the actuator for the next feed.
- The feeder assign to the cycle and a feed auger assigned to the cycle's feed type will activate.
- The proximity switch does not check if there is feed during the starting filter.
- The feed auger stops when the corresponding proximity switch indicates that the manger is full for the filter's end time.
- The feeder continues for an adjustable period.
- The waiting timer is active to let the animals finish emptying their manger.
- The purge timer is activated, the feeder starts to purge the left over.
- This sequence will restart for all selected feed auger of the current cycle.

In chain feeder mode, the general sequence of a cycle, operates as follows:

- At the start time of a cycle, the feeder and the feed augers assigned to the cycle will activate.
- The proximity switch does not check if there is feed during the start filter.

- The feed auger stops when the proximity switch indicates that the manger is full for the filter's end time.
- The feeder continues for an adjustable delay until the end of the cycle.

In feed auger mode, the general sequence of a cycle operates as follows:

- At the start time of a cycle, feed augers assigned to the cycle's feed type will activate.
- The proximity switches assigned to feed augers do not check if there is fee during their start filter.
- Each feed auger stops when their corresponding proximity switch indicates that the manger is full for the filter's end time.
- The cycle finish when all the feed augers stop.

In chain feeder drop mode, the general sequence of a cycle operates as follows:

- At the start time of a cycle, the actuators of the program conduct a closure time, a time of waiting and an opening time. These delays are all adjustable.
- The feeder and the feed augers assigned to the cycle will activate..
- The proximity switch does not check if there is feed during the start filter.
- The feed auger stops when the proximity switch indicates that the manger is full for the filter's end time.
- The feeder continues for an adjustable delay until the end of the cycle.

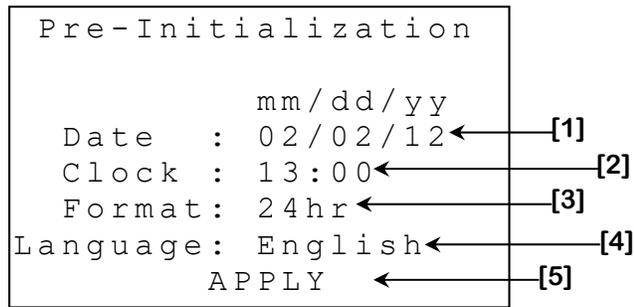
In feed auger drop mode, the general sequence of a cycle operates as follows:

- At the start time of a cycle, the actuators of the program conduct a closure time, a time of waiting and an opening time. These delays are all adjustable.
- Feed augers assigned to the cycle's feed type will activate.
- The proximity switches assigned to feed augers do not check if there is fee during their start filter.
- Each feed auger stops when their corresponding proximity switch indicates that the manger is full for the filter's end time.
- The cycle finish when all the feed augers stop.

Important details that must not be overlooked while using this controller:

- If a cycle is not over when the starting time of another cycle is reached, the system will finish the current cycle before starting the next one.
- When the system is set to On, the system will not activate the past cycle.
- When system is Off, the positioning will be 0%.
- Only one cycle can pass through midnight. When this occurs, the current cycle will finish normally, but the other cycles of the day will be ignored.

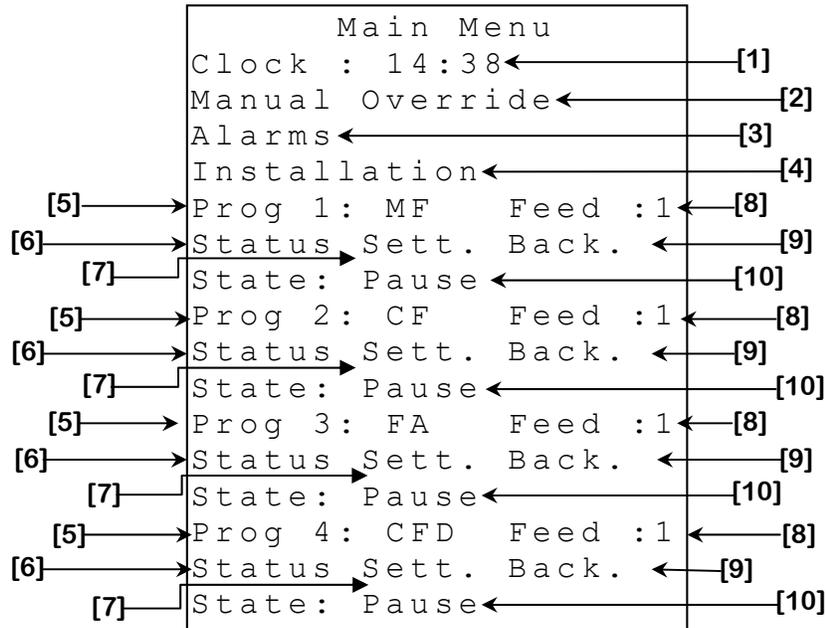
PRE-INITIALIZATION



This screen only appears when the controller is first powered up and is used to adjust the temperature unit, the date, the time of day along with its display format and the language. These adjustments may also be made after the initialization.

1. This parameter is used to adjust the date.
2. This parameter is used to adjust the clock.
3. This parameter is used to select the time format for all clock-type parameters. The display may be “24hr” or “AM/PM”.
4. This parameter is used to choose the language used by the control. The available languages are English and French.
5. This parameter activates the initialization procedure using the adjustments made above. An initialization screen will appear when the SELECT button is pressed while cursor is on this parameter.

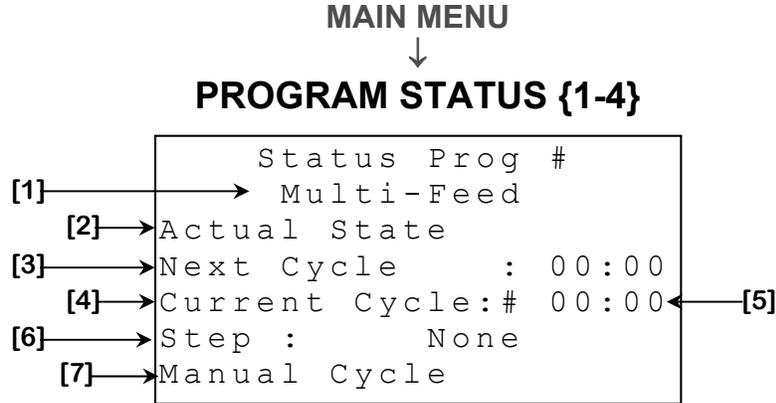
MAIN MENU



Abbreviation	Mode Complete Name
MF	Multi-Feed
CF	Chain Feeder
FA	Feed Auger
CFD	Chain Feeder Drop
FAD	Feed Auger Drop

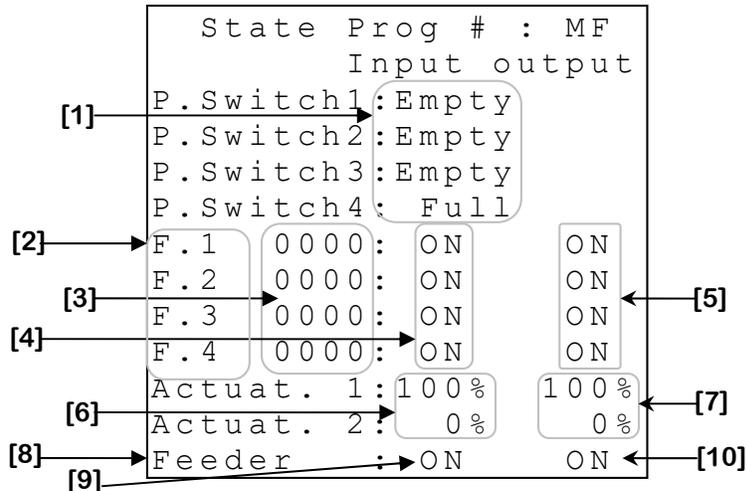
1. This parameter displays the current time and to change the actual time of day. The time of day may activate temperature setback as well as duty cycle and timed event outputs.
2. This parameter is used to access the **MANUAL OVERRIDE** screen (page C-54).
3. This parameter is used to access the **ALARMS** screen (page C-52).
4. This parameter is used to access the **INSTALLATION** screen (page C-56).
5. These parameters display the type of the corresponding program.

6. These parameters are used to access the **PROGRAM STATUS {1-4}** screen (page C-32) of the corresponding program.
7. These parameters are used to access the **SETTINGS PROGRAM {1-4}** screen (page C-37) of the corresponding program.
8. These parameters display the feed type actually being distributed by the corresponding program. These parameters are used to access the **FEED SUMMARY** screen (page C-55) of the corresponding program.
9. These parameters are used to access the **BACKUP PROGRAM {1-4}** screen (page C-51) of the corresponding program.
10. This parameter allows the changing of the program status. It can be "Auto", "Pause", "Stop" or "Cycles Stop". When this parameter is set to "Auto", the outputs assigned to this program will activate accordingly to the current cycle. When the mode is "Pause", all the program operations are suspended. When set to "Stop", the users must press select for the parameter change to "Cycles Stop". If the parameter is at "Cycles Stop", no cycle starts and if there is an active cycle, it stops.



1. This parameter displays the program type.
2. This parameter is used to access the **ACTUAL STATUS** screen (page C-33).
3. This parameter displays the time of the next cycle activation. When the program is OFF, this parameter is not feed visible.
4. This parameter displays the number of the current cycle. This parameter is not visible between two cycles.
5. This parameter displays the time elapsed since the beginning of the cycle. The time is display in hh:mm format. This parameter is not visible between two cycles.
6. This parameter displays to which step the cycle is. If there is no current step, the parameter displays "None". This parameter is not visible between two cycles.
7. This parameter is used to access the **MANUAL CYCLE PROGRAM {1-4}** screen (page C-36).

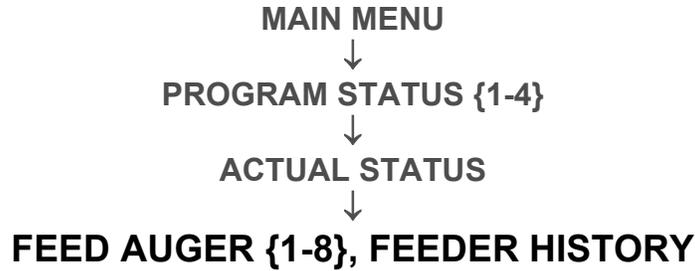
MAIN MENU
 ↓
 PROGRAM STATUS {1-4}
 ↓
 ACTUAL STATUS



On this screen, the equipment number displayed changes depending on the type of chosen program.

1. These parameters display the proximity switches status. They can be "empty" or "full". When the status is "empty", this indicates that the corresponding manger is not full. When the status is "full", this indicates that the corresponding manger is full. In chain feeder and chain feeder drop mode, there can be up to one proximity switch. In multi-feed and feed auger mode, there can be up to 4 proximity switches. In feed auger drop mode, there can be up to 8 proximity switches.
2. These parameters are used to access the **FEED AUGER {1-8}, FEEDER HISTORY** screen (page C-35) of each feed auger. In feed auger drop mode, there can be up to 8 feed augers. In other modes, there can be up to 4 feed augers. These parameters display the feed type of each feed augers.
3. These parameters display the number of each corresponding feed auger.
4. These parameters display the feed auger current status. They indicate which feed augers are running. The input can be "ON" or "OFF".
5. These parameters display the feed auger current demands. They indicate which feed augers are having a request. The output can be "ON" or "OFF".

6. These parameters display the current position of actuators. If the regulator detects a defective potentiometer, the corresponding parameter will display "*PO". If the cooling function is enabled, the current position will alternate with "*RE". If the regulator cannot read the value of the potentiometer, the corresponding parameter will display "*ER". The current positions are displayed with a resolution of 1% -99% to 127%. There can be up to 2 actuators in multi-feed, feed auger drop and chain feeder drop mode.
7. These parameters display the requested positions by the program to the actuators. The requested positions are displayed with a resolution of 1% to 0% to 100%. There can be up to 2 actuators in multi-feed, feed auger drop and chain feeder drop mode.
8. This parameter is used to access the **FEED AUGER {1-8}, FEEDER HISTORY** screen (page C-35) of the feeder. For feed auger and feed auger drop mode there is no feeder.
9. This parameter displays the status of the feeder. It indicates if the feeder is running. The input can be "ON" or "OFF".
10. This parameter displays the status of the output of feeder. It indicates if the feeder has a request. The output can be "ON" or "OFF".



Hist.	Aug #	CLR
<0>	10 20 30 40 50	
Date	Time	
11 Nov	2:35	
10 Nov	0:23	
09 Nov	4:12	

1. This parameter is used to clear the history currently displayed. When **SELECT** is pressed, a confirmation request will appear. When the confirmation is done, if it is positive, the history will be erased.
2. These settings are used to navigate through the different days of history by pressing **SELECT** when the cursor is located on the number. The number indicates which ranges of the day will be displayed.
3. These parameters display the dates of each entry in the history.
4. These parameters indicate the running time of the feed auger of the corresponding day. The running time is displayed with a resolution of 1 minute of 0:00 to 24:00 hours.

MAIN MENU
 ↓
PROGRAM STATUS {1-4}
 ↓
MANUAL CYCLE PROGRAM {1-4}

```

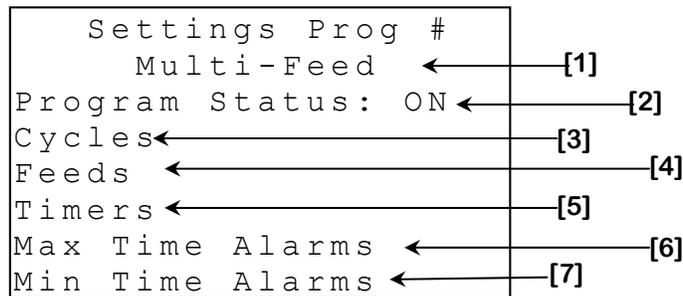
Manual Cycle Prog #
[1] → State: Pause
      Cycle 1: Start
      Cycle 2: Started
      Cycle 3: Occupied
      Cycle 4: Start
      [2] → Cycle 5: Start
      Cycle 6: Start
      Cycle 7: Start
      Cycle 8: Start
      Cycle 9: Start
      Cycle10: Start
    
```

1. This parameter allows the changing of the program status. It can be "Auto", "Pause" or "Abort". When this parameter is set to "Auto", the outputs assigned to this program will activate accordingly to the current cycle. When the mode is "Pause", all the program operations are suspended. When set to "Abort", no cycle starts and if there is an active cycle, it stops.
2. These settings are used to manually start the corresponding cycles. When a cycle is manually started, the text displayed will change to "Started". It is possible that the text changes to "Alarm Err", if an alarm is activated or "Occupied", if a cycle of the program is already in progress. In those cases, the cycle will not start.

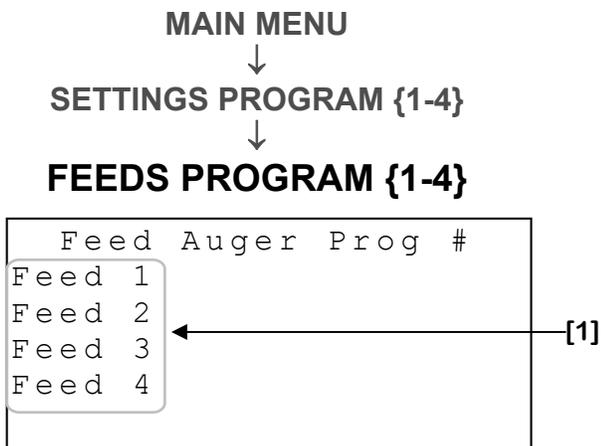
MAIN MENU



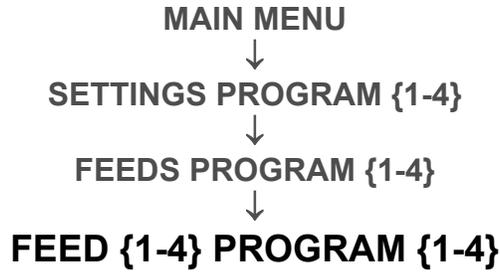
SETTINGS PROGRAM {1-4}



1. This parameter displays the program type.
2. These parameters are used to access the **CYCLES PROGRAM {1-4}** screen (page C-50) of the corresponding program.
3. This parameter shows the state of the system. The system can be “ON” or “OFF”. When the system is “OFF”, no cycle can start automatically.
4. This parameter is used to access the **FEEDS PROGRAM {1-4}** screen (page C-38).
5. This parameter is used to access the **TIMERS PROGRAM {1-4}** screen (page C-40).
6. This parameter is used to access the **MAX TIME ALARMS PROG {1-4}** screen (page C-48).
7. This parameter is used to access the **MIN TIME ALARMS PROG {1-4}** screen (page C-49).

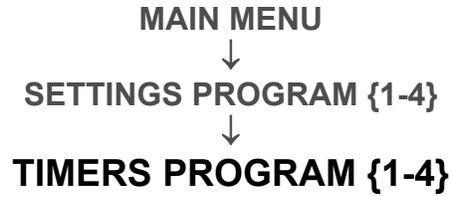


1. This parameter is used to access the **FEED {1-4} PROGRAM {1-4}** screen (page C-39) corresponding.



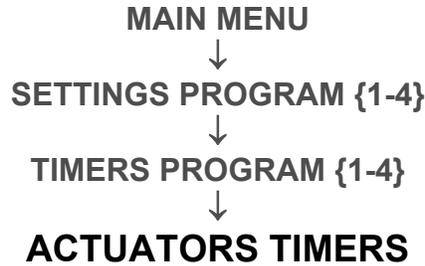
Feed #	Prog #	[1]
Vis: Vis 1	(0000)	← [2]
P.Switch: 1		← [3]
Empty Bin: No		← [4]
Backup : 2		← [5]
Position : 100%		← [6]

1. This parameter is used to assign a feed auger to the feed. During a cycle, the feed auger will only be active if its assign feed type is selected for the cycle.
2. This parameter shows the bin code of the feed's assigned feed auger.
3. This parameter allows you to choose which proximity switch will be assigned to the feed. This parameter varies from 1 to 4 in multi-feed and feed auger mode or 1 to 8 in feed auger drop mode. In chain feeder and chain feeder drop mode, there is no choice of proximity switch since only one proximity switch is being used.
4. This parameter allows you to specify if the bin containing the feed is empty. If this parameter is set to "Yes", the backup feed will be directly used.
5. This setting is used to select the backup feed auger for a feed. If the setting is set to "None", the feed does not have a backup. If the assigned feed auger engages its feeding time alarm (multi-feed mode), or its minimum or maximum time, the backup feed auger selected with this parameter will be activated instead. A feed auger can only be used as backup only once per cycle. This setting can take the value "None", 1 to 4.
6. This parameter allows you to choose the actuator position when the corresponding feed is being distributed. This setting is adjustable by increments of 1% to 0% to 100%.



Timers	Prog #
Actuator ←	[1]
Feeding ←	[2]
P.Switch Filter ←	[3]
Feeder ←	[4]
On/Off periods ←	[5]
Wait ←	[6]
Purge ←	[7]

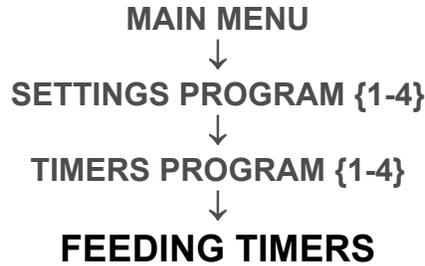
1. This parameter is used to access the **ACTUATORS TIMERS** screen (page C-41).
2. This parameter is used to access the **FEEDING TIMERS** screen (page C-42).
3. This parameter is used to access the **PROXIMITY SWITCH FILTERS** screen (page C-43).
4. This parameter is used to access the **FEEDER TIMER** screen (page C-44).
5. This parameter is used to access the **WAITING TIMER** screen (page C-46).
6. This parameter is used to access the **PURGE TIMER** screen (page C-47)



Actuator	Timers	
Starting	: 60Sec	← [1]
Distrib.	: 60Sec	← [2]
Stopping	: 60Sec	← [3]

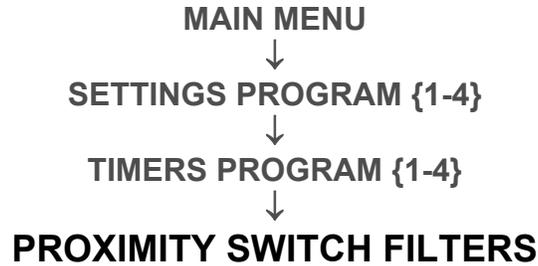
This screen can only be access in feeder auger drop and chain feeder drop.

1. This setting allows you to adjust the opening time of the drop. If an actuator does not have a position under 5% at the end of the delay, the alarm is activated and the cycle is cancelled. If no potentiometer is used, the opening time is equal to sum of the parameter plus the total run time of the actuator. This setting varies in increments of 1 second from 0 to 300 seconds.
2. This setting allows you to adjust the waiting time of the actuator. This setting varies in increments of 1 second from 0 to 300 seconds.
3. This parameter allows you to adjust the closing time of the drop. If an actuator does not have a position above 95% at the end of the delay, the alarm is activated and the cycle is cancelled. If no potentiometer is used, the closing time is equal to sum of the parameter plus the total run time of the actuator. This setting varies in increments of 1 second from 0 to 300 seconds.



Feeding Timer	
Feed 1	: 100 min ← [1]
Feed 2	: 100 min
Feed 3	: 100 min
Feed 4	: 100 min
Delay Aug:	30 sec ← [2]

1. These parameters allow you to set the feeding timer for each feed. This time represents the maximum distribution time of feed to fill the manger. If a feed is distributed for this duration without activation of its assigned proximity switch, the program will use the backup feed. If the backup auger is not available, the cycle is canceled. However, if the selected program is the multi-feed, the system will rise to the feeder phase rather than canceling the cycle. These parameters are adjustable in increments of 1 minute from 5 to 240 minutes.
2. This parameter is used to choose the duration of de feed auger delay. The feed auger delay is a delay at the start of the feeding phase where the feed auger won't activate. Only the feeder will be active during this period. When this parameter is set to OFF, the feed auger will activate at the start of the feeding phase without delay. This parameter is only accessible when a feeder is used.

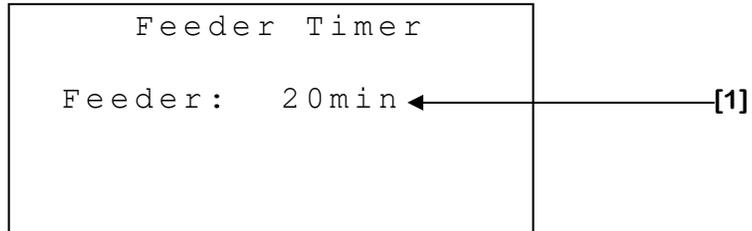
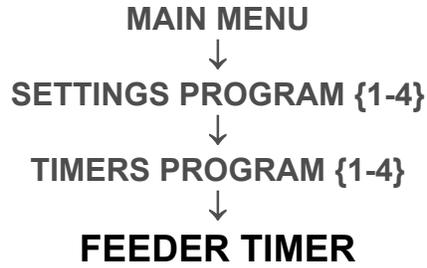


P. Switch Filters		
	Time (sec)	
	Start	End
P. Switch1:	15	15
P. Switch2:	15	15
P. Switch3:	15	15
P. Switch4:	15	15

← [1]

← [2]

1. These parameters allow you to adjust the length of the start filter of the proximity switch for each feed auger. During this period, the feed auger assigned to the proximity switch won't stop even if the proximity switch is active for its filter end time. For the feeding phase to end, the start filters need to be done. In multi-feed mode, these time limits are reset for each feed auger of the cycle. This setting can be adjusted in increments of 1 second from 0 to 999 seconds.
2. These parameters allow you to adjust the proximity switch activation time to determine if the manger is full. These parameters are adjustable in increments of 1 second from 0 to 999 seconds.



This screen is only accessible in multi-feed, chain feeder and chain feeder drop.

1. These parameters allow you to adjust the feeder activation time during the feeder phase. This timer can be set in increments of 1 minute from 0 to 240 minutes.



On/Off Periods		Time (Sec)	
		ON	OFF
Feed 1	:	100	100
Feed 2	:	100	100
Feed 3	:	100	100
Feed 4	:	100	100

← [1]

← [2]

This screen is only available in multi-feed mode.

1. These parameters are used to adjust the activation time of feed augers during the ON period of the feeding phase. If the accumulation of ON time of a feed auger is bigger than the feeding timer, the feed auger feeding alarm will be triggered. The activation period of each feed augers depends at which feed they are associated. This setting is adjustable in increments of 1 second from 1 to 360 seconds.
2. These parameters allow you to adjust the time of feed augers off period. In the meantime, the corresponding feed auger will be stopped during the feeding phase. Setting this to 0 seconds will continually activate the feed auger, without considering the timer ON / OFF. The length of this period for each feed auger will depends at which feed they are associated. This setting is adjustable in increments of 1 second from 0 to 360 seconds.

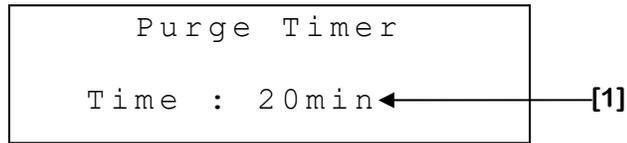


Waiting Timer	
Feed 1	: 100min
Feed 2	: 100min
Feed 3	: 100min
Feed 4	: 100min

[1]

This screen is only available in multi-feed mode.

1. These parameters allow you to adjust the required time to allow the animals to empty their manger. Each feed type has its waiting period. These parameters are adjustable in increments of 1 minute from 0 to 240 minutes.



This screen is only available in multi-feed mode.

1. This parameter is used to adjust the time given the corresponding feeder to purge the left over. During that time, only the feeder assign to the current cycle is activated. This parameter is adjustable in 1-minute increments from 0 to 240 minutes.

MAIN MENU
 ↓
SETTINGS PROGRAM {1-4}
 ↓
MAX TIME ALARMS PROG {1-4}

Max Time Alarms P#	Option	Time	
Feeder	: OFF	5:00	[1]
Feed 1	: ON	5:00	
Feed 2	: OFF	5:00	
Feed 3	: OFF	5:00	[2]
Feed 4	: OFF	5:00	

1. These parameters are used to choose if the maximum alarm time is active for the feeder or for feed augers assigned to the corresponding feed. If this parameter is set to "ON", the maximum alarm time goes on when a feed auger (assigned to the corresponding feed) runs continuously for longer than in **MAX TIME[2]**.
2. These parameters are used to set the maximum run time of feed augers assigned to the corresponding feed. When a feed auger runs continuously for a period exceeding its assigned feed limit, the alarm will activate. When this happens, the backup feed of the corresponding feed will be distributed instead of this one and the corresponding bin will be considered empty. This parameter can be set from 0:00 to 300:59 minutes.

MAIN MENU
 ↓
SETTINGS PROGRAM {1-4}
 ↓
MIN TIME ALARMS PROG {1-4}

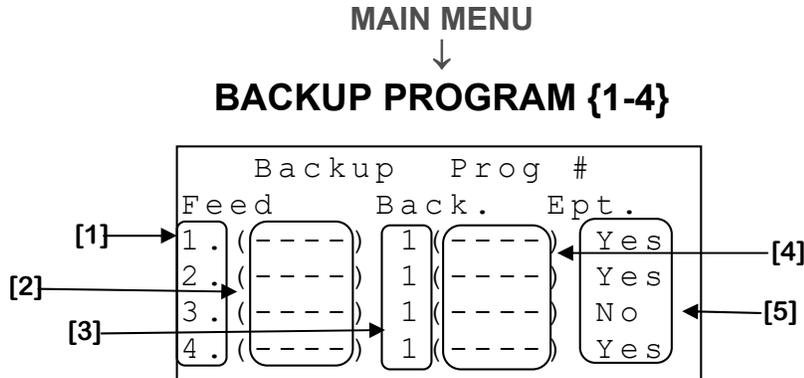
Min Time Alarms P#	Option	Time	
Feeder	: OFF	5:00	
Feed 1	: ON	5:00	
Feed 2	: OFF	5:00	← [1]
Feed 3	: OFF	5:00	
Feed 4	: OFF	5:00	← [2]

1. These parameters are used to choose if the maximum alarm time is active for the feeder or for feed augers assigned to the corresponding feed. If this parameter is set to "ON", the minimum alarm time goes on when the feed auger assigned to the corresponding feed receives an activation request, but won't be activated for longer than **TEMPS MIN[2]**.
2. These parameters are used to set the time limit for each minimum time feed auger alarm assigned to the corresponding feed. When a feed auger does not operate and it has a request for a period exceeding its assigned feed limit, the alarm activates. Besides, if applicable, the backup of the corresponding feed will be used instead of the depleted one. In multi-feed mode, if the active feed has no reserve, the program goes to the feeder phase. In chain feeder and drop chain feeder mode, the cycle is canceled. In feed auger and drop feed auger mode, the feed augers assigned to the corresponding feed stop operating. When this limits it exceed, the corresponding bin is considered empty. This parameter can be set from 0:00 to 300:59 minutes.

MAIN MENU
↓
CYCLES PROGRAM {1-4}

Settings	Prog #	
Cycle Quantity: 6		[1]
Cycles	Hours	Feed
1: Yes	12:00 P	----
2: Yes	12:00 P	----
3: Yes	12:00 P	----
4: Yes	12:00 P	----
5: Yes	12:00 P	----
6: Yes	12:00 P	----
7: Yes	12:00 P	----
8: Yes	12:00 P	----
9: Yes	12:00 P	----
10: Yes	12:00 P	----

1. This parameter is used to select the number of cycle used by a program. There is a maximum of 10 cycles per program. There is always at least 1 used cycle in a program.
2. These parameters are used to indicate the system if the corresponding cycle is used or not. When a parameter is set to "Yes", the program will use the corresponding cycle. If this parameter is set to "No", the cycle will not be considered.
3. These parameters are used to choose the cycle start times. **The cycles' departure times must be in chronological order.**
4. In multi-feed, feed auger and feed auger drop mode, these parameters are used to select which feed type will be used for the corresponding cycle. The feed augers associated to a feed type selected here will be active during the corresponding cycle. In chain feeder and chain feeder drop mode, the feed augers are directly selected by the user.

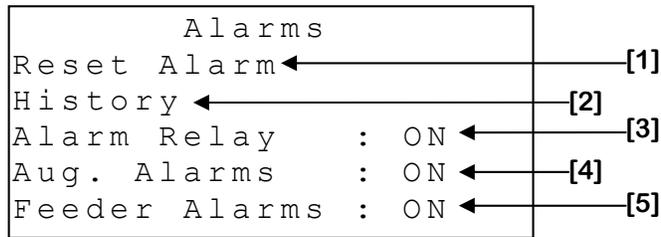


1. This parameter is used to access the **FEED {1-4} PROGRAM {1-4}** screen (page C-39) corresponding.
2. These parameters show bin codes of all feed auger assigned to a feed.
3. These settings are used to select the backup feed auger for each feed. If the setting is set to "None", the corresponding feed does not have a backup. If the assigned feed auger engages its feeding time alarm (multi-feed mode), or its minimum or maximum time, the backup feed auger selected with this parameter will be activated instead. A feed auger can only be used as backup only once per cycle. This setting can take the value "None", 1 to 4.
4. These parameters show bin codes of all backup feed auger of each feed.
5. This parameter allows you to specify if the bin containing the feed is empty. If this parameter is set to "Yes", the backup feed will be directly used.

MAIN MENU



ALARMS



1. This parameter allows you to reset the feeding timer alarm, the minimum time and maximum time. When the **SELECT** button is pressed while the cursor is on this setting, the feeding timer alarms, of minimum and maximum time will be reset.
2. This parameter is used to access to **ALARM HISTORY** screen (page C-53).
3. This parameter is used to activate or deactivate the alarm relay. If this option is set to "ON", when an alarm situation occurs, the alarm relay activates. If this option is set to "OFF", the alarm LED will blink continuously and the relay will never activate. **It is strongly recommended keeping this parameter "ON" at all time.**
4. This parameter allows the activation or the deactivation of the alarm relay when a feed auger alarm is occurring. If this option is set to "ON", when a feed auger alarm situation occurs, the alarm relay activates. If the option is set to "OFF", the alarm LED will blink continuously, but the alarm relay will not be activated. **It is strongly recommended to adjust this setting to "ON" all times.**
5. This parameter allows the activation or the deactivation of the alarm relay when a feeder alarm is occurring. If this option is set to "ON", when a feeder alarm situation occurs, the alarm relay activates. If the option is set to "OFF", the alarm LED will blink continuously, but the alarm relay will not be activated. **It is strongly recommended to adjust this setting to "ON" at all times.**

MAIN MENU



ALARMS



ALARM HISTORY

```

Alarm Hist.          CLR ← [1]
[2] → 11 Nov -> 22:08
[3] → Alrm Min Aug:8888
[2] → 11 Nov -> 20:38
[3] → Défect. Pot Pos 1
[2] → 10 Nov -> 1:12
[3] → Error Code 1
    
```

This screen can contain up to 30 alarms. For more information about the alarm messages and their cause, see **ALARM MESSAGE TABLE** (page C-69).

1. This parameter is used to clear the history currently displayed. When the **SELECT** button is pressed, a confirmation question will appear. When confirmation is positive, the history will be cleared. Clearing the alarm history will also reset all alarm counts and timers.
2. These parameters indicate the date and time at which the alarm mentioned immediately below this parameter occurred.
3. These parameters indicate the alarm that occurred at the date and time mentioned immediately above this parameter.

MAIN MENU



MANUAL OVERRIDE

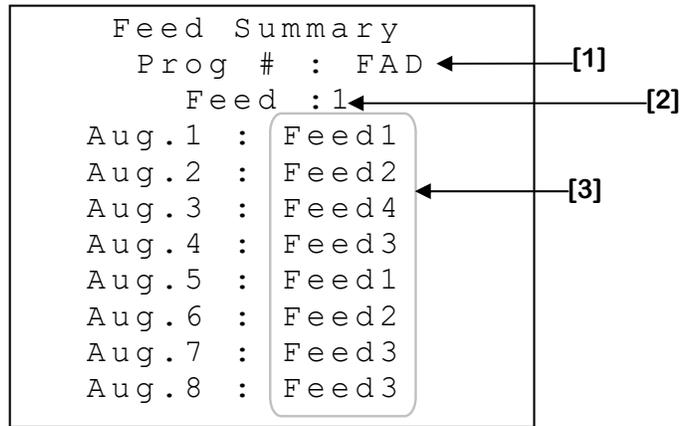
R	Type	F	P	Bin	State
1	-FE	-	1	----	Auto
2	-FA1	1	1	1234	Auto
3	-FA2	4	1	4578	Auto
4	-A1O	-	1	----	Auto
5	-A1C	-	1	----	Auto
6	-FE	-	2	----	Auto
7	-FA1	-	2	8945	Auto
8	-FA2	-	2	0023	Auto
9	----	-	-	----	Auto
10	-FE	-	3	----	Auto
11	-A1O	-	3	----	Auto
12	-A1C	-	3	----	Auto

1. These parameters display the type in which the corresponding relay output is used. The types are "FE" for feeder, "FA1-8" for feed auger, "A1-4O" for actuator opening, "A1-4C" for actuator closing or "None" if no logic is associated to the relay.
2. These parameters display the feed type for each relay. There is only a feed type when the relay is assigned to a feed auger.
3. These parameters display which program the relay is assigned to.
4. These parameters display the bin numbers of feed augers assigned to the each relay. A bin number is only display if the relay type is feed auger.
5. These parameters are used to manually override the calculated activation demand by the regulator of each relay. When this value is set to "AUTO", the relay will be activated according to the configuration adjustments. When this value is set to "OFF", the relay will deactivate. When this value is "ON", the relay will be activated. When this value is not set to "AUTO", the corresponding led will blink. When a relay is assign to an actuator, these parameters are used to manually operate the corresponding actuator output ignoring the demand calculated by the regulator. When this value is set to "AUTO", the actuator output will be activated according to the configuration adjustments. When this value is set to "STOP", the actuator output will not move. When this value is set to "CLOSE", the actuator output will continually close. When this value is set to "OPEN", the actuator output open continuously. When the value is between 0% and 100%, the actuator position will take this value.

MAIN MENU

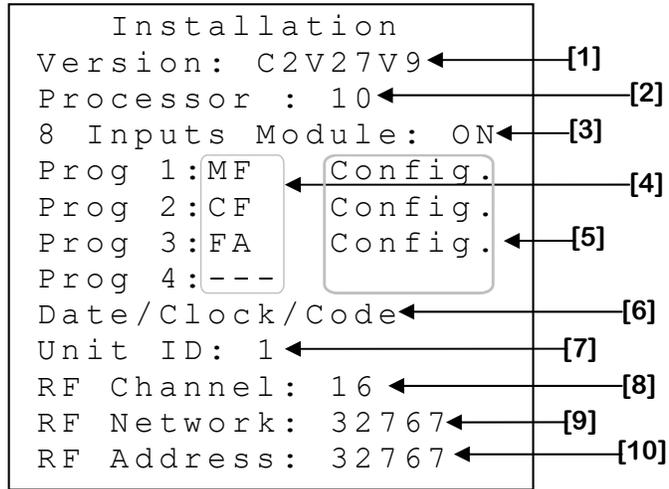


FEED SUMMARY



1. This parameter displays the program type.
2. This parameter displays the feed type actually being distributed.
3. Ces paramètres affichent quels type de moulée est actuellement assigné à chaque vis.

MAIN MENU
↓
INSTALLATION



1. This setting displays the configuration version currently used.
2. This setting displays the processor version currently used.
3. This setting allows you to choose if the 8 inputs board is used.
4. These parameters allow you to choose the mode of each program.

Abbreviation	Mode Complete Name
MF	Multi-Feed
CF	Chain Feeder
FA	Feed Auger
CFD	Chain Feeder Drop
FAD	Feed Auger Drop

5. This setting is used to access the screen **INSTALLATION PROGRAM {1-4}** (page C-58).
6. This parameter is used to access the **DATE/CLOCK/CODE** screen (page C-66).

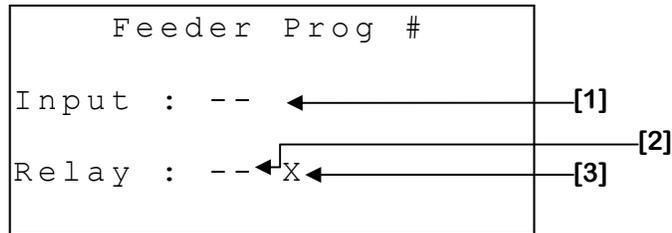
7. This parameter is used to select the identification number that will be used when communicating with the remote access software. Each controller must have a unique identification number. When **RF CHANNEL [7]** is set to any value other than "OFF", this parameter will disappear. This parameter may be adjusted to any value from 1 to 250.
8. 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.
9. This parameter is used to identify a WiFarm network. A WiFarm network is formed when the **RF NETWORK [8]** is set to the same value as the **RF ADDRESS [9]** of the 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 [8]** to the **RF ADDRESS [9]** 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 [7]** is set to "OFF", this parameter will disappear. This parameter can be adjusted to any value from 00000 to 39999.
10. 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. The **RF ADDRESS [9]** also appears on the sticker present on the RF communication card. When **RF ADDRESS [9]** is set to "OFF", this parameter will disappear. The address can be any value from 0 to 32767.

MAIN MENU
↓
INSTALLATION
↓
INSTALLATION PROGRAM {1-4}

Installation Prog #	
Feed Qty : 4	[1]
Feeder	[2]
Feed Auger	[3]
Proximity Switch	[4]
Transmission Chains	[5]
Actuators	[6]

1. This parameter is used to select the number of different type of feed used by a program.
2. This setting is used to access the screen **FEEDER {1-4} INSTALLATION** (page C-59).
3. This setting is used to access the screen **INSTALLATION FEED AUGER PROGRAM {1-4}** (page C-60).
4. This setting is used to access the screen **PROXIMITY SWITCH INSTALLATION PROGRAM {1-4}** (page C-61).
5. This setting is used to access the screen **TRANSMISSION CHAIN INSTALLATION PROGRAM {1-4}** (page C-62).
6. This setting is used to access the screen **ACTUATORS INSTALLATION PROGRAM {1-4}** (page C-63).

MAIN MENU
 ↓
 INSTALLATION
 ↓
FEEDER {1-4} INSTALLATION



1. This parameter is used to select the feeder input for a program. This input inform if the feeder is active or not. This parameter varies from 1 to 8 (up to 16 with 8 inputs board) and "--" when no input is selected.
2. This parameter is used to select the feeder relay for a program. When the feeder receives an activation request, the selected relay will be activated. This parameter varies from 1 to 12 and "--" when no relay is selected.
3. This parameter shows the presence of conflict between the feeder and an actuator using the same relay. In case of conflict, the actuator has priority and the feeder demand has no impact on the relay. An X is showed when there is a conflict and nothing in absence of conflict.

MAIN MENU
 ↓
INSTALLATION
 ↓
INSTALLATION PROGRAM {1-4}
 ↓
INSTALLATION FEED AUGER PROGRAM {1-4}

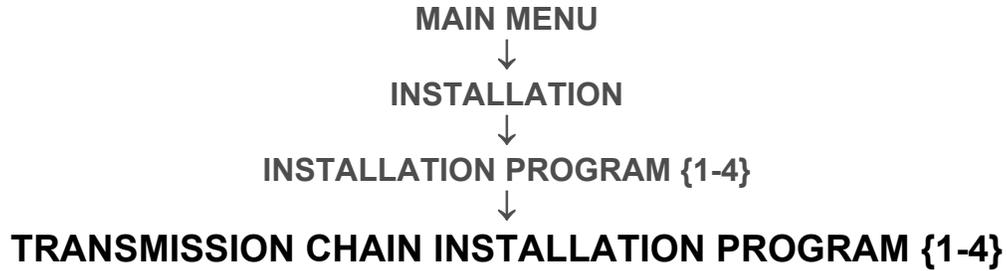
Feed Auger Prog #		
Numbers		
Aug1 (0000)	Aug5 (0000)	[1]
Aug2 (0000)	Aug6 (0000)	
Aug3 (0000)	Aug7 (0000)	[1]
Aug4 (0000)	Aug8 (0000)	
Inputs Outputs		
Aug. 1 :	--	-- X [2]
Aug. 2 :	--	-- X
Aug. 3 :	--	-- X
Aug. 4 :	--	-- x [3]
Aug. 5 :	--	-- x
Aug. 6 :	--	-- x
Aug. 7 :	--	-- x [4]
Aug. 8 :	--	-- x

1. These parameters are used to link a bin number to each feed auger. These parameters vary from 0 to 9999.
2. These parameters are used to select each feed auger inputs for a program. These inputs are to determine if the feed augers are active or not. These parameters vary from 1 to 8 (up to 16 with an 8 inputs board) and "--" when no input is selected.
3. These parameters are used to select the feed auger outputs for a program. When a feed auger has an activation request, the selected relay will be activated. These settings vary from 1 to 12 and "--" when no output is selected.
4. These parameters show the presence of conflict between a feed auger and an actuator using the same relay. In case of conflict, the actuator has priority and the feed auger demand has no impact on the relay. An X is showed when there is a conflict and nothing in absence of conflict

MAIN MENU
 ↓
 INSTALLATION
 ↓
 INSTALLATION PROGRAM {1-4}
 ↓
PROXIMITY SWITCH INSTALLATION PROGRAM {1-4}

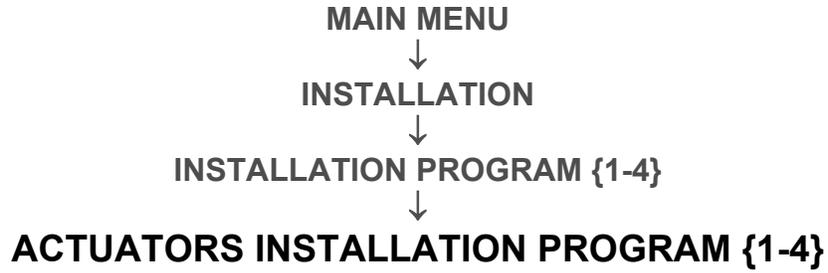
Prox. Switch	Prog #	Inputs	Mode
P.Switch1:	--	← [1]	NO
P.Switch2:	--		NO
P.Switch3:	--		NO
P.Switch4:	--		NO
P.Switch5:	--		NO
P.Switch6:	--		← [2]
P.Switch7:	--		NO
P.Switch8:	--		NO

1. These parameters are used to select the proximity switch inputs for a program. These settings vary from 1 to 8 (up to 16 with an 8 inputs board) and "--" when no input is selected.
2. These parameters are used to determine if the corresponding proximity switch contact is normally closed "NC", or normally open "NO". When a proximity switch is normally closed "NC", it shows "full" when there is no contact. When a proximity switch is normally open "NO", it shows "full" when there is contact.



```
Trans. Chain Prog #
      Inputs  Mode
Chain :  -- ← [1] NO ← [2]
```

1. This parameter is used to select the transmission chain input for a program. This setting vary from 1 to 8 (up to 16 with an 8 inputs board) and "--" when no input is selected.
2. This parameter is used to determine if the transmission chain contact is normally closed "NC", or normally open "NO". When a proximity switch is normally closed "NC", it shows "full" when there is no contact. When a transmission chain is normally open "NO", it shows "full" when there is contact.



Actuators	Prog #	Pot:--	Relays	Calib. & Config
Actuator 1	1	Pot:-- ← [1]	Relays : 1-2 ← [2]	Calib. & Config 1 ← [3]
Actuator 2	2	Pot:-- ← [1]	Relays : --- ← [2]	Calib. & Config 2 ← [3]

1. These parameters are used to choose to which potentiometer the actuator will be connected. When a potentiometer is selected, the corresponding actuator will run in potentiometer mode and relay will be automatically chosen. If no potentiometer is selected and relays are chosen, the actuator will run in time mode. These parameters can have values "--" and 1 to 4.
2. These parameters are used to choose on which couples of relay the actuators will be assigned. If a potentiometer is assigned to the actuator, the relay will be selected automatically (Pot 1 relay 1-2, Pot 2 relay 3-4, Pot 3 relay 5-6, Pot 4 relay 7-8). If no potentiometer is selected and relays are chosen, the actuator will run in time mode. These parameters can have values '-', 1-2, 3-4, 5-6, 7-8.
3. This setting is used to access the screen **ACTUATOR {1-4} CALIBRATION & CONFIG** (page C-64).

MAIN MENU
↓
INSTALLATION

ACTUATORS INSTALLATION PROGRAM {1-4}
↓
ACTUATOR {1-4} CALIBRATION & CONFIG

Act #	Calib. & Config
	Precision: 1% ← [1]
	Total Run Time: 1m00s ← [2]
	Actu. Alarm: ON ← [3]
	Manual Over.: AUTO ← [4]
	Calibration:
	Set Low Limit ← [5]
	Set High Limit ← [6]
	Max Run Time : 9min ← [7]

1. This parameter is used to set the precision of the respective actuator. If the actuator moves too often, increase the value of this parameter. When the value of this setting is increased, the actuator will need a bigger difference between the current position and the requested one before performing a movement. The precision is adjustable in increments of 1% of 1% to 20%.
2. This setting is used to determine the actuator total run time. The total run time is the time required for the actuator to move from its fully closed position to its fully opened position. The actuators used in time mode must use this setting in order to calculate the moving required time according to the demand in percentage. This parameter can be set from 0:00 to 59:59 minutes.
3. This setting is used to deactivate or activate the alarm function for the actuator. The alarm activates if this option is set to "ON" when the actuator has a problem with his potentiometer or goes in cooling mode.
4. This setting is used to manually operate the, ignoring demand calculated by the regulator. When this value is "AUTO", the actuator will be activated according to the configuration adjustments. When this value is set to "STOP", the actuator output will not move. When this value is set to "CLOSE", the actuator output will continually close. When this value is set to "OPEN", the actuator output open continuously. When this screen is left, this setting is given to "AUTO".

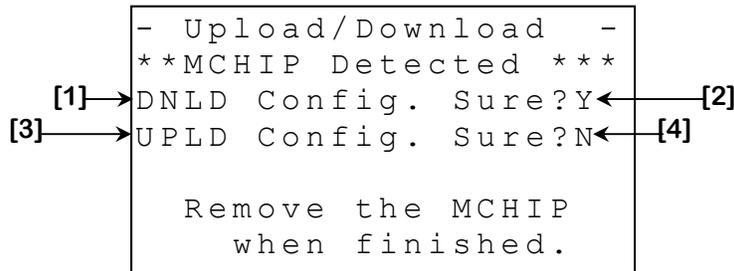
5. This parameter is used to set the potentiometer lower limit for the actuator calibration. This will effectively define the lowest possible value for the actuator's potentiometer. To obtain this value, completely close the actuator using **OPER MANUAL [4]**. Once the actuator is completely closed, press **SELECT** when the cursor is on this parameter. At this point, the text displayed here will change to "Low Limit Saved" if the value was correctly saved, "Can't Save Check Pot" if the value of the potentiometer could not be read or "Can't Save Low Limit" if an error occurred during the operation. In the two later cases, calibration must be performed once the situation is corrected.
6. This parameter is used to set the potentiometer upper limit for calibration of the actuator. This will effectively define the highest value that can be read by the actuator potentiometer. To get this value, completely open the actuator using **OPER MANUAL [4]**. Once the actuator is completely open, press **SELECT** when the cursor is on this setting. At this point, the text displayed here will change to "High Limit Saved" if the value was correctly saved, "Can't Save Check Pot" if the value of the potentiometer could not be read or "Can't Save Hi Limit" if an error occurred during the operation. In the two later cases, calibration must be performed once the situation is corrected.
7. This parameter is used to set the maximum run time of the actuator within a ten-minute period. When an actuator has moved for a time greater than the value of this parameter within a ten-minute period, the module will not activate the open or close relays until the actuator has had time to cool down and an alarm message will be logged in the alarm history. The alarm goes off if the **ACTUATOR ALARM [3]** is set to "ON". This value should be set according to the manufacturer's specifications. Setting this value to "OFF" will deactivate the module cool down function. If the actuator is already in cool down mode when this parameter is set to "OFF", it will finish the cool down period before deactivating the function. This parameter is adjusted in 1-minute increments from 1 minute to 9 minutes, "OFF".

MAIN MENU
 ↓
INSTALLATION
 ↓
DATE/CLOCK/CODE

Time Format : AM/PM	← [1]
Adjust Clock: 21:08	← [2]
Adjust Date: 19/11/11	← [3]
Language: English	← [4]
Param Locked	← [5]
Change Password	← [6]
Tech Param Code	← [7]

1. This parameter is used to change the time format for all clock-type parameters. When this value is changed, all clock-type parameters will be modified to reflect the new time format. The format may be either "24hr" or "AM/PM".
2. This parameter is used to change the actual time of day. The time of day may activate temperature setback as well as duty cycle and timed event outputs.
3. This parameter is used to change the actual date. Changing the date will automatically create a new entry in all active history screens. The date is displayed in DD/MM/YY format.
4. This parameter is used to choose the language used by the control. The available languages are English and French.
5. This parameter is used to lock or unlock all parameter access and displays the current state ("Locked" or "Unlocked"). To modify the current state, press the SELECT button when cursor is positioned on "Locked"/"Unlocked" and then enter the first alphanumerical digit. Once the first value is entered, press SELECT once again to move on to the next value. Repeat the process for each value until all four are entered. When all four characters are entered, the parameter will indicate "Wrong Password", if the password was not the correct one, or the status will change from "Locked" to "Unlocked" or vice versa if the code was valid.
6. This parameter is used to change the password used to lock or unlock parameters. This is done by pressing the SELECT button when cursor is positioned on this parameter. The password may now be changed using the same procedure as described at the above parameter.
7. This parameter is reserved for the manufacturer's technical support personnel.

MCHIP DETECTED



This screen will be shown when a MCHIP is inserted in the socket used for this purpose. The **RF CHANNEL [5]**¹ must be set to "OFF" to allow this screen to appear.

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

If the MCHIP 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.

1. This parameter is used to trigger a download of the configuration from the MCHIP to the controller. When the **[SELECT]** 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 confirm a download of the configuration from the MCHIP to the controller. When the **[SELECT]** button is pressed while the cursor is on this parameter and the latter is adjusted to "Y", the download will begin. If the **[SELECT]** button is pressed while the cursor is positioned on this parameter and the latter is adjusted to "N", the download will be cancelled.
3. This parameter is used to trigger an upload of the configuration from the controller to the MCHIP. When the **[SELECT]** button is pressed while the cursor is on this parameter, a confirmation question will appear and, if the confirmation is positive, the upload will begin.

¹ Refer to the **INSTALLATION** screen (page C-53) for more information on this parameter.

4. This parameter is used to confirm an upload of the configuration from the controller to the MCHIP. When the button is pressed while the cursor is on this parameter and the latter is adjusted to "Y", the upload will begin. If the button is pressed while the cursor is positioned on this parameter and the latter is adjusted to "N", the upload will be cancelled.

Alarm Message Table

Situational Alarm Message List	
<p>These alarms will activate the alarm relay and the alarm LED will light up when the condition is present. When the situation is corrected, the alarm relay will deactivate and the alarm LED will light up.</p>	
Message	Cause
"Act. # Pot Defect"	<ul style="list-style-type: none"> - The POSITIONNER ALARM {1-4} [3] option is "ON" and The controller receives an unclear signal from the mentioned actuator's potentiometer. - The POSITIONNER ALARM {1-4} [3] option is "ON" and potentiometer is short-circuited or an open circuit.
"Act. # cool down"	- The POSITIONER ALARM {1-4} [3] option is "ON" and the respective actuator's cool down function has activated.
"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 of these error codes appear, contact your distributor.
"Error Code 6"	- The MCHIP has remained in the socket for five or more minutes.
"Main Module Damaged"	<ul style="list-style-type: none"> - The main module is absent or defective. - There is no communication with the main module for more than 20 seconds.
"Err 8 Inputs Board"	- There is no communication with the 8 inputs board for more than 5 minutes.
Continuous Alarm Message List	
<p>These alarms will activate the alarm relay and the alarm LED will light up when the condition is present and when the situation is corrected. The alarm history must be cleared to deactivate the alarm relay and alarm LED will light up.</p>	
Message	Cause
"Feeder P# Max"	- A feeder has continuously stayed active for a period of MAX TIME[3] .
"Feeder P# Min"	- A feeder has stayed inactive for a period of MIN TIME[3] while receiving an active demand.
"Feeding Aug. : ####"	- The feeding timer expires during the feeding phase.
"Aug Min Alrm : ####"	- A feed auger has stayed inactive for a period of MIN TIME[3] while receiving an active demand.

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"Aug Max Alrm : ####"	- A feed auger has continuously stayed active for a period of MAX TIME[3] .
"Drop Prog #"	- An actuator assigned to program # in FAD or CFD mode has a position over 5% after its closing delay. - An actuator assigned to program # in FAD or CFD mode has a position under 95% after its opening delay.
"Trans Chain P#"	- The program # transmission chain is activate.
Event Message List	
These entries are not alarms, but events that occurred at a given time and date.	
"Backup F. Auger P#"	- This message tells the users that a backup feed auger is being used for program #.

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GE-NUTRI
SECTION D**

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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.

SECTION D

