User Manual

Image Pro

Image Pro Climate Controller

Revision 1.0 of 04.2025

Software version: AVI192601

The information contained within this document is used as a general description for the controller and its program. The information contained here may vary from the program installed in your unit.

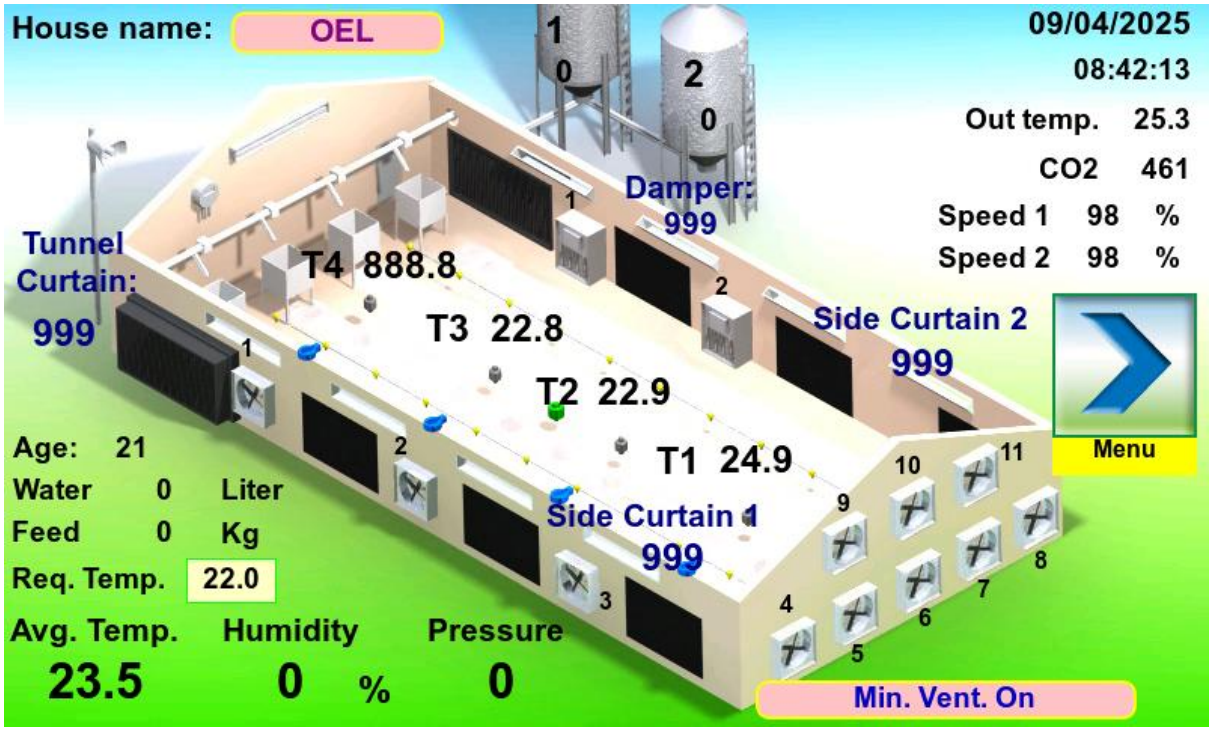
This document may contain mistakes and printing errors.

Agrologic accepts no liability or their consequences for technical mistakes or printing error.

Contents

1. Main Screen

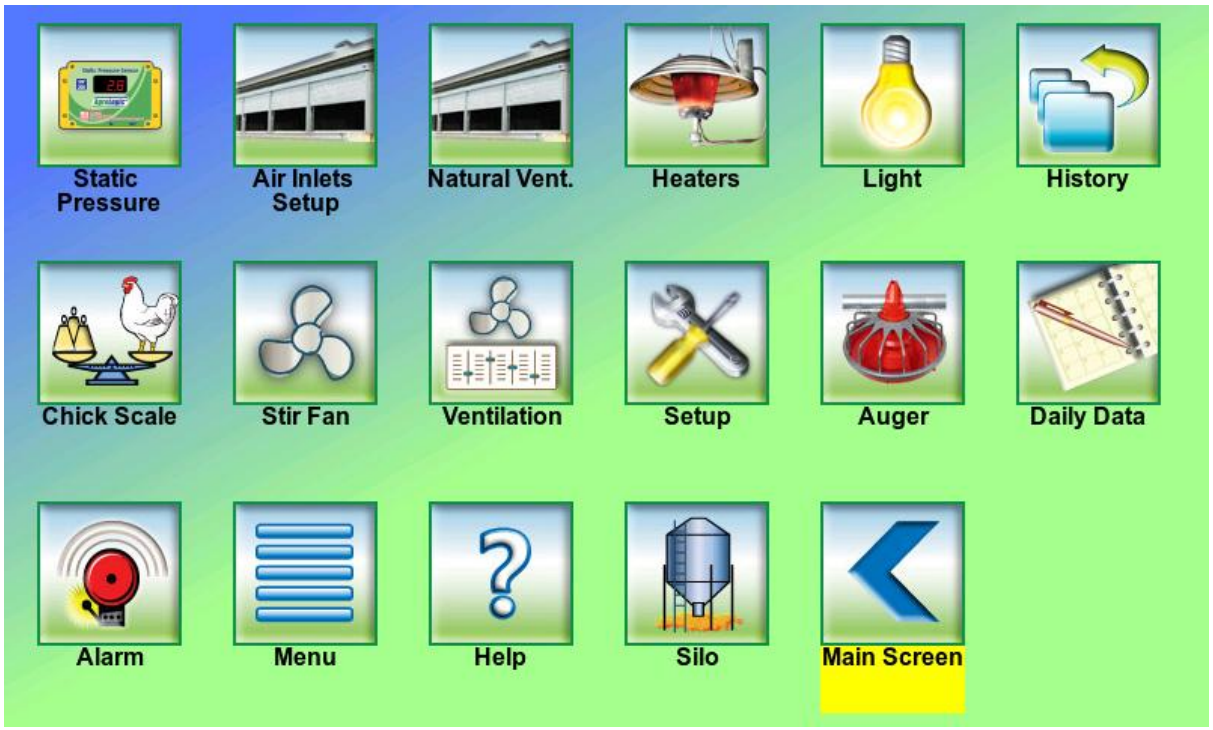
This screen shows a quick look at certain house paraments.



Click on the Menu Icon button to open the controller Menu screen.

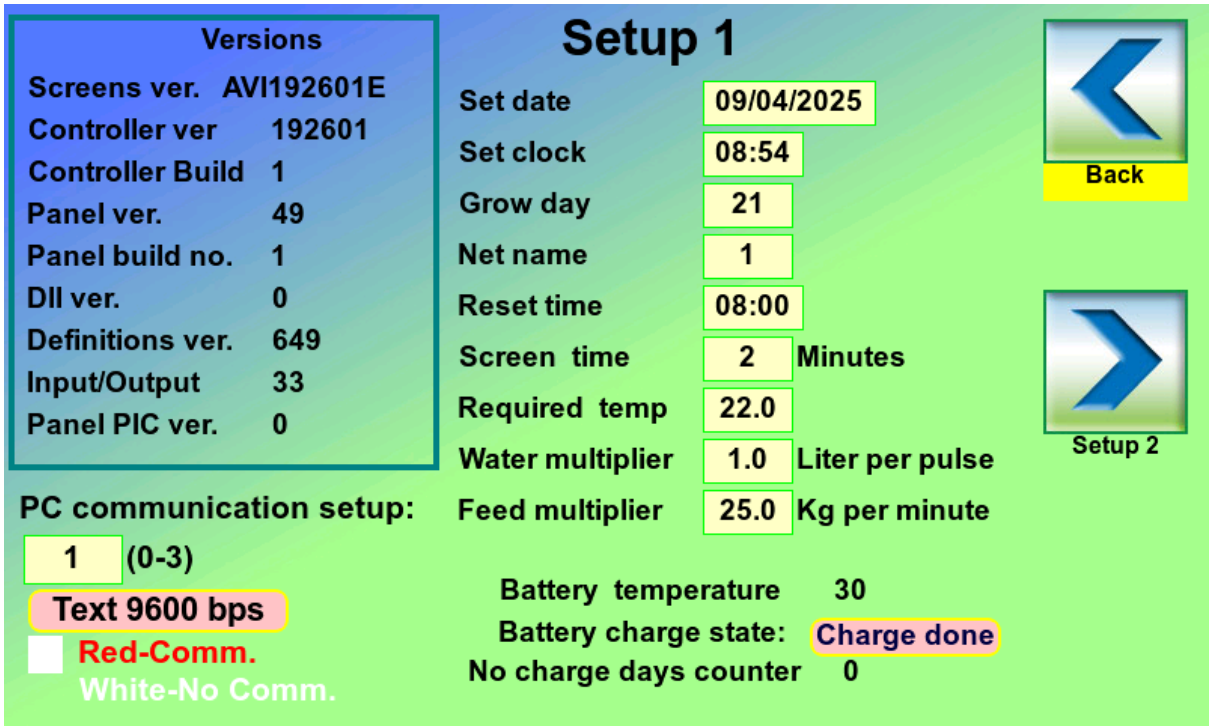
The controller will return to this screen after the set Screen time is up.

2. Menu Screen



Use this screen to open additional screens containing other parameters. Click on the desired Icon button to open its corresponding screen.

3. Setup Screen



3.1.1 TIME

Enter here the current time in a 24-hour format. This is the time that is used by the controller.

3.1.2 GROW DAY

A display of the current grow day. Grow day is updated according to the reset time (below) and after midnight. If the grow day is set to the day 1, the *Requested Temp* will receive the value of 1st Day Temp. The Growth curve weight will also start from day 1.

3.1.3 RESET TIME

The controller collects all its information on a 24 hours basis. Set the time in 24-Hours format in which the daily data is registered in history and the grow day is incremented

3.1.4 NET NAME

It is possible to connect the controller to a remote access control program, the Web Chick Pro. Each controller will need a "Net name" to be used to recognize it in the Web Chick Pro program.

Example; Enter 1 for the net name of the first TS36 control unit. Enter 2 for the second control and so.

3.1.5 SCREEN TIME

This is the length of time, set in minutes that the controller will remain in the current screen. At the end of this time period the controller will return to the Main screen. The minimum time is 2 minutes, maximum 99 minutes.

3.1.6 REQUIRED TEMPERATURE

This is the required temperature for the house. The majority of the controller operations are using this setting for operation.

3.1.7 PANEL VERSION

The current version of the Panel card software

3.1.8 CONTROLLER VERSION

The current version of the Power card software

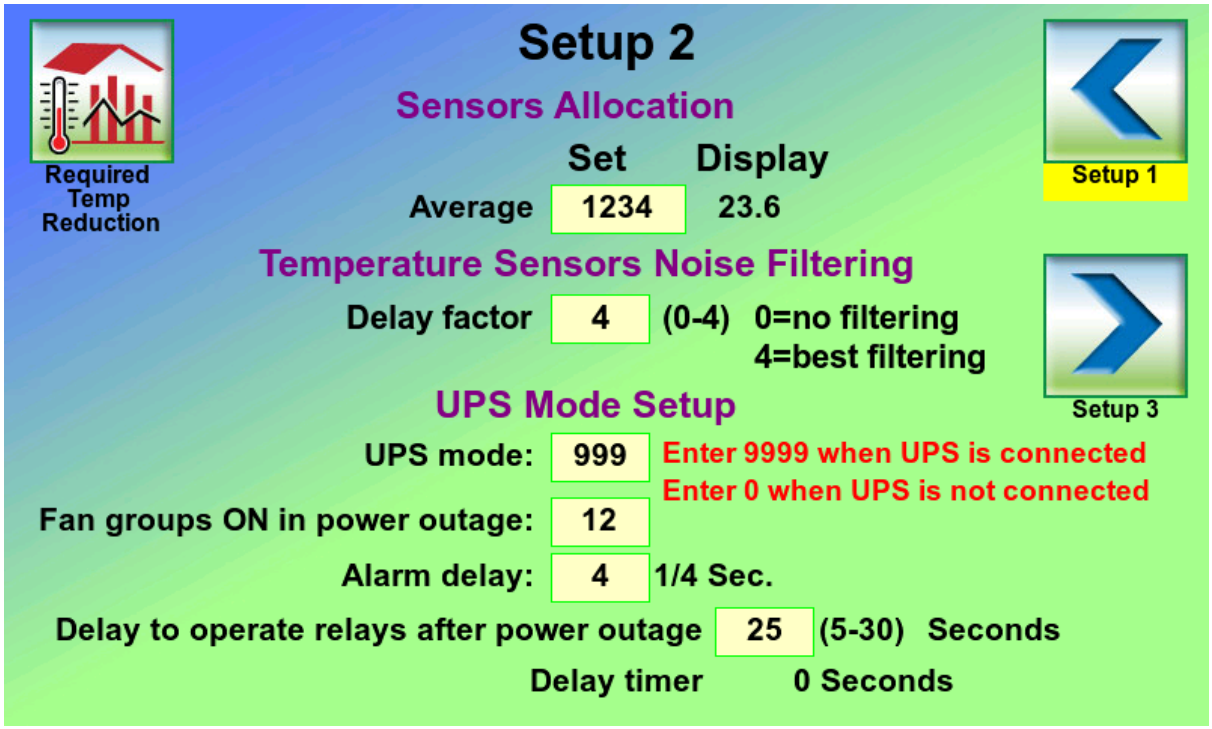
3.1.9 SCREEN

The current version of the screens file

3.1.10 BUILD NO

The current build number of the Power card software.

3.2 Setup Screen 2



3.2.1 AVERAGE

Define here which temperature sensor or sensors will be used to make up the average temperature.

The temperature sensors used to define the average temperature are the sensors that will be used for the ventilation and cooling systems.

Example:

Enter 1234 for the average. All four inside temperature sensors will be used to make up the inside average temperature.

3.2.2 UPS MODE

Uninterrupted Power Supply - In certain areas the power supply may be unstable and it may necessary to connect the controller to a UPS to avoid electric spikes which may damage the unit.

If a UPS is connected, the controller will not know when there is a power outage and will not activate the alarm relay.

If you connect a UPS unit, you must supply the controller a dry contact that will indicate that there is a power failure. This contact should be a closed contact that will open when there is a power failure. See your installation manual for the dry contact input number.

When the input is open (no power, UPS working) it will not try and move the dampers or curtain, thus avoiding the flap alarm.

If there is no UPS connected to the *Vision 24S* the number 0 should be entered

If there is a UPS connected to the system, the number 9999 should be entered.

3.2.3 FANS ON IN POWER OUTAGE

Enter here the fan groups that will come on when the power returns. These fans will come on only momentarily. The controller will slowly start to bring back the ventilation that was running before the power outage. See Delay To Operate Relays After Power Outage.

3.2.4 ALARM DELAY

This parameter is useful in areas where there is a AC voltage irregularity.

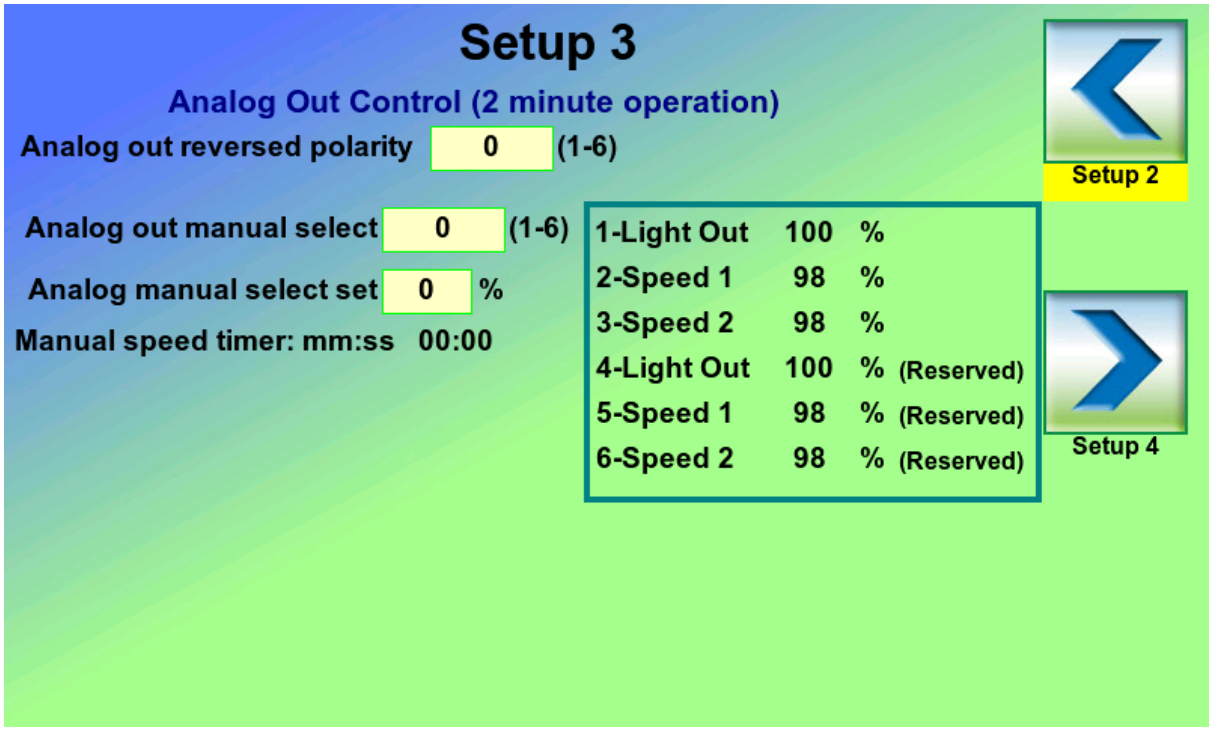
This is parameter is the time delay used before activating the alarm relay if there is a power failure. This parameter represents ¼ of a second.

It is recommended to enter the number 12 for a three second delay.

3.2.5 DELAY TO OPERATE RELAYS AFTER POWER OUTAGE

This is a delay after the main power returns, set seconds. After this time setting is up, the controller will bring back into operation the fan groups running before the power outage.

3.3 Setup Screen 3



3.3.1 ANALOG OUT REVERSED POLARITY

The analog outputs can be reversed by entering here the output number.
Example: default output is 0V equals 0 and 10V equals 100.
By reversing the output 0V equals 100 and 10V equals 0

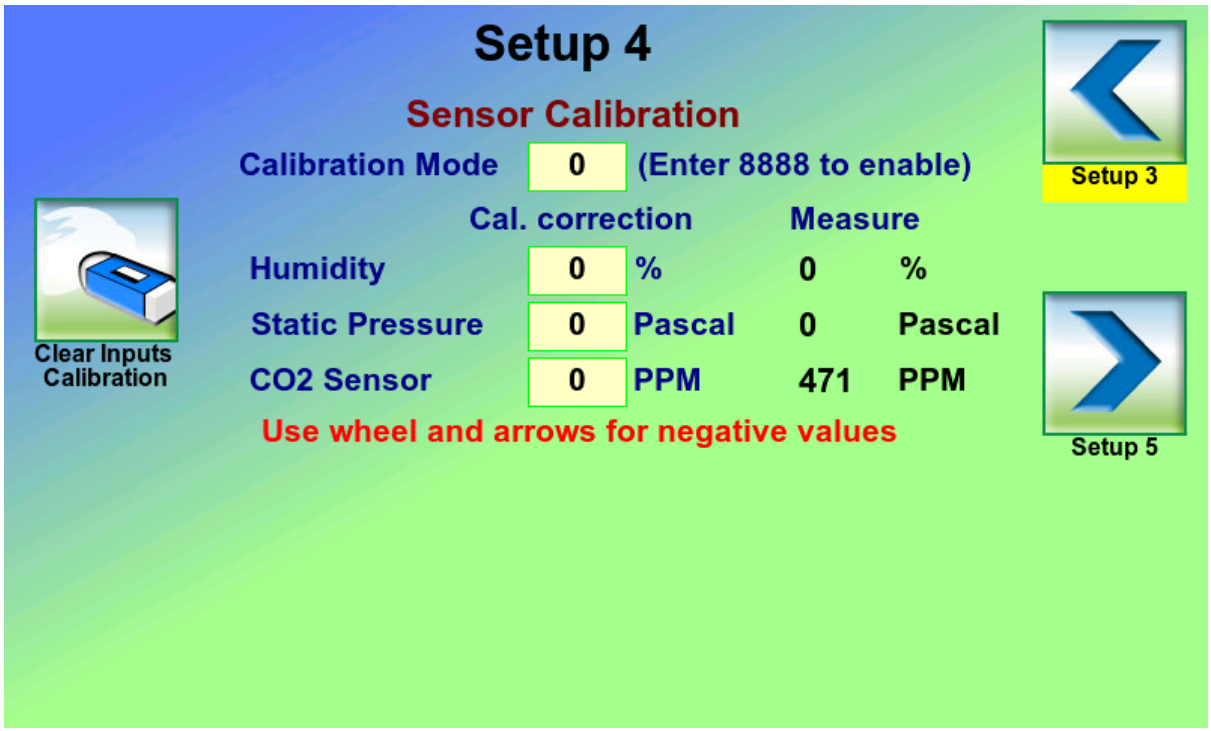
3.3.2 ANALOG OUT MANUAL SELECT

Enter here the analog output numbers that you would like to test their outputs for 2 minutes.
For example, to set the outputs of outputs 1&2, enter 12.

3.3.3 ANALOG MANUAL SELECT SET

Enter here the output value of the analog outputs that you would like to test for 2 minutes.
The permitted range is 1 to 100 (%). At the end of the test, this value returns to 0.

3.4 Setup Screen 4



Use this screen to calibrate the temperature, humidity, static pressure and CO2 sensors.

3.4.1 CALIBRAION MODE

Enter here 8888 to enter the calibration mode.

In the Cal. Correction edit box for each sensor, enter the desire calibration correction.

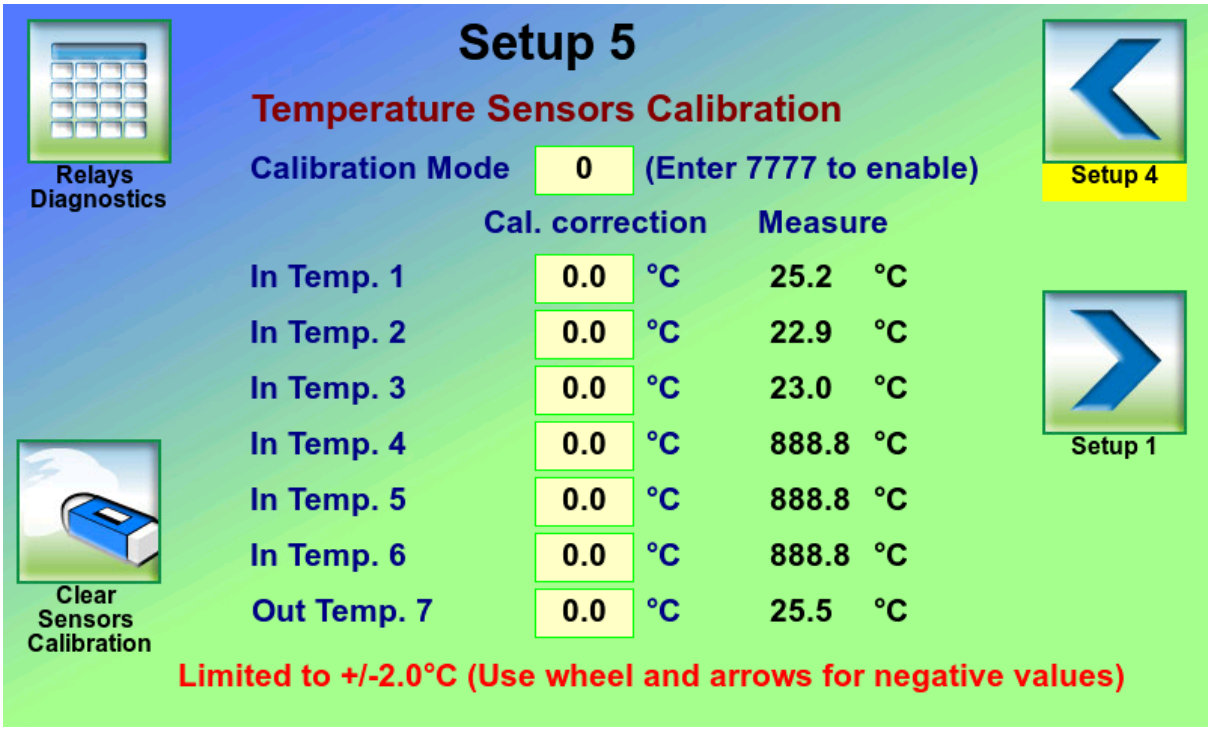
Maximum correct allowed per sensor:

Humidity = 20%

Static Pressure = 10 Pascal

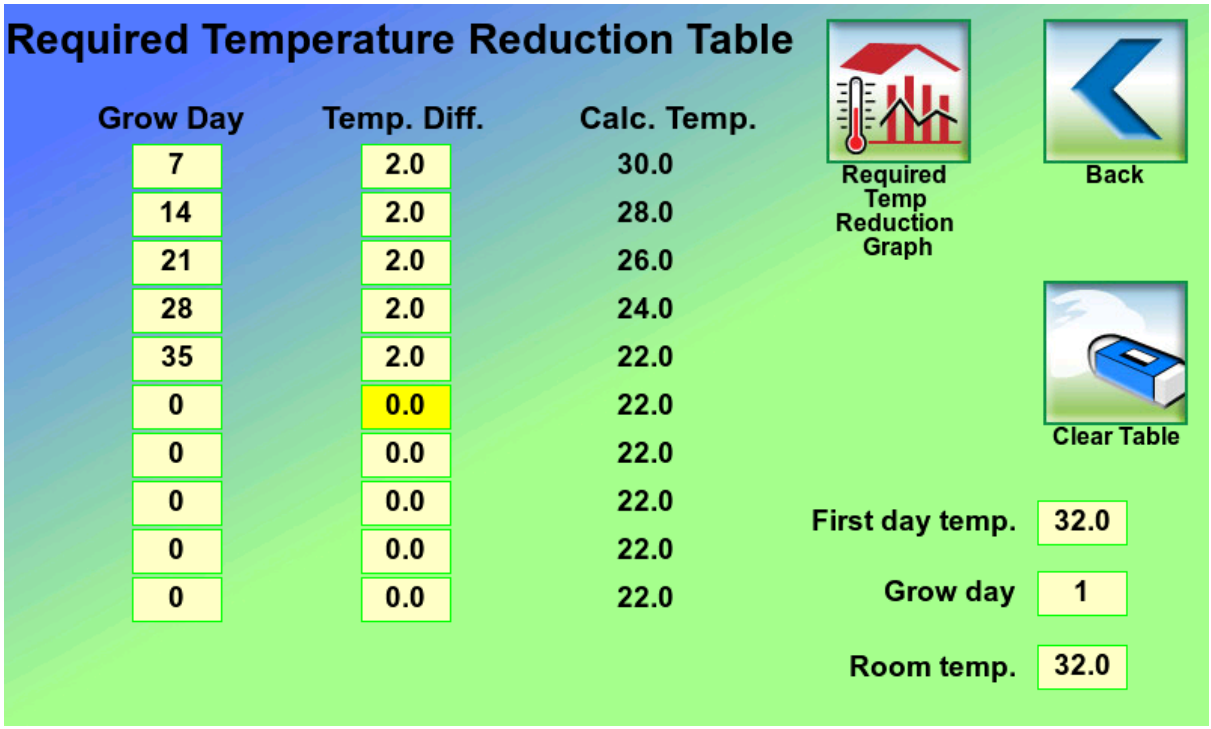
CO2 = 1000 PPM

3.5 Setup Screen 5



Use this screen to adjust Temperature sensors.

3.6 Temperature Reduction Table



Use this table to set the temperature reduction curve to automatically reduce the required temperature each day during the raising period. The reduction will take place after Reset time. It is possible to set up to 10 reduction steps. Each step can be reduced up to 9.9°F.

3.6.1 DAY COLUMN

Enter here the age (day) of the birds for the first temperature reduction. This is the age that the birds will be at the end of the first reduction period.

Important: If zero is entered in any of the day columns the temperature reduction will stop at this point.

Do not use 0 or 1 in the first row of the day column. The value entered here must be larger than 1.

3.6.2 Temperature DIFFERENCE

Enter here the desired temperature reduction. This reduction will take place over the numbers of days set in the Days column. This reduction will be linear.

3.6.3 CALC DIFF

This displays the calculated temperature reduction for each group of temperature reductions.

3.6.4 GROW DAY

Grow day is updated at reset time, if midnight has passed first. If Grow day is set to the day 1, the **Required Temperature** will receive the value of **Day 1 Temp.**

3.6.5 1ST DAY TEMPERATURE

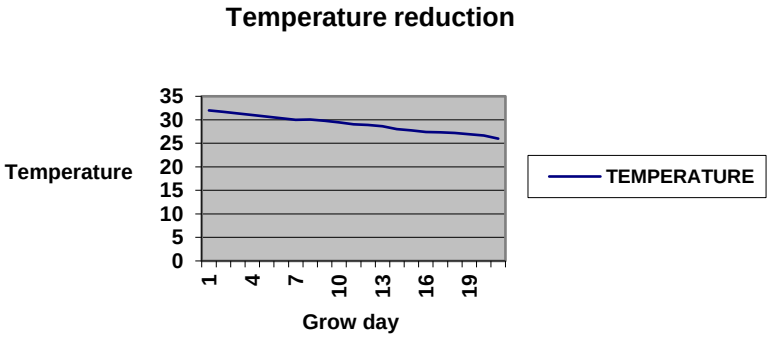
Day 1 Temp is the required temperature for the first day of growing. It is the temperature that will appear as **Required temperature** when Grow Day is equal to 1.

Important: When Day is equal to 1 it is not possible to change Required Temperature.

Example;
Temperature reduction
Grow day = 1

1st day temperature = 32.0°

Day	Temperature difference	Calculated temperature
7	2	30.0°
14	2	28.0°
21	2	26.0°



In this example the day 1 temperature is set at 32°.

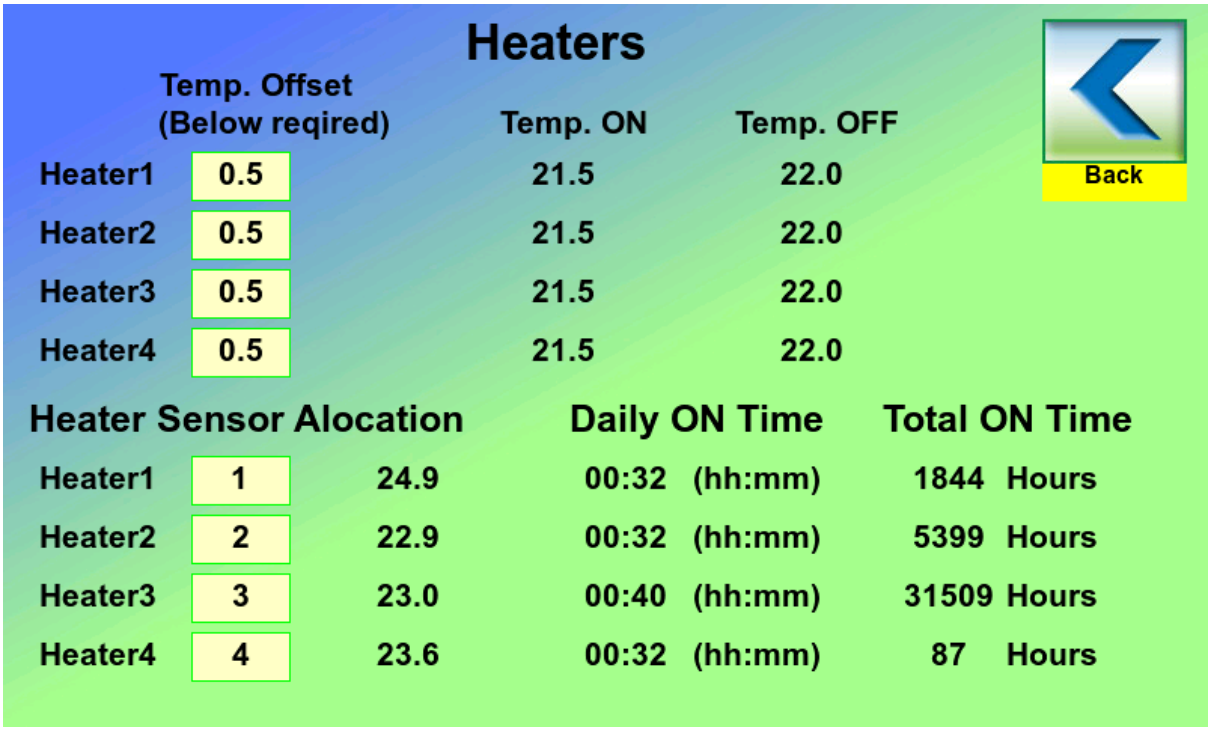
Over the first 7 days there will be a gradual decrease in the house temperature. By the end of the day 7 the house temperature will have decreased to 30°

By the end of day 14 the house temperature will have decreased to 28°

By the end of day 21 the house temperature will have decreased to 26°

Be sure to program all the rows in the table. Any rows not used should be programed with the value 0 (zero).

4. Heat Screen



The heater screen is used to setup the heater operations.

4.1.1 TEMP Offset

A heater is turned on when measured temperature (average) falls below the Required temperature minus the **Temp Offset** set point.

4.1.2 TEMP ON / TEMP OFF

The calculated ON and Off temperatures are displayed on the screen.

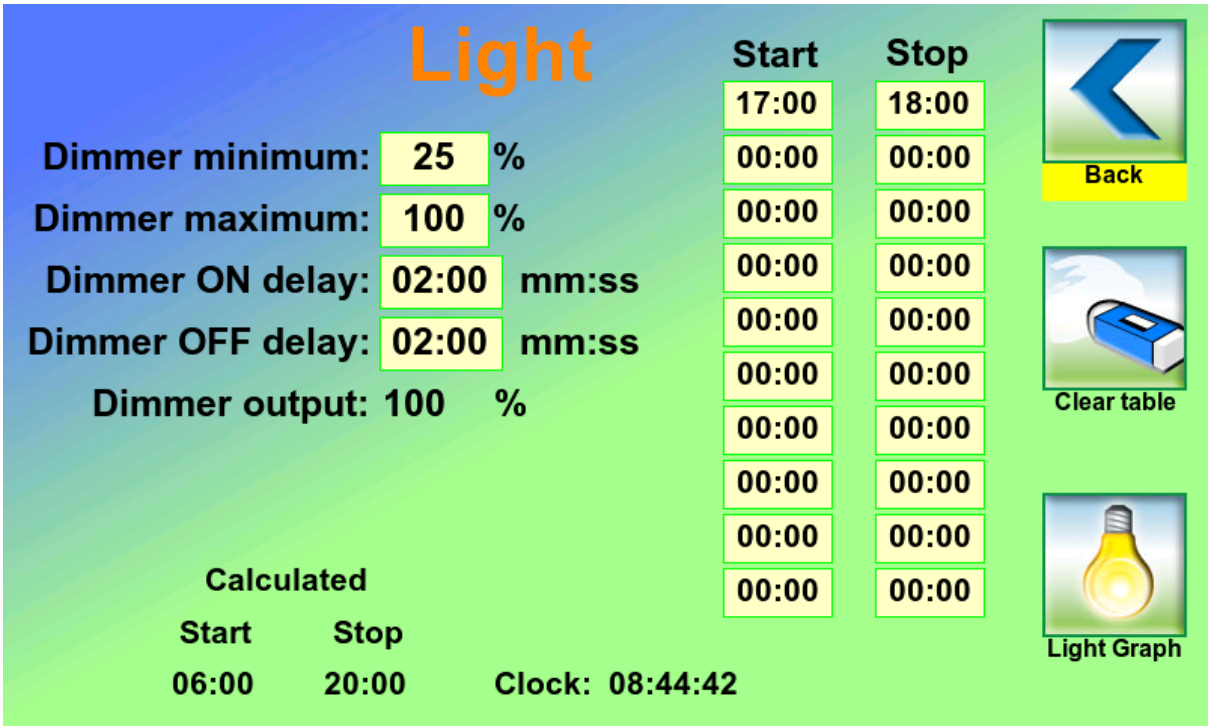
4.1.3 HEAT SENSOR ALLOCATION

Each heating group uses the set temperature sensors to calculate the average temperature for operation.

4.1.4 TOTAL HEATER OPERATION TIMES.

Daily and total On time for each heat group is displayed in this screen.

5. Light Screen



Your program contains a sunrise-sunset light mode.

The program contains a light graph which can be setup for the entire flock.

5.1 Dimmer Mode

5.1.1 DIMMER MINIMUM

Enter here a percentage between 0-100. This is the minimum light intensity when the lights first come on.

5.1.2 DIMMER maximum

Enter here the maximum light percentage to be used.

5.1.3 DIMMER ON DELAY

When the light relay is activated, the light intensity will start to increase over the Set Dimmer On delay. This is the length of time in minutes and seconds that it takes the lights to go from minimum to maximum intensity.

5.1.4 DIMMER OFF DELAY

When the Stop light time is reached, the dimmer Off delay time will start. This is the length of time in minutes and seconds that it takes the lights to go from maximum to minimum intensity.

When the minimum setting is reached, the lights will turn off.

5.1.5 DIMMER OUTPUT

This is the current light intensity in percentage.

5.1.6 ON / OFF

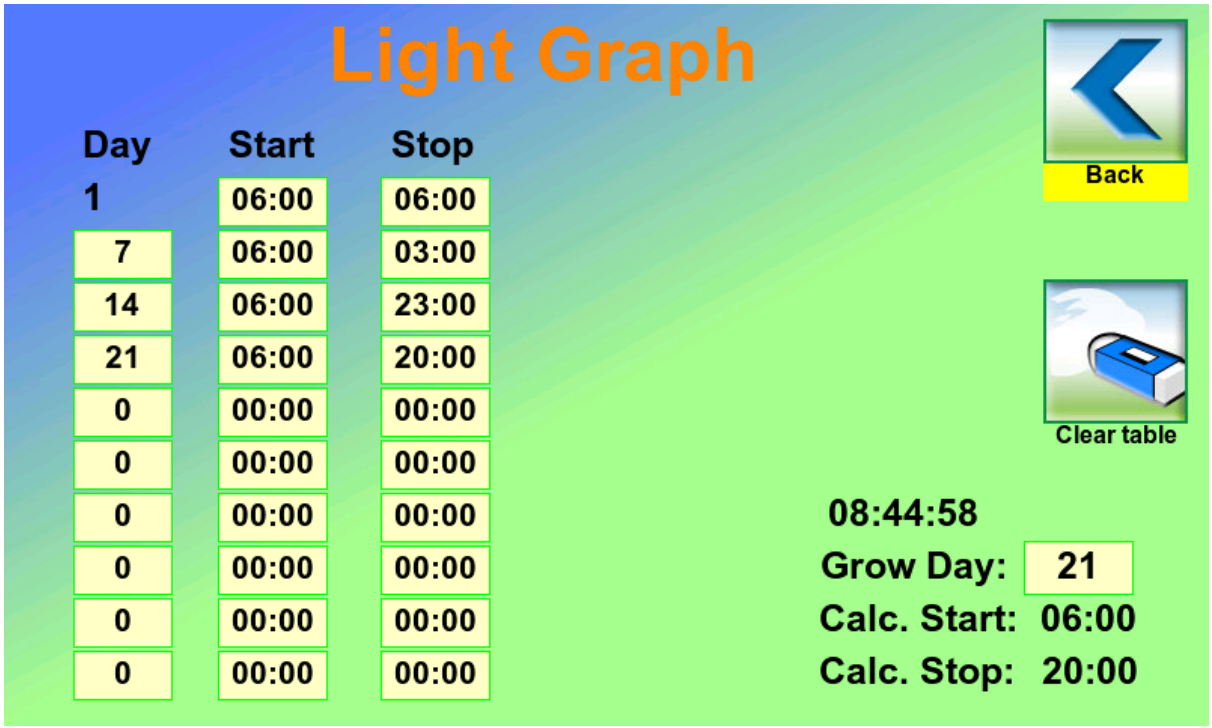
These on off time setting are used to add extra light times.

These times will override the time setting in the Light Graph.

5.1.7 CALCULATED ON AND OFF TIMES

Displays the current on and off times as calculated in the light graph.

5.2 Light Graph Screen



Use this screen to setup the lighting program for the entire flock.

The screen has 3 columns.

5.2.1 DAY

The day column represents the target grow day for the light change.

5.2.2 START

Start is the set time for the lights to go on. This ON time will be used with the target day setting. The start time will change in a linear fashion between target days.

5.2.3 STOP

Stop is the set time for the lights to go off. This OFF time will be used with the target day setting. The stop time will change in a linear fashion between target days.

5.2.4 GROW DAY

This is the current grow day.

5.2.5 CALC START

This is the calculated time the lights will go on.

5.2.6 CALC STOP

This is the calculated time the lights will go off.

Example;

Day	Start	Stop
1	06:00	06:00
7	06:00	03:00
14	06:00	23:00
21	06:00	20:00

Day 1 the lights are on for 24 hours. Enter 06:00 to 06:00

By day 7 the lights will go on at 06:00 and off at 03:00 – total on time of 21 hours

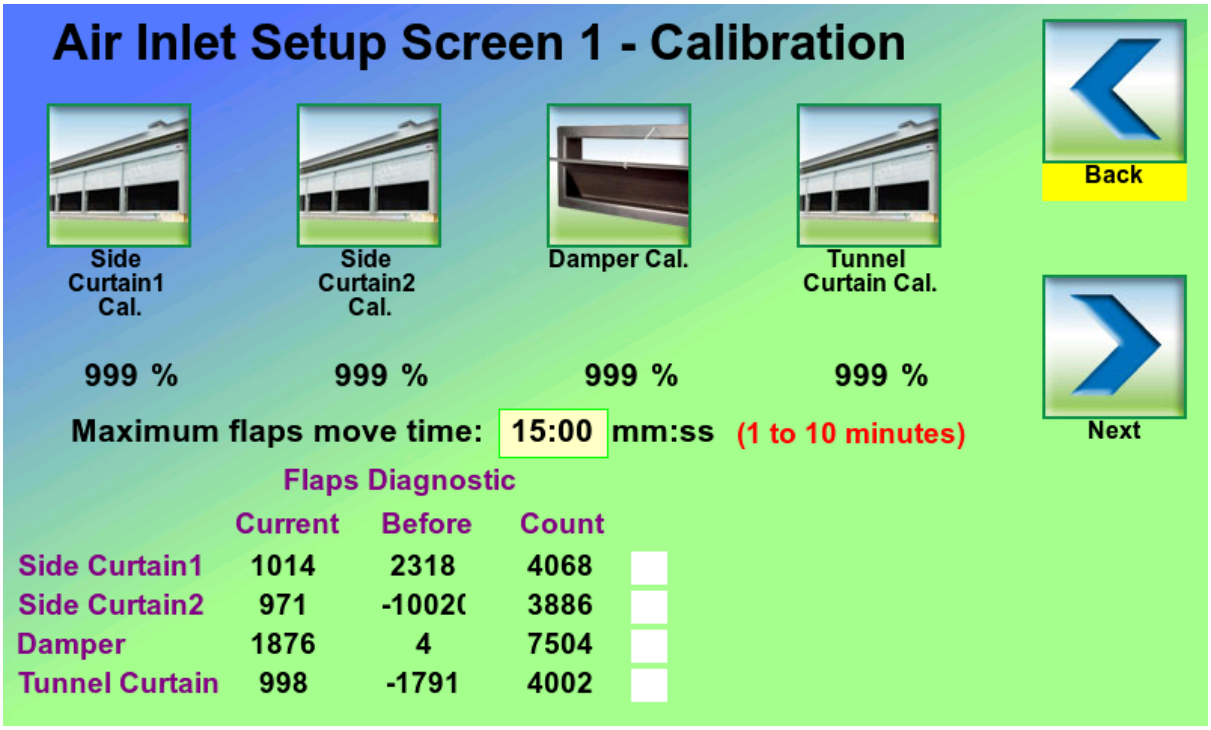
By day 14 the lights will go on at 06:00 and off at 23:00 – total on time of 17 hours

By day 21 the lights will go on at 06:00 and off at 20:00 – total on time of 14 hours

The changed each day will be a linear change, the off time shorting accordingly.

If at some point you want to turn the lights on outside of the light graph, you can use the ON / Off table located in the first light screen. This will override the light graph but will not change it.

6. Air Inlet Setup Screen



Use this screen to calibrate the side curtains, dampers (inlets) and tunnel curtain.

In order for the controller to properly control the flaps, each one must be calibrated. Place the cursor on the Side curtain 1, then press Enter. The flap will close 100% and then open to 100%. After the calibration is finished the flap will return to its proper position.

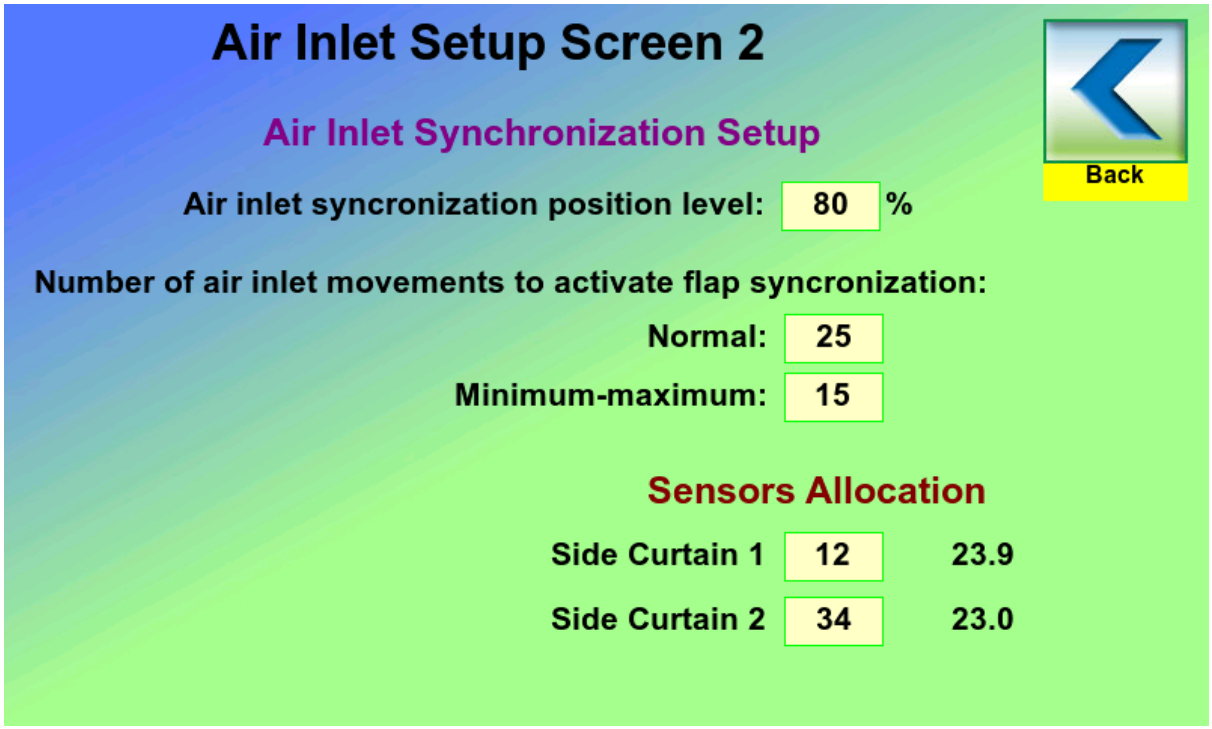
Do this for all flaps.

6.1.1 Maximum FLAPS MOVE TIME

Enter here the maximum time in minutes that it takes for any of the flaps to go from 0% to 100%.

Any time longer that this will cause a Flap alarm.

6.2 Air Inlet Setup 2 Screen



6.3 Number of movements for synchronization of flaps:

The controller calculates the Damper/Curtains position by measuring the time it takes to move from 0% (fully closed) to 100% (fully open). If the Damper/Curtain moves up and down many times without reaching 0 or 100% (limit switches) the Damper/Curtain position display may not show the actual position. It may be necessary to do an automatic synchronization. Synchronization is a process in which the system finds automatically the correct position of the Damper/Curtains by moving it to 0 or 100%.

6.3.1 NORMAL

Enter here the number of steps the Damper/Curtain will move before doing synchronization. If the Damper/Curtain moves this entered number of times between 0 and 100% (without reaching either), that particular Damper/Curtain will do a calibration. The Damper/Curtain will either open or close completely (see Flap Syn Set Point) Each time the flap reaches 0 or 100% then the ImageII restarts the count.

6.3.2 MINIMUM / MAXIMUM

Enter here a number of steps for the Damper/Curtain. If this number is reached and the Damper/Curtain is at its Minimum position, the Damper/Curtain will open or close depending on the Flap Sync Set point setting.

6.3.3 FLAP SYNC SET POINT

Enter here a position for the Damper/Curtain. If the Damper/Curtain is open more than this setting, synchronization to 100% is done. If less, synchronization to 0% is done. When

synchronizing to 0% is done the ventilation system does not run. This is to prevent high pressure occurring in the house. When synchronizing to 100% the ventilation system continues to operate.

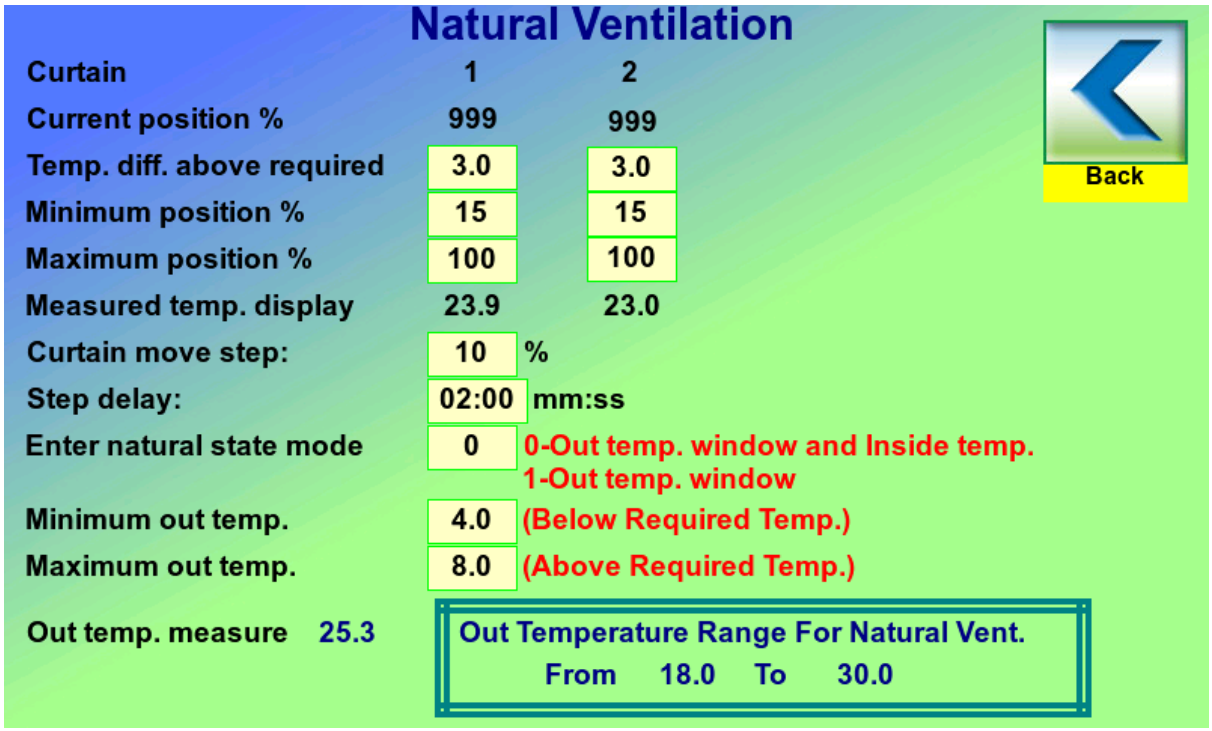
Example: If the value 25 is entered as the number of steps for synchronization and one of the Damper/Curtain moves 25 steps without reaching 0 or 100%, the ImageII start synchronization. If 25 is entered as a set point, then during a automatic synchronization, if the Damper/Curtain is open less than 25% it will close to 0% and then reopen. Any opening above 25% will cause the flap to open to 100% during synchronization.

When the damper/curtain is in a synchronizing state, the current position shown for the damper/curtain will be 4444 while synchronizing to zero (closing), 6666 while synchronizing to 100% (opening) and 5555 when finished synchronizing and returning to its required position.

6.3.4 FLAP ALARM DISABLE

Disable the alarm for the damper and cooling curtains here. To disable the damper alarm enter here 1. Use 2 / 3 for the cooling curtains. If you disable the damper or cooling curtains alarms you will not receive an alarm if the Image II senses a fault.

7. Natural Ventilation Screen



7.1 Natural Ventilation Operation

The side curtains will start to operate in natural ventilation if the inside temperature is above the set temperature set point of at least one curtain and the and the outside temperature range is within the range set.

Once in natural ventilation, each curtain will open or close depending on its own measured temperature. If the measured temperature is above the set-point, then the curtain will be opened. If the measured temperature is below the set-point, then the curtain will be closed.

The curtains will be opened and closed in steps. After each step, the curtain will not move until the step delay is over.

The curtains will only moved between the settings on minimum and maximum position.

If the outside temperature is outside of the set range, natural ventilation will be stopped. It will also stopped if the inside temperature reaches the cool-pad temperature set-point or if the minimum positions are set to 0% and the curtains are both closed to 0%

7.1.1 CURRENT POSITION %

Displays the current curtain position in percentage.

7.1.2 TEMP DIFF ABOVE REQUIRED

Enter here the offset temperature point above the required temperature for each curtain. For example: if the required temperature is 25.0 and the value entered here is 1.0, then the temperature set-point for the curtain is 26.0 .

This temperature will be considered the curtains required temperature.

7.1.3 MINIMUM POSITION%

Enter here in percentage the minimal opening for the side curtain once they start to work. If the temperature for the curtain causes it to close, this minimum opening will be the amount the curtain will remain open when it is closed. The curtain will not close more that this setting as long as the controller is in Natural ventilation mode.

7.1.4 MAXIMU POSITION%

Enter here in percentage the maximum opening for the side curtain during natural ventilation.

7.1.5 CURTAIN MOVE STEP

Enter here the step size for the curtains each time they move.
Example: Step size = 10
Each time the curtain moves it will do so in steps of 10%.

7.1.6 STEP delay

Enter here the delay time between steps. This is delay is minutes and seconds.
Example: Step size = 10 / delay time = 02:00
The curtain will move 10% and then wait 2 minutes before the next step.
This delay allows the controller to recalculate the current tempature and decide if the curtain should open or close.

7.1.7 ENTER NATURAL STATE MODE

This parameter defines what temperatures cause the controller to go into natural ventilation.

Enter here 0 (zero) if you want the controller to go into natural ventilation when both outside and inside temperature settings are reached.

Enter here 1 if you want the controller to go into natural ventilation when the outside temperature is within a set range. It will not take into account the inside temperature.

7.2 Out Temperature For Natural Ventilation

7.2.1 MINIMUM OUT TEMPERATURE (BELOW REQUIRED)

Enter here a temperature offset below the required temperature to define the outside temperature range.
Example: Required temp 29.0° and Min temp out = 5.0°
This setting translates to a minimum outside temperature of 24.0 degrees (29.0 minus 5.0).

7.2.2 MAXIMUM OUT TEMPERATURE (ABOVE REQUIRED)

Enter here the a temperature offset above the required temperature to define the outside temperature range.
Example: Required temp 29.0° and Max temp out = 1.0°
This setting translates to a minimum outside temperature of 30.0° (29.0° plus 1.0°).

7.2.3 OUTSIDE TEMPERATURE RANGE FOR NATURAL VENTILATION

Shown here is the ventilation outside temperature range as defined by the Minimum and Maximum Out Temperature off settings.

Here is an example using a required temperature of 22.0°, cool pad set-point is 32.0° and Curtain 1 and 2 are set with an offset of 3.0°.
Outside temperature range is between 18.0° to 30.0°

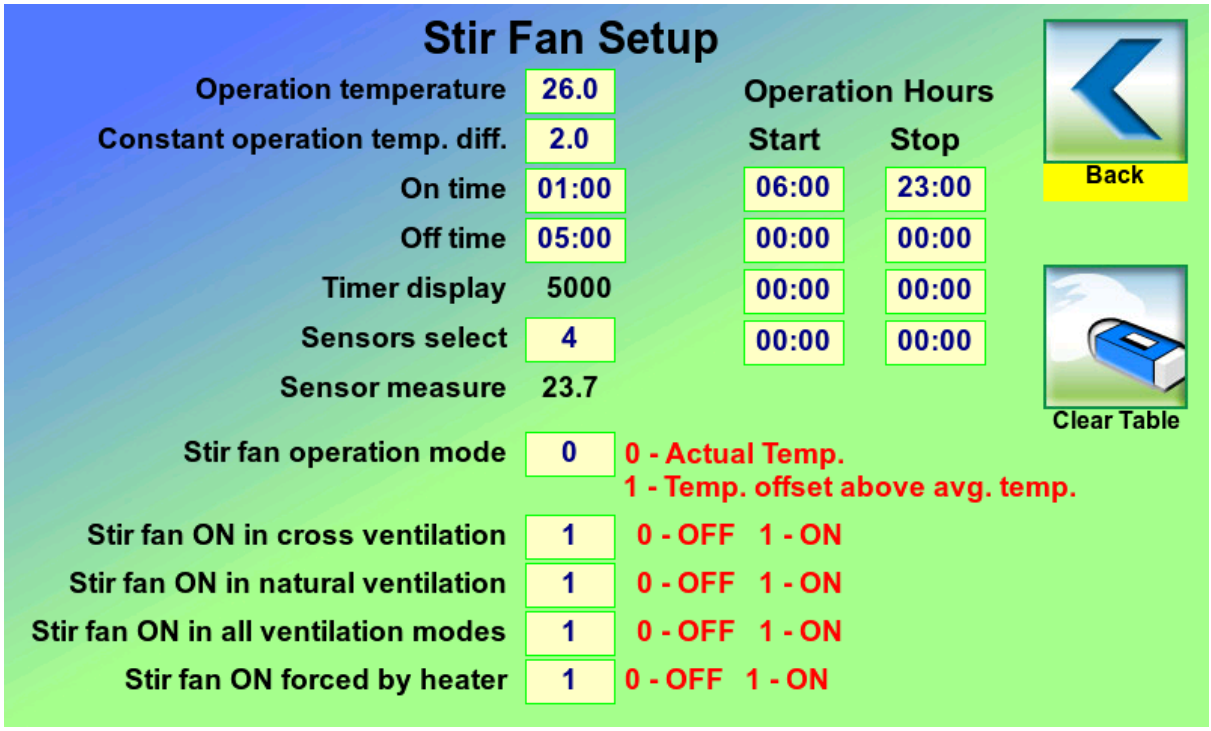
If the measured temperature for curtain 1 or 2 reaches 25.0° (22.0° + 3.0° = 25.0°) and the outside temperature is between 18.0° and 30.0°, the controller will go into natural ventilation and the curtains will start to operate. They will be opened first to their minimum opening of 15%.

If the measured temperature of a curtain is above the temperature set-point of that curtain, the curtain will be opened in steps of 10% and delay of 2 minutes between steps. If the measured temperature of a curtain is below the temperature set-point of that curtain, the curtain will be closed in steps of 10% and delay of 2 minutes between steps.

If the outside temperature is below 18.0° or above 30.0°, the natural ventilation will be stopped. The next ventilation state will be according to the inside temperature and the fans temperature settings.

If the inside temperature is above 32.0, the natural ventilation will be stopped and tunnel ventilation with cool pad will start.

8. Stir Fan Screen



8.1.1 Operation TEMPERATURE

Enter here the temperature used to operate the stir fan. See Stir Fan Operation Mode.

8.1.2 CONSTANT OPERATION TEMPERATURE DIFFERENCE

Enter here the temperature off set above the Operation temperature that will cause the stir fans to run nonstop.

8.1.3 ON TIME

On time for stir fans while in cycle mode.

8.1.4 OFF TIME

Off time for stir fans while in cycle mode.

8.1.5 TIMER DISPLAY

Display the stir fan cycle countdown.

8.1.6 SENSORS SELECT

Select which temperature sensors will be used for the Stir fan operation.

8.1.7 SENSOR MEASURE

Temperature display for the selected stir fan sensors.

8.1.8 STIR FAN OPERATION MODE

The stir fans can be set to start running according to a actual temperature or an offset temperature above the house requested temperature

Enter here the value 0 to use an actual temperature.
Enter here the value 1 to use an offset temperature.

8.1.9 STIR FAN ON IN CROSS VENTILATION

Enter here the value 0 if the stir fans are off during cross ventilation.
Enter here the value 1 if the stir fans continue to operate in cross ventilation.

8.1.10 STIR FAN ON IN NATURAL VENTILATION

Enter here the value 0 if the stir fans are off during natural ventilation.
Enter here the value 1 if the stir fans continue to operate in natural ventilation.

8.1.11 STIR FAN ON IN ALL VENTILATION MODES

Enter here the value 0 if the stir fans are off in all ventilation modes.
Enter here the value 1 if the stir fans continue to run in all ventilation modes

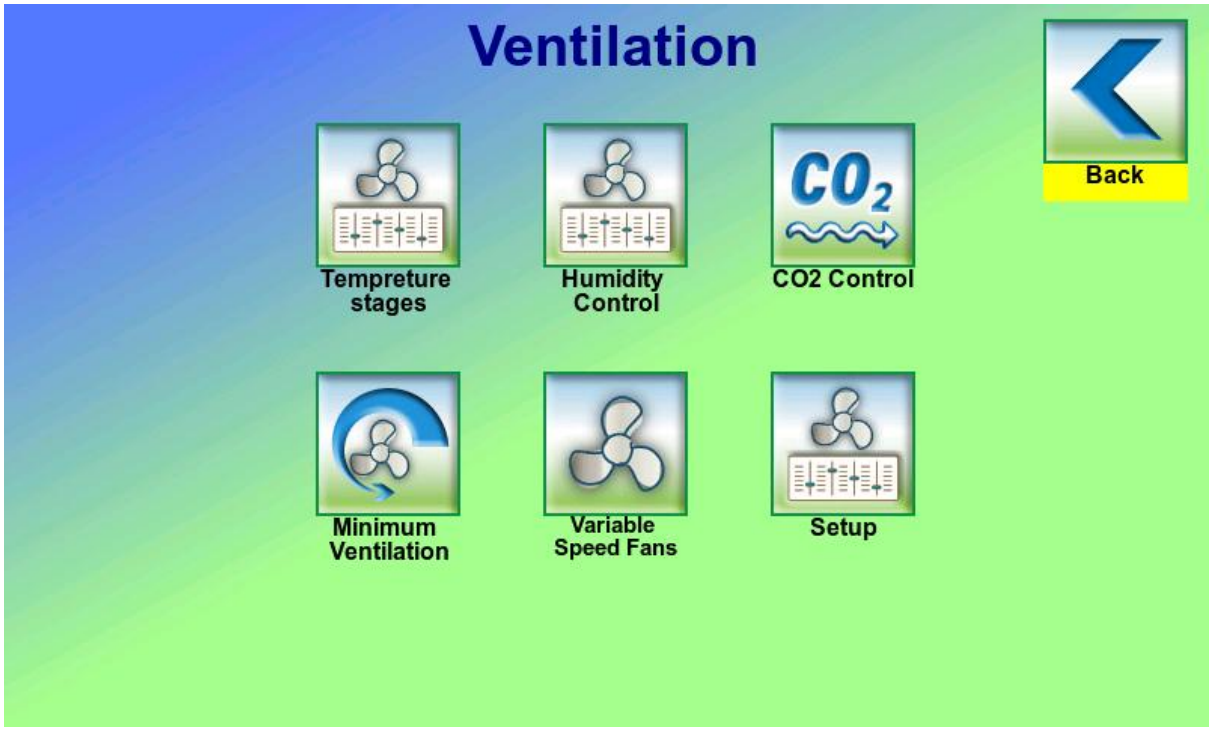
8.1.12 STIR FAN ON FORCED BY HEATER

Enter here the value 0 if the stir fans are off when the heater operate.
Enter here the value 1 if the stir fans are on when the heater operate.

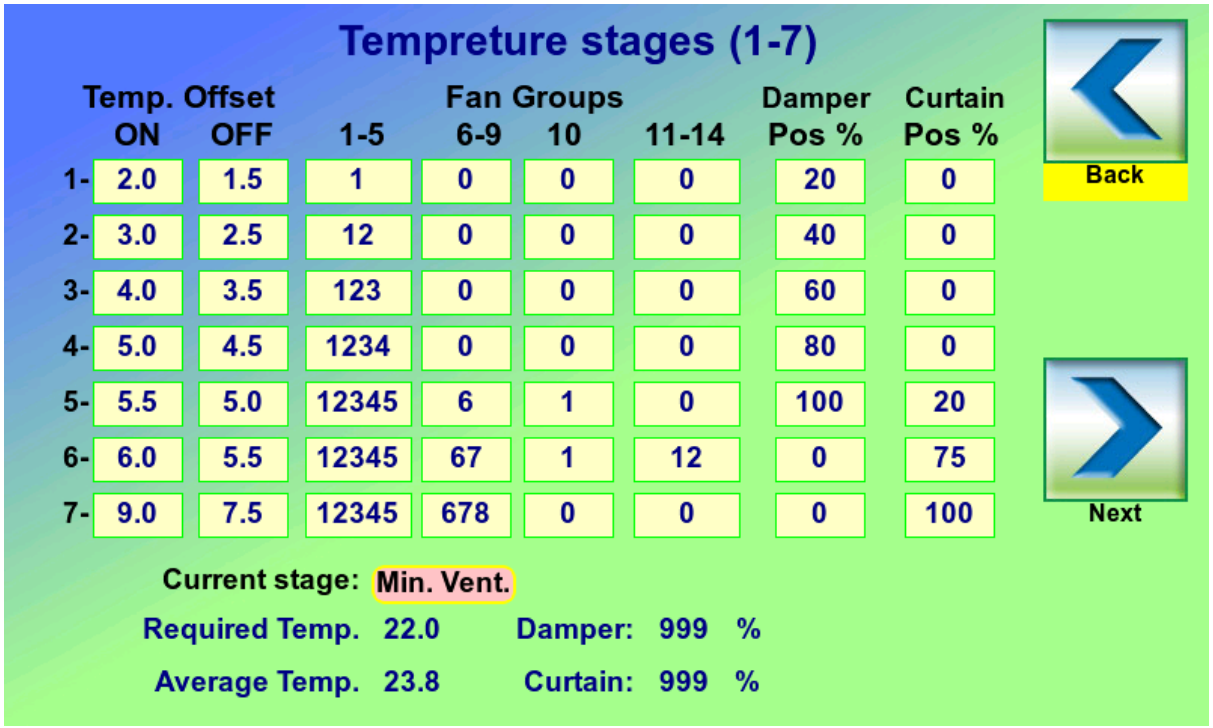
Example of how stir fans operate.

Operation temperature: 26.0°
Stir fan mode: 1 (offset temperature above requested house temperature)
Constant operation temperature difference: 2.0°
Stir fan on time: 01:00
Stir fan off time: 05:00
The stir fan will start running when the selected temperature sensor reading reaches 26.0°.
The stir fan will run in an On Off cycle mode; On 1 minute, Off 5 minutes.
When the sensor reading reaches 28.0°(26.0° + 2.0°) the stir fan will run nonstop.

9. Ventilation Screen



9.1 Temperature Stage Screen



9.2 Ventilation

This program works with stages. There are a total of 14 stages (rows), each stage has its own On and Off temperature setting, fan groups, damper and curtain openings.

Each row represents one stage.

9.2.1 TEMPERATURE ON COLUMN

This is the offset temperature difference above the required temperature that will turn on the fan groups as set in the different Fan Groups column.

9.2.2 TEMPERATURE OFF COLUMN

This is the offset temperature difference above the required temperature, but less than the Temperature On setting, that will turn off the fan groups set in the Fan Groups column.

9.2.3 FAN GROUPS 1-5

Enter here the fan group or groups you want to operate for this corresponding row.
Use the values 1,2,3,4 and 5 (this represents fan groups 1,2,3,4 and 5).

9.2.4 FAN GROUPS 6-9

Enter here the fan group or groups you want to operate for this corresponding row.
Use the values 6,7,8 and 9 (this represents fan groups 6,7,8 and 9).

9.2.5 FAN GROUPS 10

Use the value 1(this represents fan group 10).

9.2.6 FAN GROUPS 11-14

Use the values 1,2,3 and 4 (this represents fan groups 11,12,13, and 14).

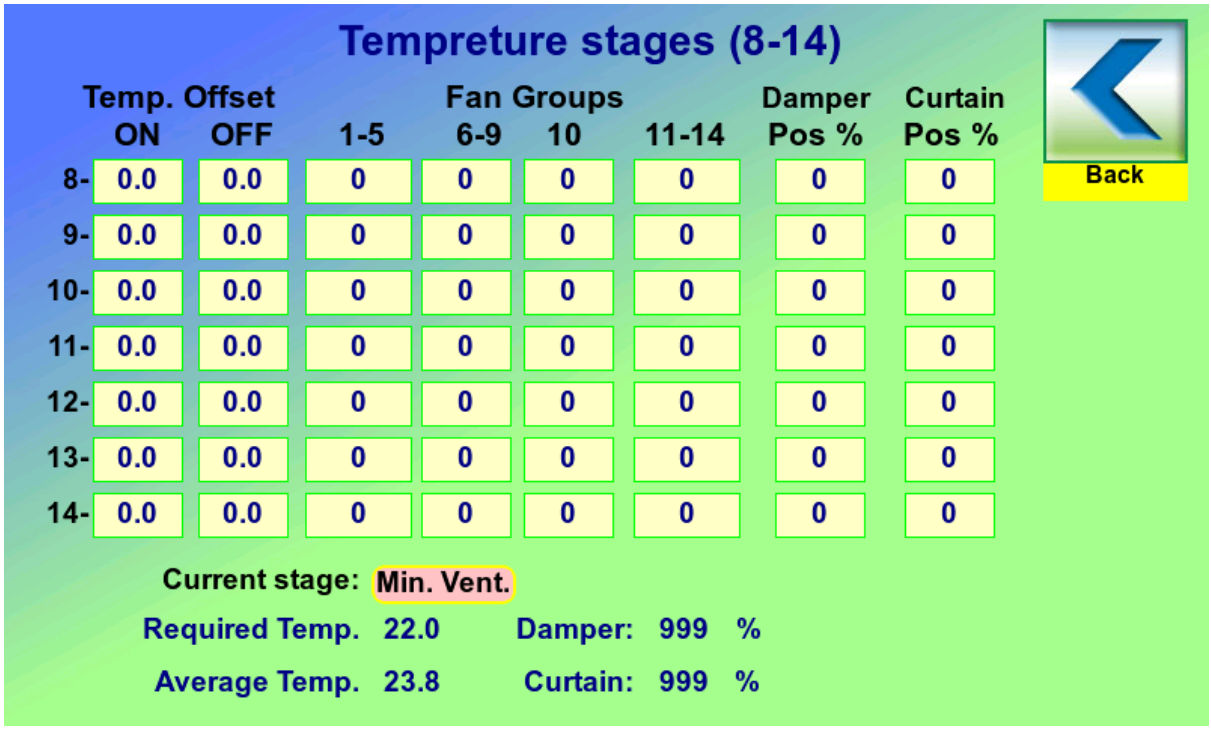
9.2.7 DAMPER POSITION %

Enter here the required damper opening for the corresponding stage.

9.2.8 CURTAIN POSITION %

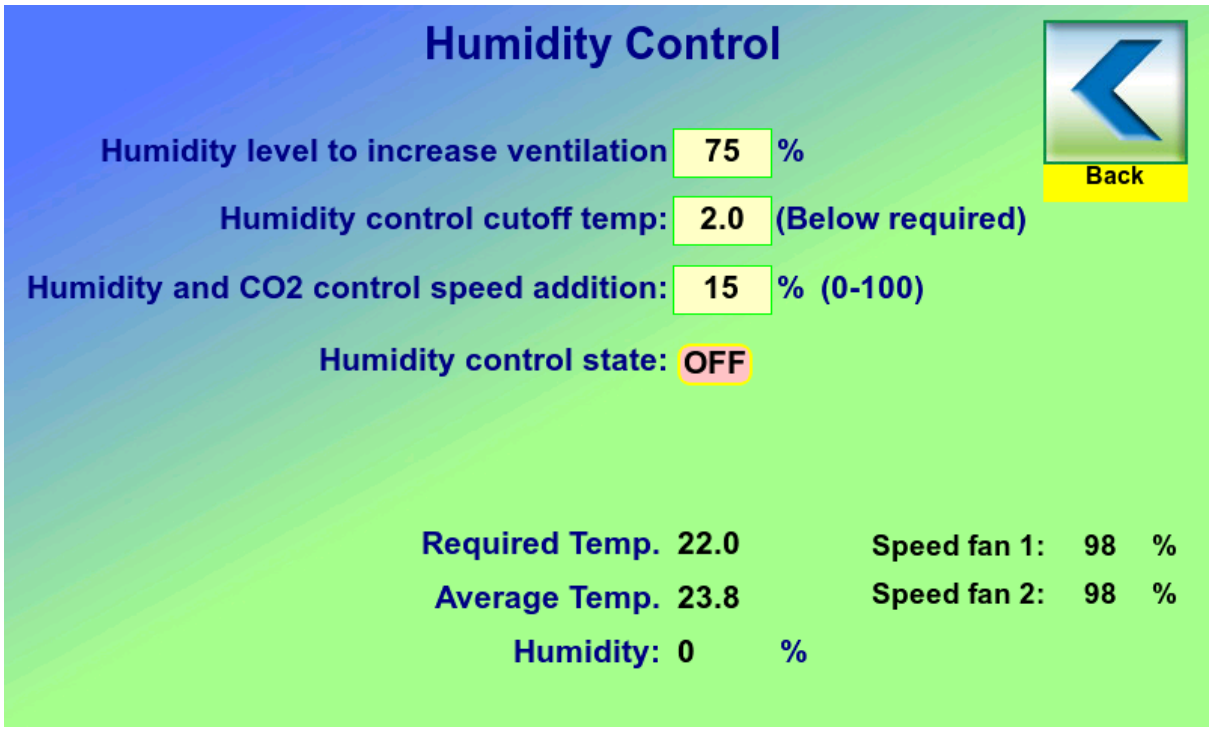
Enter here the required curtain opening for the corresponding stage.

9.3 Temperature Stage Screen 2



Setup Temperature Stages 8-14 in the same manner as stages 1-7. See Temperature Stage Screen

9.4 Humidity Control Screen



Use this screen to setup the humidity control.

9.4.1 HUMIDITY LEVEL TO INCREASE VENTILATION

Enter here the humidity level for the house that will increase the ventilation.
This is done to help reduce the humidity level in the house.

9.4.2 HUMIDITY CONTROL CUTOFF TEMPERATURE

Enter here a temperature offset, set below the Requested temperature, that will prevent the humidity control mode to run.

9.4.3 HUMIDITY AND CO2 CONTROL SPEED ADDITION

Enter here the speed increase for the humidity control.

*This is used only when the variable speed fans are operating.
*If the regular fans are running, the controller will increase ventilation by one stage.

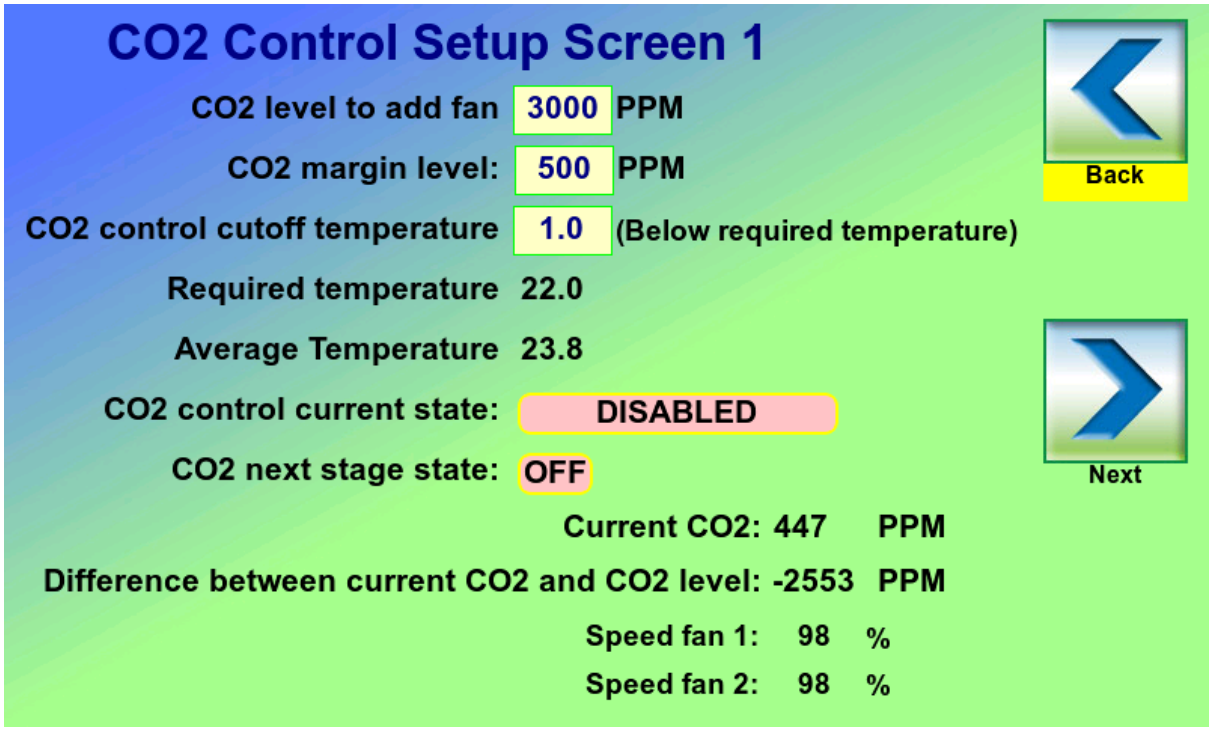
Example;
Requested temperature = 27°
Humidity level to increase ventilation = 75%.
Fan humidity control cutoff temperature = 2°.
Humidity and CO2 control speed addition = 10%

If the humidity in the house passes 75%, the controller will increase the speed fan by 10%.

If the regular fans are running, the controller will increase ventilation by one stage.

If the average house temperature is less than 25° then the humidity control mode will not run.

9.5 CO2 Control Screen



9.5.1 CO2 LEVEL TO ADD FAN

Enter here the CO2 level for the house that will increase the ventilation.
If the variable speed fans are running, they will increase in speed as setup in Humidity And CO2 Control Speed Addition (see Humidity Control Screen on page 30).

If the regular fans are running, the controller will increase ventilation by one stage.

9.5.2 CO2 MARGIN LEVEL

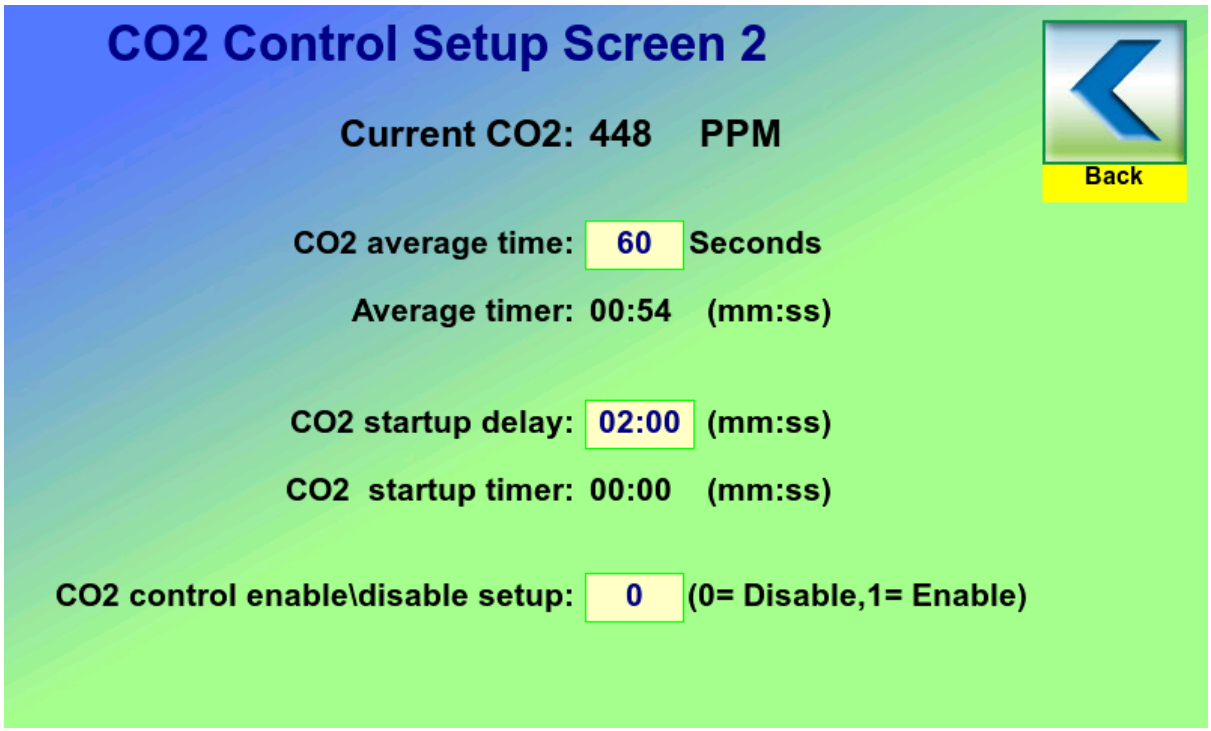
This is an amount of CO2 above or below the CO2 level desired.

Example: CO2 level - 3000PPM

9.5.3 CO2 MARGIN – 500PPM

Any CO2 reading between 2500PPM and 3500PPM will be consider within the allowed level and will not affect the ventilation.

9.6 CO2 Control 2 Screen



9.6.1 CO2 AVERAGE TIME

The time length in seconds that you enter here is the time length used to calculate the average CO2 level in the house.

Example; enter here 90. The unit will record the CO2 level over 90 seconds and then calculate the average level. The CO2 level display will be updated every 90 seconds.

9.6.2 AVERAGE TIMER

The time remaining until the end of the CO2 average cycle.

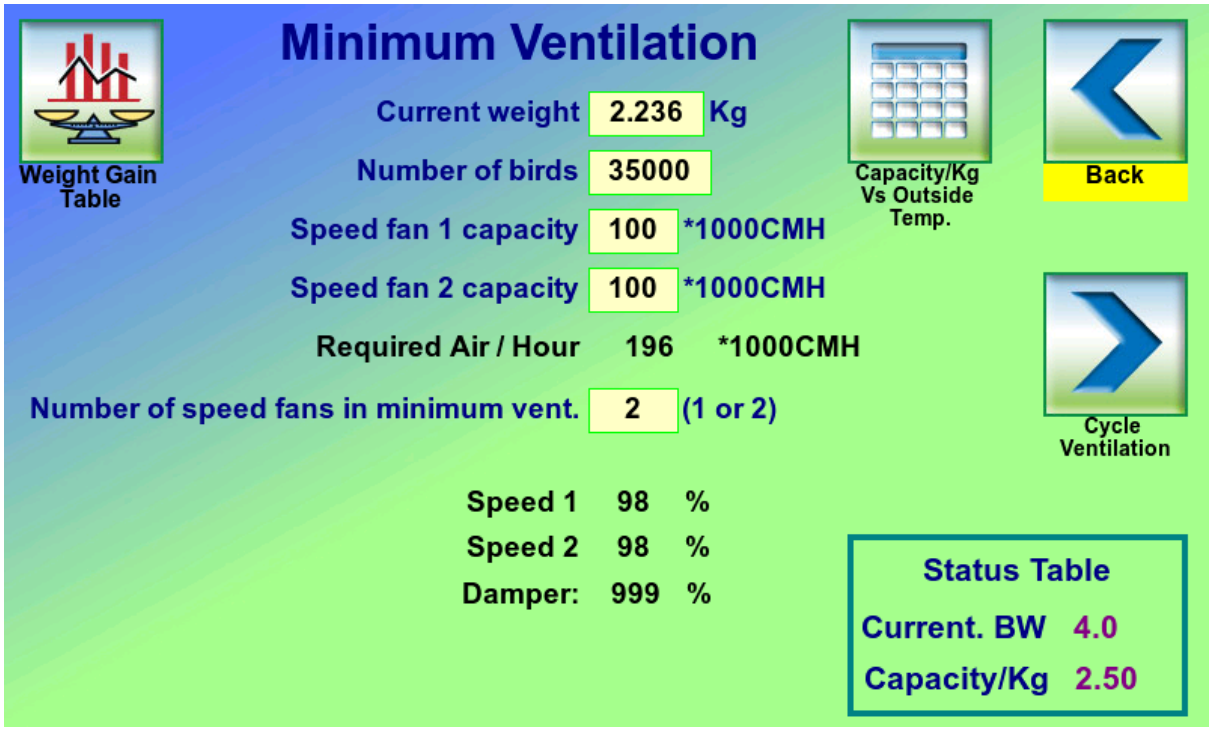
9.6.3 CO2 STARTUP DELAY

When the controller is powered on, this time setting is used before CO2 measurement starts. This is set in minutes and seconds.

9.6.4 CO2 STARTUP TIMER

Displays the remaining time for the *CO2 Startup Delay* time.

9.7 Minimum Ventilation Screen



9.7.1 Current WEIGHT

Weight of one bird as calculated from preset graph (Weight Gain Table on page 35) This value is updated every day by the weight gain table. The current weight can be here if needed. The daily gain of weight will be added from the preset weight graph data automatically.

9.7.2 NUMBER OF BIRDS

The current number of birds housed. This number is used to calculate the amount of air needed for the house. The number of birds is adjusted each time mortality is entered. See Daily Data / Mortality Update Screen on page 63.

9.7.3 SPEED FAN 1 CAPACTIY

Enter here the air capacity per hour for the variable-speed fan group in thousands of cm. For example: if the capacity of the fan group is 36000 CM/H, enter here 36.

9.7.4 SPEED FAN 2 CAPACTIY

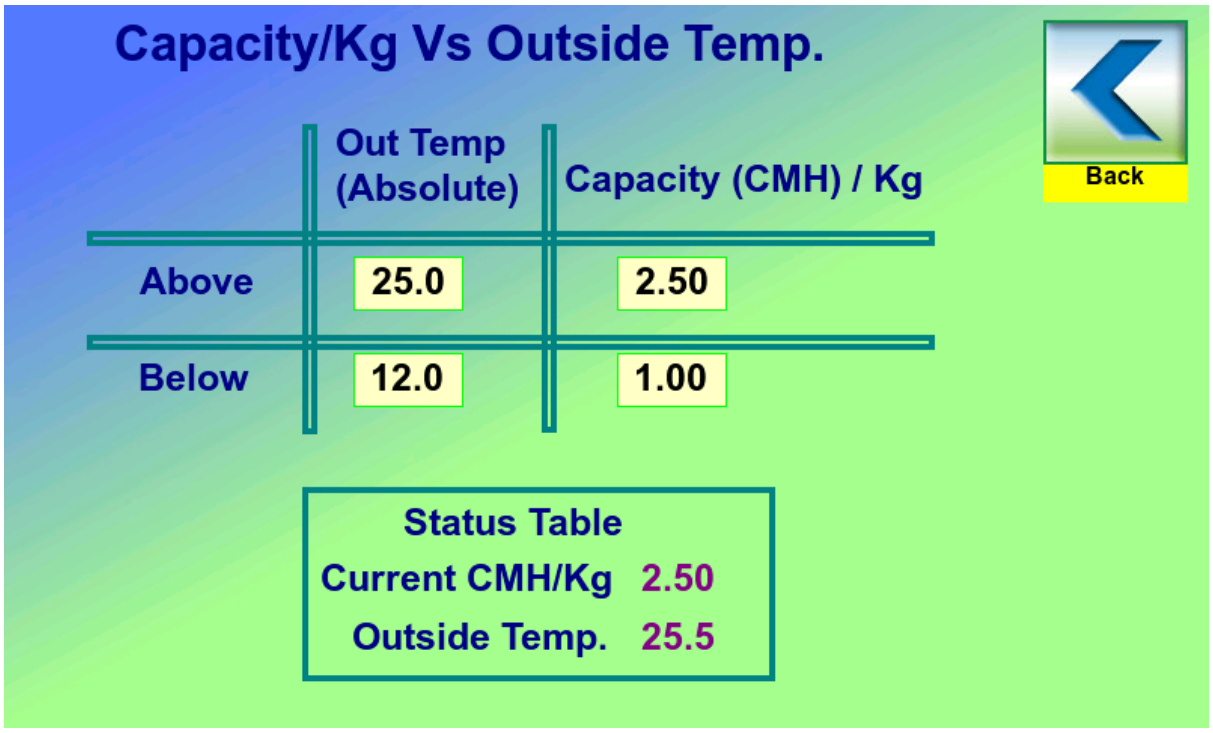
Enter here the air capacity per hour for the variable-speed fan group in thousands of cm. For example: if the capacity of the fan group is 36000 CM/H, enter here 36.

9.7.5 NUMBER OF SPEED FANS IN MINIMUM VENTILATION

Enter here which speed fan group or groups will run in minimum ventilation.

Enter 1 for group 1, 2 for group 2 and 12 for both groups.

9.8 Capacity/Kg vs Outside Temperature Screen

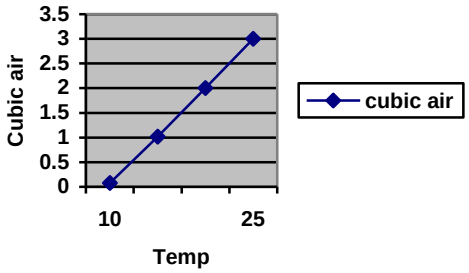


Use this to set up the minimum air per kilo required for minimum ventilation.

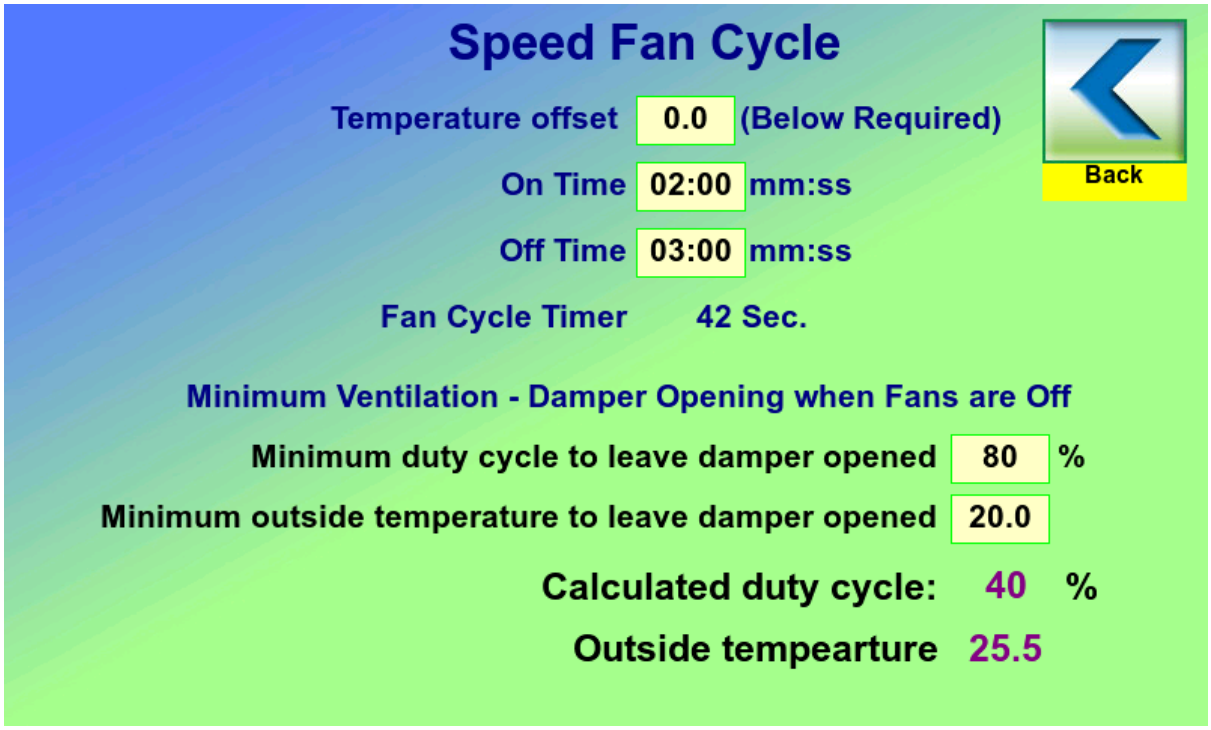
Out Temp (ABS). Under/Above	Enter here an absolute temperature. This temperature is the outside temperature
Min. Air/KG	This value is in cubic air per hour. Opposite the "Under" out temperature enter the amount of cubic air per hour that will be used in the minimum ventilation mode when the outside temperature is below the set temperature. Opposite the "Above" out temperature enter the amount of cubic air per hour that will be used in the minimum ventilation mode when the outside temperature is above the set temperature. When the outside temperature is between the two setting the cubic air per kg will be calculated in a linear graph.

Example:

Out temperature.	Min. Air Kg
Under: 10.0°	0.8
Above: 25.0°	3.0



9.9 Cycle Ventilation Screen



The variable speed fans are used for minimum ventilation. They can be set to run in a cycle On / Off mode. Use this screen to setup up the On / Off cycle.

When the house average temperature drops to 24.0° (requested less Temperature offset) the variable speed fans will start to run in a cycle mode of 1 minute on, 3 minutes off.

During the minimum ventilation off cycle the damper has two modes:

Remain open; if the calculated duty cycle is greater than the duty cycle set in Minimum duty cycle to leave damper open, the damper will remain open in the OFF cycle.

Close

Each time the cycle fans are in the off mode, the damper will close. If the calculated duty cycle is equal to or larger than this setting, the inlet will remain open.

9.9.1 TEMPERATURE OFFSET

This is an offset difference set below the requested house temperature. This temperature will start the variable speed fans operation in cycle mode.

The variable speed fans will run using the On / Off settings. See below on page 40.

9.9.2 ON TIME

On time in minutes and seconds for the variable speed fans.

9.9.3 OFF TIME

OFF time in minutes and seconds for the variable speed fans.

9.9.4 FAN CYCLE TIME

Displays the On / Off cycle time.

Example:

Requested house temperature: 25.0°

Temperature Offset: 1.0

On Time: 01:00

Off Time: 03:00

When the house average temperature drops to 24.0° (requested less Temperature offset) the variable speed fans will start to run in a cycle mode of 1 minute on, 3 minutes off.

During the minimum ventilation off cycle the inlet has two modes:

Remain open; if the minimum duty cycle is greater than set in the minimum duty cycle to leave damper open, the damper will remain open during the off cycle.

If the outside temperature is greater than the minimum outside temperature to leave damper open setting, the damper will remain open during the off cycle.

Close; if the minimum duty cycle is less than set in the minimum duty cycle to leave damper open, the damper will close during the off cycle.

If the outside temperature is less than the minimum outside temperature to leave damper open setting, the damper during close in the off cycle.

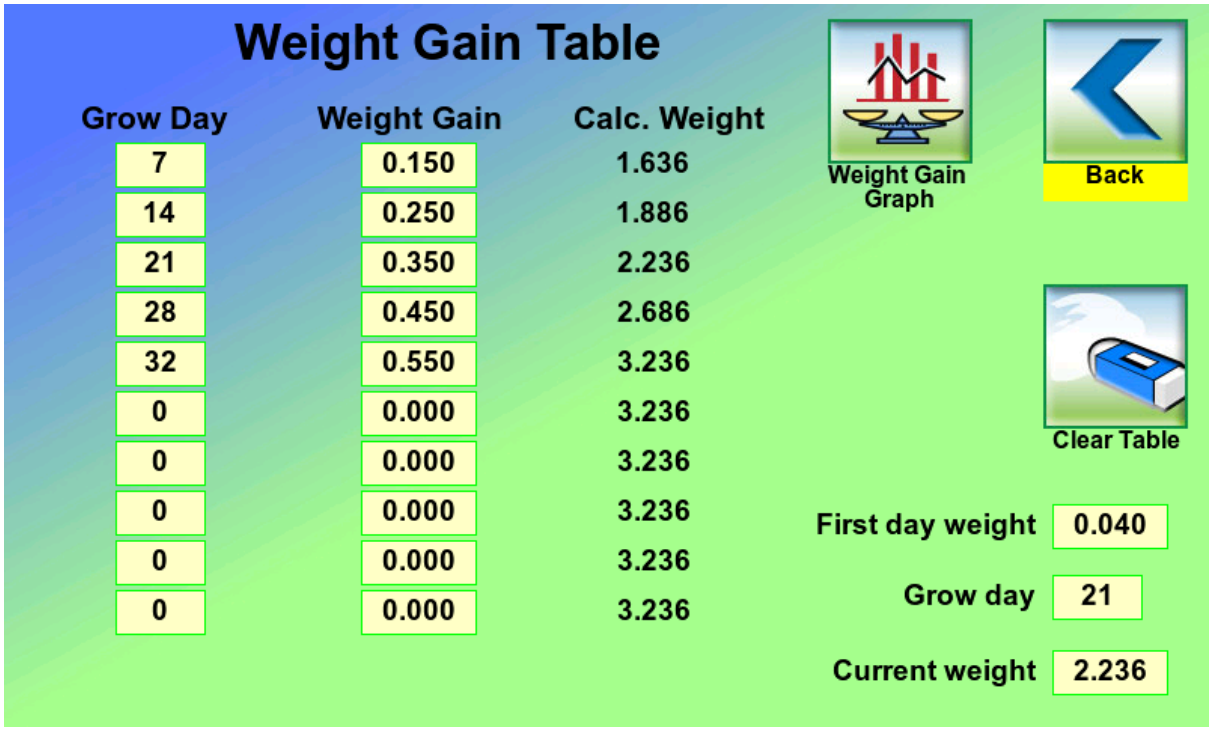
9.9.5 Minimum DUTY CYCLE TO LEAVE DAMPER OPEN

Set here the calculated duty cycle that that will leave the damper open during the off cycle.

9.9.6 MINIMUM OUTSIDE TEMPERATURE TO LEAVE DAMPER OPEN

Set here the minimum outside temperature that will leave the damper open during the off cycle.

9.10 Weight Gain Table



Use this table to calculate the expected average weight of one bird. This weight is used to calculate the minimum ventilation.

9.10.1 GROW DAY COLUMN

Enter here the age (day) of the birds for each weight increase. This is the age that the birds will be at, at the end of the first gain period. In the first edit box, do not enter 0 or 1.

9.10.2 WEIGHT GAIN COLUMN

Enter the bird weight increase over the number of days as set in the Grow day value column. In the first edit box do not enter 0 or 1.

9.10.3 CALCULATED WEIGHT COLUMN

The calculated weight at the day entered in the Day column.

9.10.4 FIRST DAY WEIGHT

Enter the weight of one bird at day one. This is the weight that will be set as the current weight when day 1 is entered in the grow day field

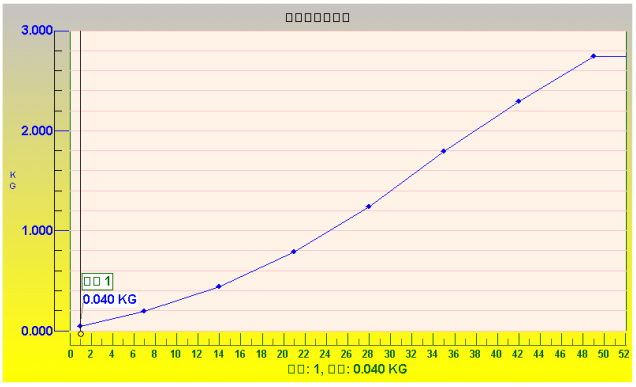
9.10.5 GROW DAY

This is the current grow day. It is incremented every reset-time. When a value of 1 is entered, the user is asked if the history and daily data should be cleared. The Requested-temperature and current weight will automatically receive the value entered in the First-day-temperature / weight parameters. Note: the grow-day is incremented at reset-time only if the time has passed midnight also.

Current weight.

The current bird weight (Kg). This value is used by the controller to calculate the amount of air that is needed in the house.

9.10.6 WEIGHT GAIN GRAPH



It is possible to change / adjust and see the weight gain table in a graph form.

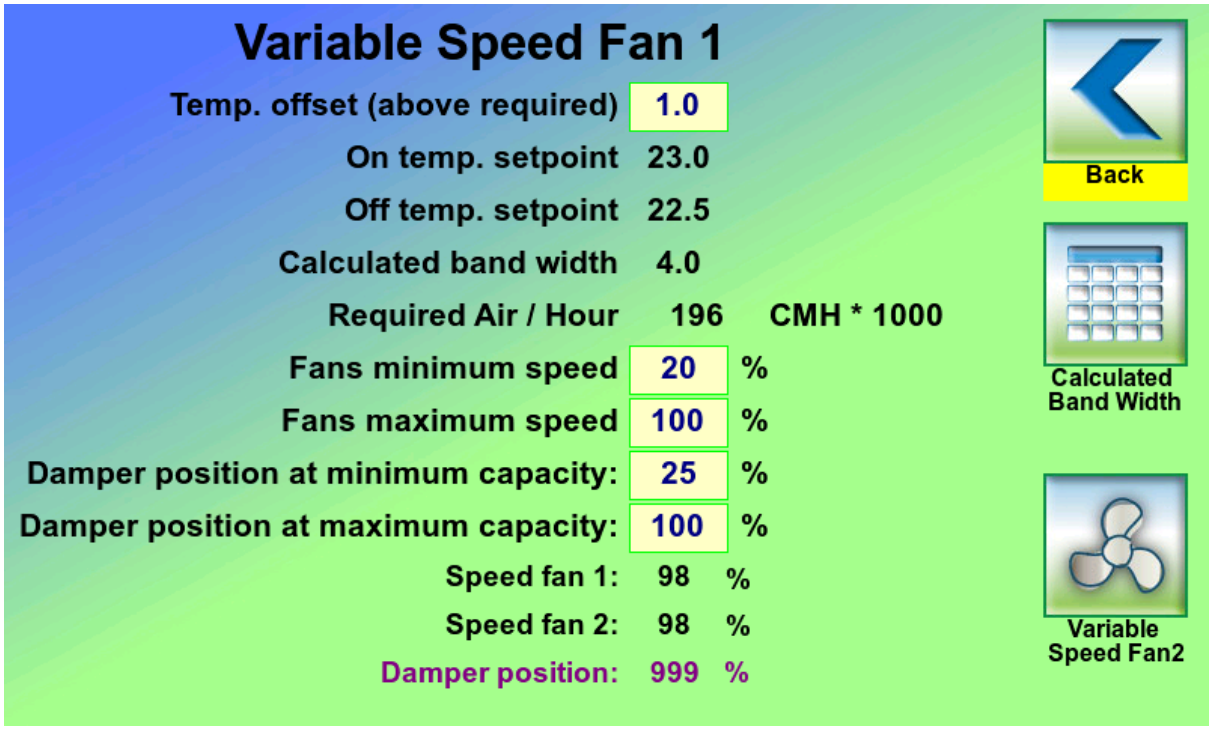
To enter a new value or move a point, place the cursor at the required place on the graph line.

Next press the **Star** button, the Menu window will open. To change a point, choose the Enter Temperature\Weight or the Move point menu items. Instead of using these menu items you can also press ENTER to start changing the point. To finish moving the point, press the ENTER button again.

When moving a point use the right and left arrows to change the point grow day and the up and down arrows to change the point value (temperature or weight).

Note: the point value of grow-day 1 can be changed only if the current grow-day is 1.

9.11 Variable Speed Fan Screen



9.11.1 TEMPERATURE OFFSET ABOVE REQUIRED

This is the temperature setting which the speed fans start to increase in speed from the minimum set speed according to the calculated band width.

9.11.2 FANS MINIMUM SPEED

This is the speed fan minimum speed.

9.11.3 FANS MAXIMUM SPEED

This is the speed fan minimum speed.

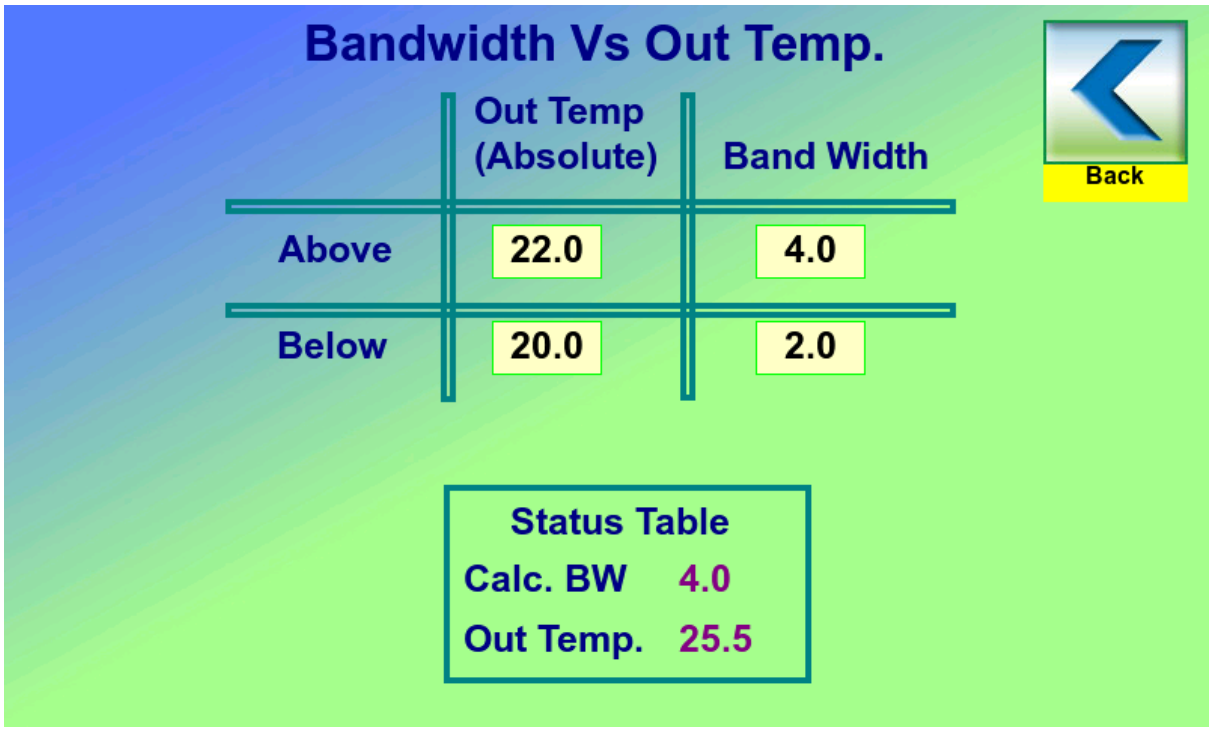
9.11.4 DAMPER POSITION AT MINIMUM CAPACITY

This is the damper position used when the speed fan is running at its minimum speed.

9.11.5 DAMPER POSITION AT MAXIMUM CAPACITY

This is the damper position used when the speed fan is running at its maximum speed.

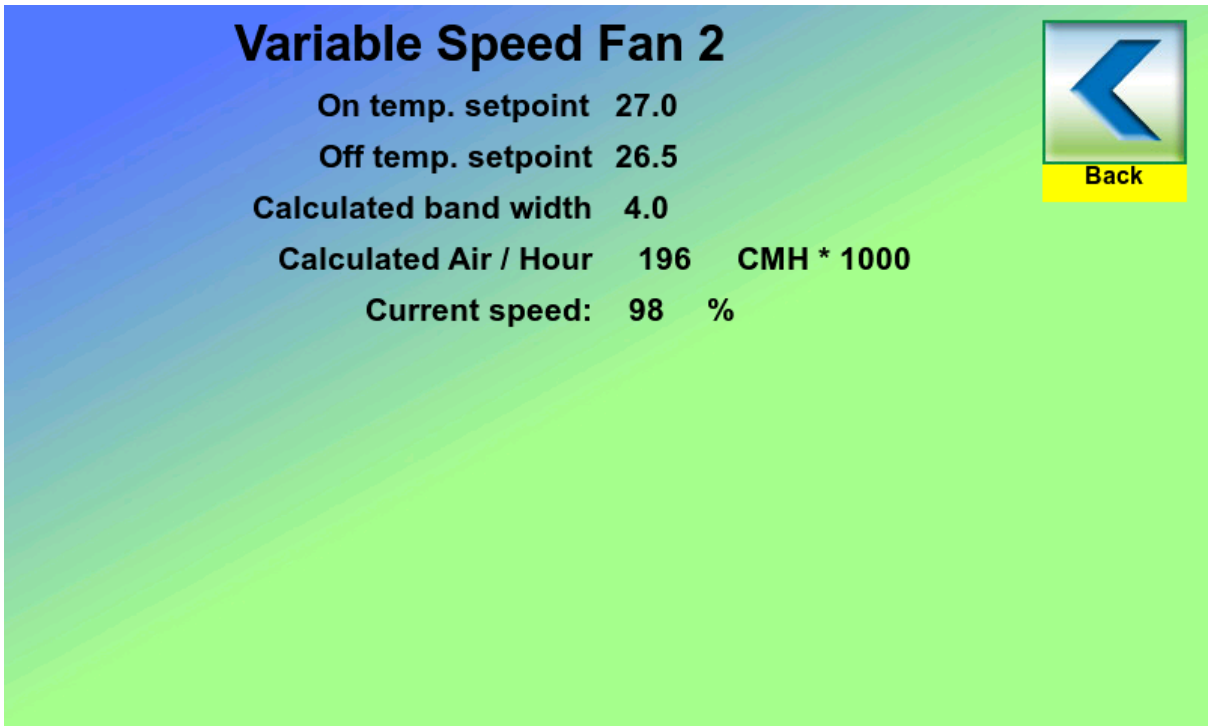
9.12 Calculated Band Width Screen



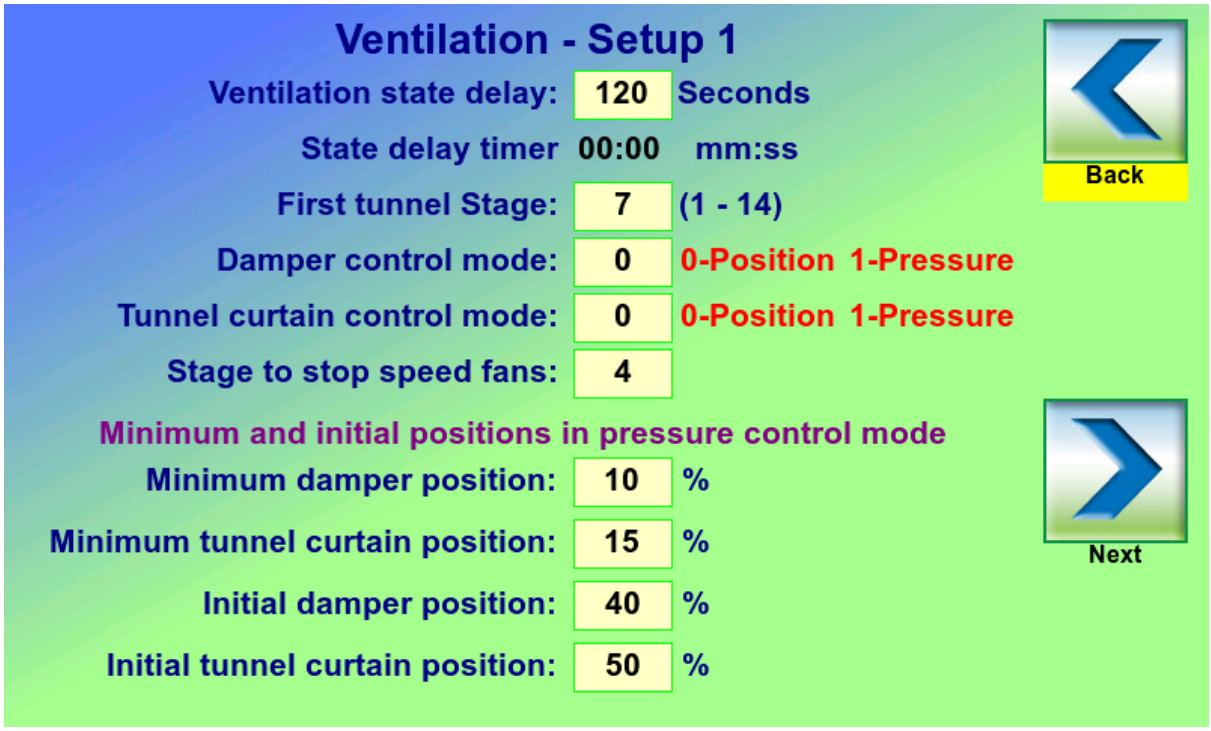
Bandwidth is the temperature band used to increase the speed fans, starting at the minimum set speed up to the maximum set speed.

9.13 Variable Speed Fan 2 Screen

This screen displays current calculated parameters.



9.14 Ventilation Setup



9.14.1 VENTILATION STATE DELAY

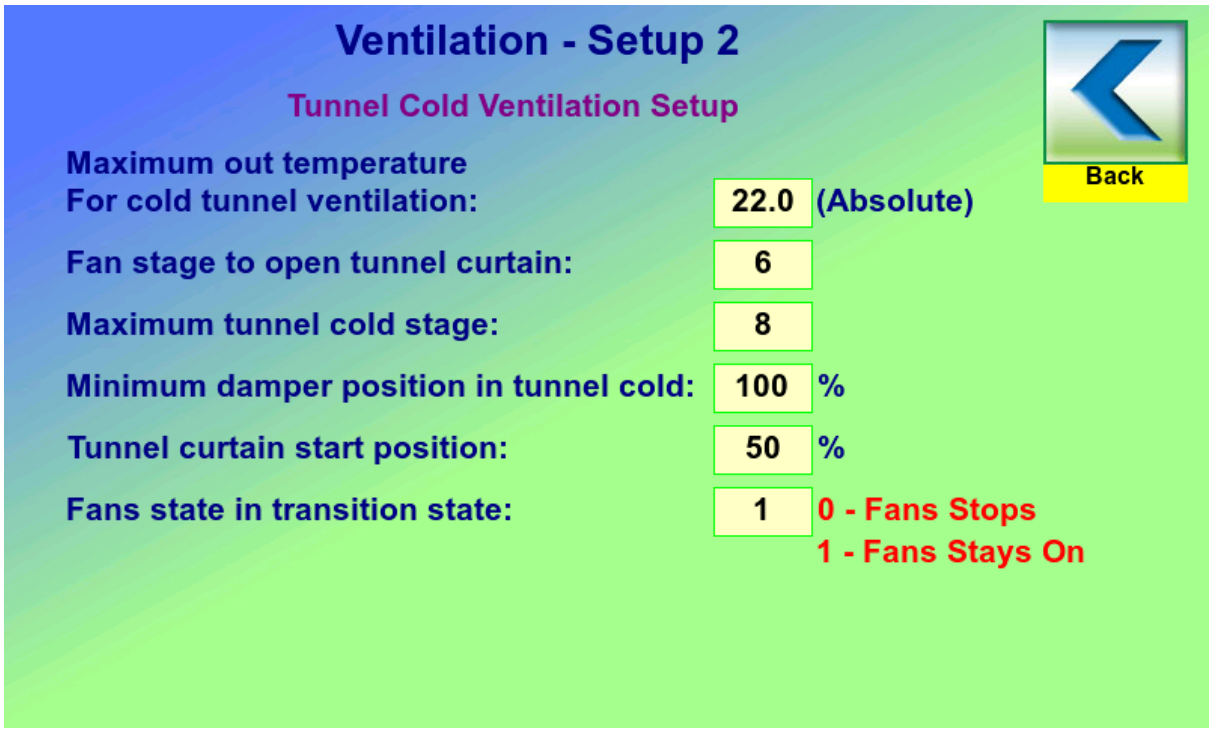
Delay time set in seconds. This is the minimum time the controller will stay in the current ventilation mode.

9.14.2 FIRST TUNNEL STAGE

This is the stage that will bring in tunnel ventilation. There are 3 ventilation options for tunnel ventilation.

Tunnel ventilation using the damper only. See cold tunnel ventilation.
Tunnel ventilation using the damper and tunnel curtain. See tunnel cold ventilation.
Tunnel ventilation using only the tunnel curtain.

9.15 Ventilation Setup 2



9.16 Cold tunnel ventilation:

Cold tunnel ventilation is when the control unit goes into tunnel ventilation mode but the outside temperature is too cold to open the tunnel curtain. The tunnel fans come on and work opposite the side dampers.

9.17 Regular tunnel ventilation

Regular tunnel ventilation is where the tunnel fans are running, the side dampers are closed and the tunnel curtain is open and is controlling the static pressure for the house.

9.17.1 MAXIMUM OUT TEMPERATURE FOR COLD TUNNEL VENTILATION

Set the outside temperature that cancels cold tunnel ventilation mode.

9.17.2 FAN STAGE TO OPEN TUNNEL CURTAIN

This is the ventilation stage that opens the tunnel curtain while in tunnel cold ventilation. The dampers reopen but will move to the set position as set in Minimum damper position in tunnel cold ventilation.

9.17.3 MAXIMUM TUNNEL COLD STAGE

This is the last stage for tunnel cold ventilation. The next stage cancels cold ventilation mode. The dampers close and the controller will bring air in only through the tunnel curtain.

9.17.4 MINIMUM DAMPER POSITION IN TUNNEL COLD

This is the damper opening when the controller is in cold tunnel ventilation and the tunnel curtain open stage is reached. The damper will open to this setting. If the current damper opening is larger than set here, the damper will remain in its current position.

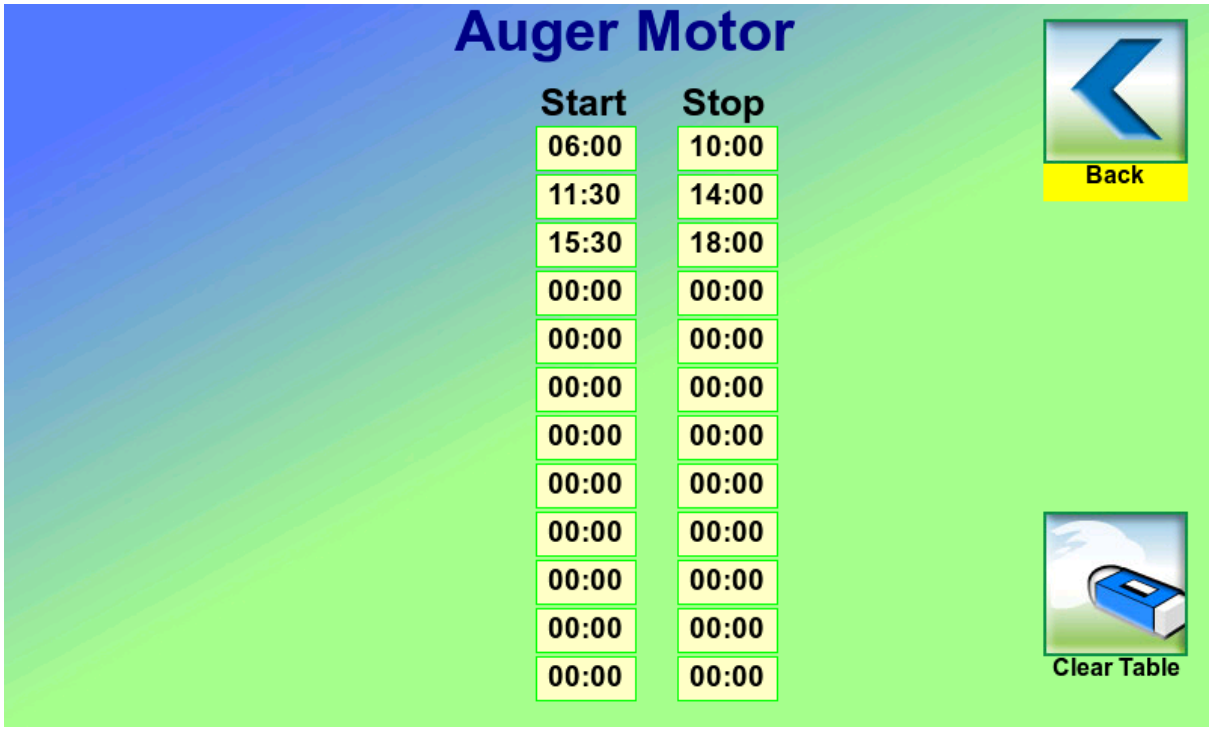
9.17.5 TUNNEL CURTAIN START POSITION

This is the tunnel curtain opening position when the fan stage to open tunnel curtain is reached.

9.17.6 FANS STATE IN TRANSITION STATE

When the controller changes ventilation modes (ex: speed fans with dampers > tunnel ventilation), there are two options for the fans. Enter 0 to stop fans while the dampers close and tunnel curtain open or 1 to leave the fans running during transitions.

10. Auger Screen

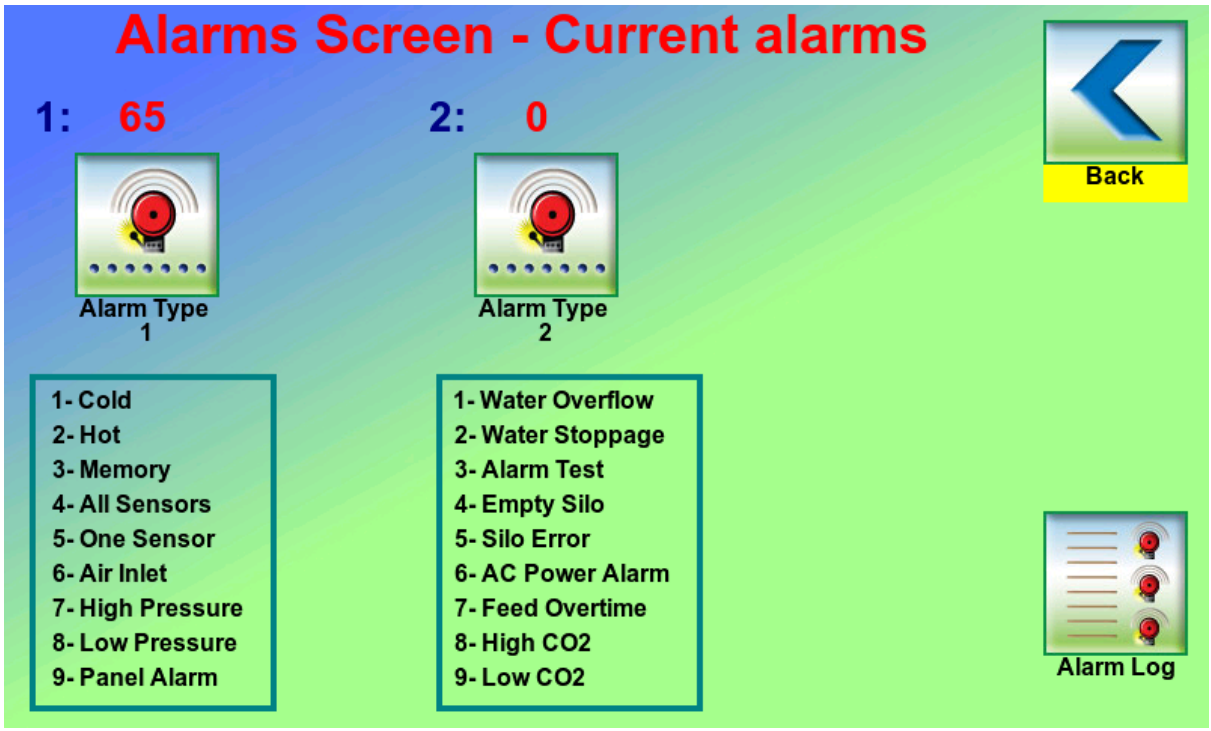


10.1.1 START / STOP

Use this screen to setup the feed auger operational times.

You can setup 12 On Off times over a 24-hour period.

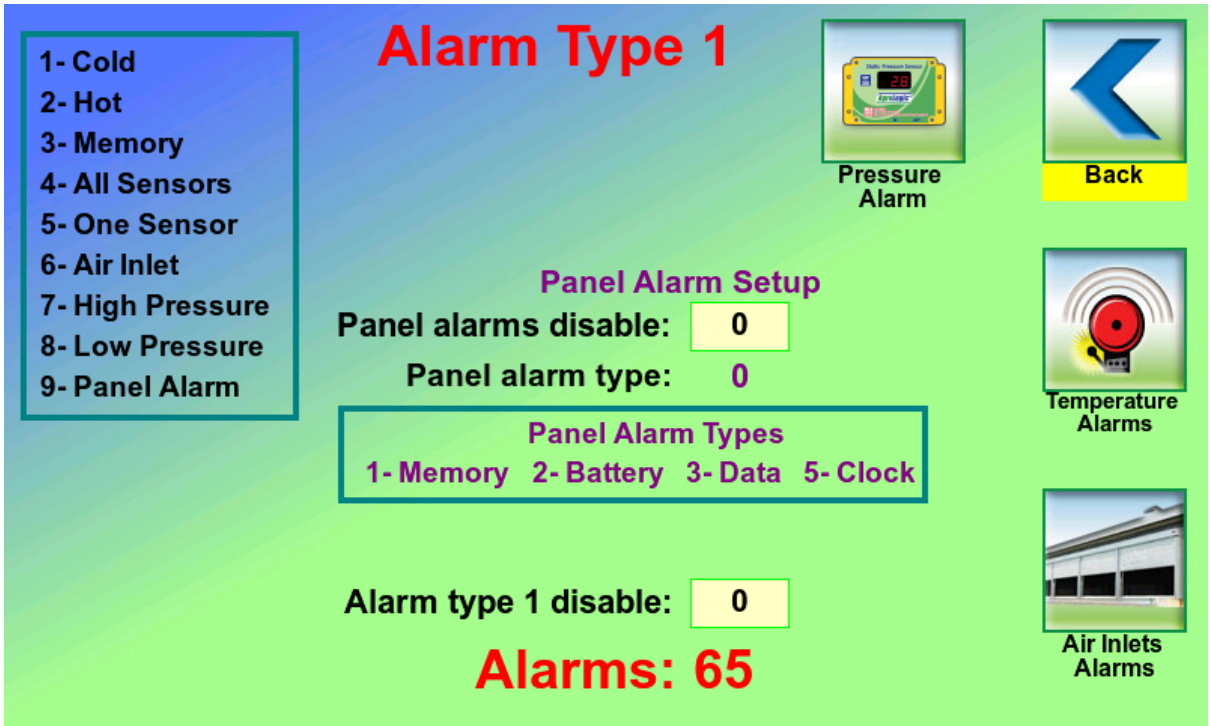
11. Alarm Screen



This screen displays the current alarm type.

Use the Alarm Type 1 and 2 cons to go to the alarm screens.

11.1 Alarm Type One Screen



11.1.1 PANEL ALARM (#9)

There are 4 types of panel alarms: memory alarm, battery alarm, data alarm and clock alarm. When one or more of these panel alarms occur, the Panel Alarms displays the number 9 and the Panel alarm type displays which of the 4 types occurred according to this table:

Table: Panel Alarm Types

Panel Alarm Type	Alarm Type Number
Memory	1
Battery	2
Data	3
Clock	5

For example, if panel alarm type Battery occurs, the **Panel alarm type** displays '2' and if both Battery and Clock alarms occur the **Panel alarm type** displays '25'.

Here is a description of each panel alarm type:

Memory (#1): this alarm type occurs when important parameters that are saved in the permanent memory of the panel have been corrupted. This alarm can also occur once after the panel screens have been replaced.

Battery (#2): this alarm occurs when the panel's rechargeable battery is faulty and needs replacing.

Data (#3): this alarm occurs when important parameters that are saved in the volatile memory of the panel have been corrupted.

Clock (#5): this alarm occurs when important parameters that are saved in the volatile memory of the panel have been corrupted.

When Memory or Data alarms occur, it means that these parameters might have been changed.

Required Temperature Reduction Table parameters.
Weight Gain Table parameters.
Required temperature.
Current weight
Grow day.

11.1.2 CLEARING THE PANEL ALARMS

Clearing the panel alarm can be done by entering the number of alarm type that occurred in the Panel alarms disable. For example, to clear the Memory alarm, enter the number 1 and to clear the Data alarm, enter the number 3. The panel alarm can also be cleared by entering the number 9 in the parameter Alarm type 1 disable.

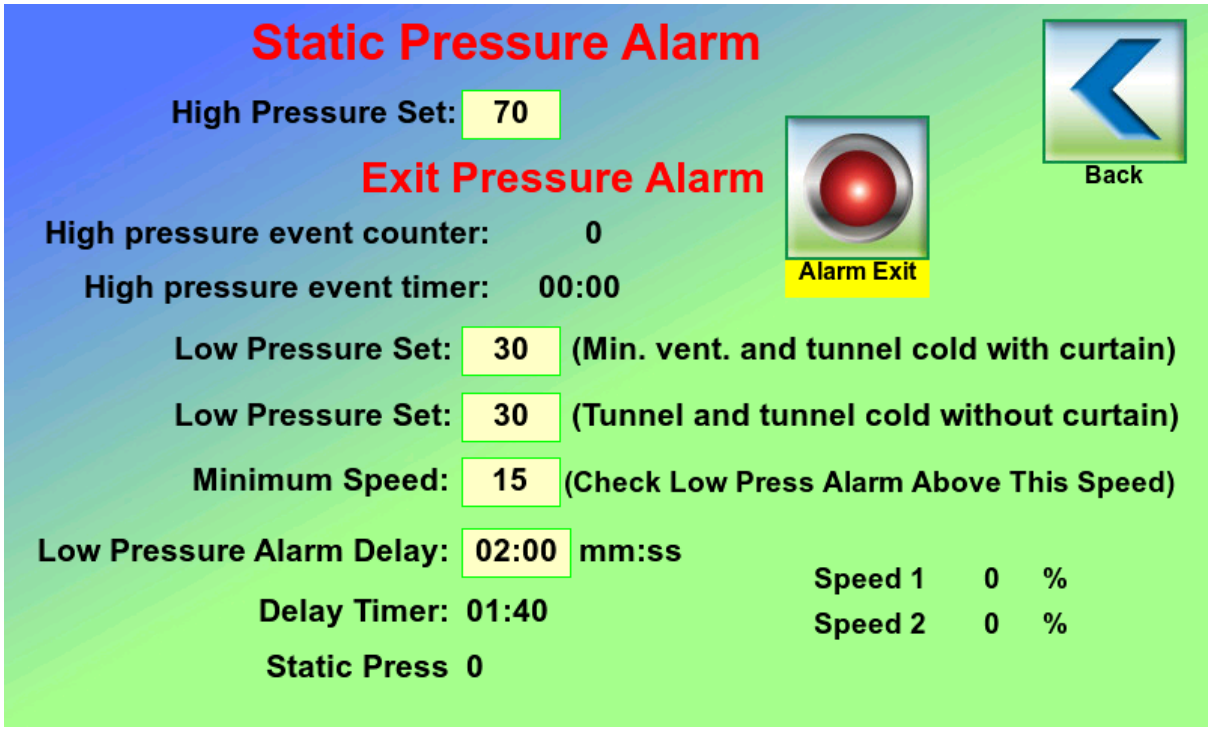
11.1.3 DISABLING PANEL ALARMS

Out of the 4 panel alarm types, only the Battery and Clock alarms can be disabled. To disable the Battery alarm, the number 2 must be entered in the Panel alarms disable. To disable the Clock alarm, the number 5 must be entered in the Panel alarms disable. A summary of the panel alarm disable options is shown in the table below.

Table: Panel Alarms Disable Options

Panel Alarm Type	Can be disabled?
Memory	No
Battery	Yes
Data	No
Clock	Yes

11.2 Pressure Alarm Screen



There are 2 static pressure alarms: Low Pressure (#8) and High Pressure (#7). The static pressure alarms are part of Alarm Type 1 alarms.

11.2.1 HIGH PRESSURE ALARM

The High-Pressure alarm occurs when the measured static pressure in the house is above the value entered in the High-pressure alarm level for duration of 30 seconds. When the alarm occurs, the tunnel curtain and dampers will open to 30%.
To release the pressure alarm, click on the High-Pressure Alarm Exit icon. 

11.2.2 LOW PRESSURE ALARM

The Low-Pressure alarm occurs when the measured static pressure in the house is below the values entered in the Low-pressure alarm levels.

11.2.3 LOW PRESSURE SET (MIN VENT AND TUNNEL COLD WITH TUNNEL CURTAIN)

Enter here the required minimum static pressure level while in minimum ventilation and cold tunnel with tunnel curtain.

11.2.4 LOW PRESSURE SET (TUNNEL AND TUNNEL COLD WITHOUT TUNNEL CURTAIN)

Enter here the required minimum static pressure level while in tunnel ventilation and cold tunnel with tunnel curtain.

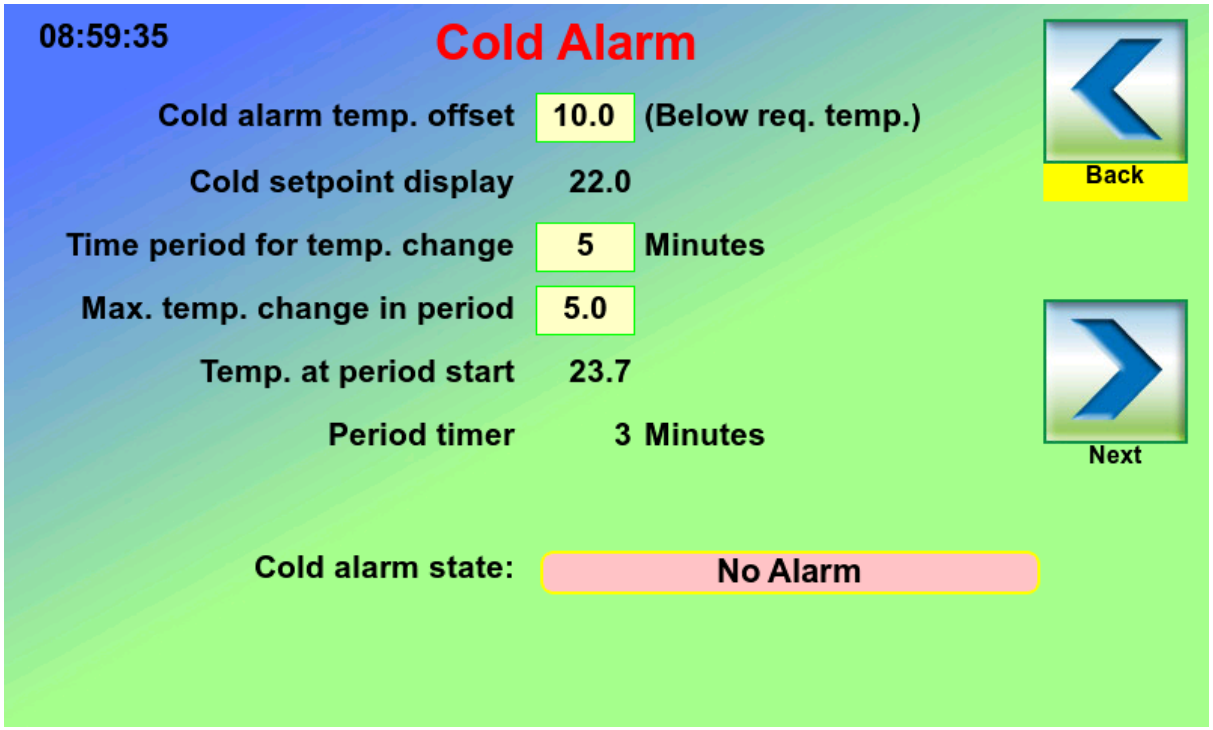
11.2.5 MINIMUM SPEED

Check low pressure only when the speed fan is running above this percentage.

11.2.6 LOW PRESSURE ALARM DELAY

Low-pressure alarm delay is used to set the duration in which the measured pressure has to be lower than the levels for the alarm to occur. The Low-pressure alarm delay timer display shows the time that is left until the alarm occurs. The alarm is cleared automatically when the static pressure goes above the level set in this screen.

11.3 Cold Temperature Alarm Screen



11.3.1 COLD ALARM TEMP OFFSET

This parameter defines a temperature level below the required temperature. For example: if the required temperature is 23.6 and the Cold alarm temp**.** is set to 5.0, the temperature level

for the alarm is 18.6. This level is shown in the Cold setpoint display. When the average temperature is below 18.6, the alarm occurs. The alarm is automatically cleared when the average temperature in the house goes above 18.6.

11.3.2 TIME PERIOD FOR TEMP. CHANGE

Set here a time in minutes. Over this time period, if the temperature decreases more than what is set in the *Max. Temp Change In Period*, the alarm will be activated.

11.3.3 MAX. TEMP CHANGE IN PERIOD

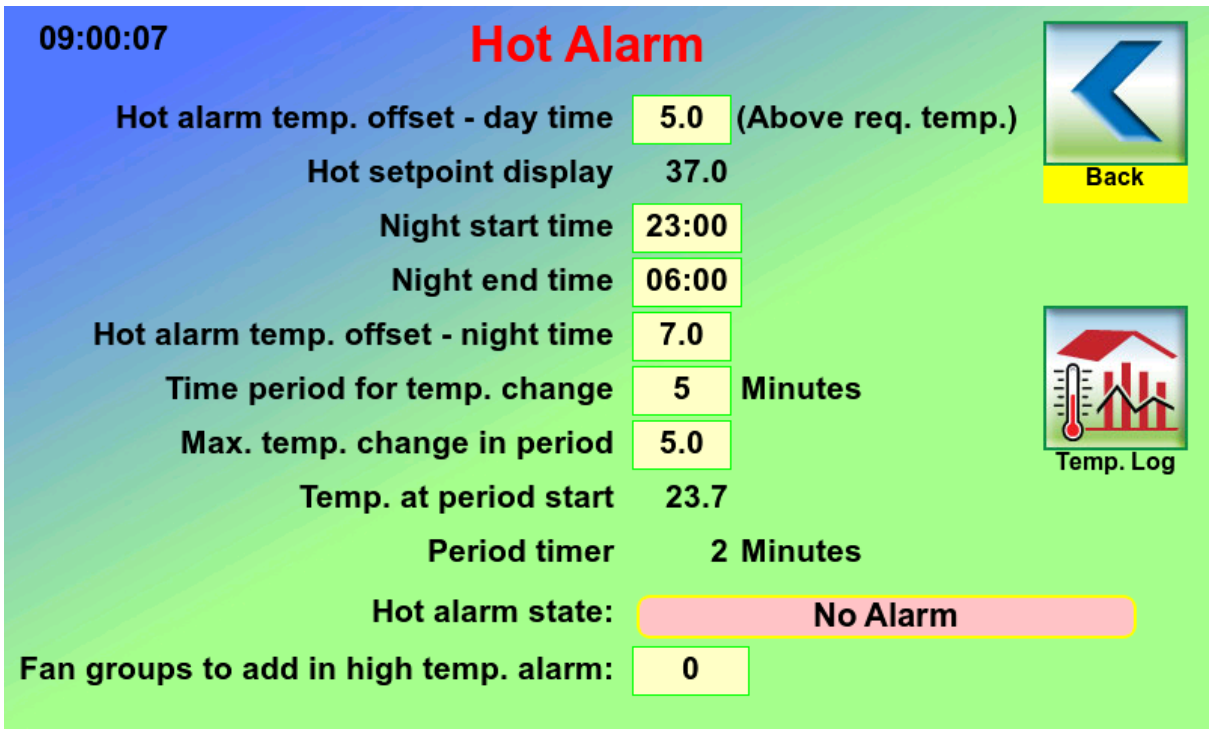
Set here the temperature change used for the *Max. Temp Change In Period.*

Example:
Required temperature: 23.5 degrees
Time period for temp change: 2 minutes
Max temp change in period: 3 degrees

If over 2 minutes the house temperature decreases by 3 degrees (or more), the alarm will be activated.

NOTE: Cold alarm can happen in 2 of the above-mentioned scenarios. The first, is when the house temperature reaches the offset point. The second is when there is a sharp decrease in the house temperature in a certain period. It is possible to disable the cold alarm only if the second scenario takes place.

11.4 Hot Temperature Alarm Screen



11.4.1 HOT ALARM TEMP OFFSET-DAY TIME

The hot alarm function is activated based on a temperature level calculated by adding the 'Hot alarm temp' parameter to the 'required temperature.' For example: Given a required

temperature of 23.6°C and a 'Hot alarm temp' setting of 12.0°C, the hot alarm setpoint is 35.6°C. An alarm condition is initiated when the average temperature surpasses this setpoint (35.6°C) and is automatically reset when the average temperature drops below the setpoint. It is important to note that these parameters are only valid for daytime operation; separate parameters govern nighttime behavior.

11.4.2 NIGHT START TIME AND END TIME

Night time periods can be defined to activate an alternative hot alarm temperature offset. Enter the start and end times (hours) for this period

11.4.3 HOT ALARM TEMP OFFSET-NIGHT TIME

Enter the night time temperature differential above the required house temperature. The alarm activates when the house temperature exceeds this level."

11.4.4 TIME PERIOD FOR TEMP CHANGE

The mode used in the cold alarm is also used for the hot alarms, to activate the alarm in case there is a sharp increase in the house temperature in a certain time. Set here time in minutes to decide the period. If in this period, the temperature will increase in more than what is set in the max. temp change in period, then the alarm will go on.

11.4.5 MAX. TEMP CHANGE IN PERIOD

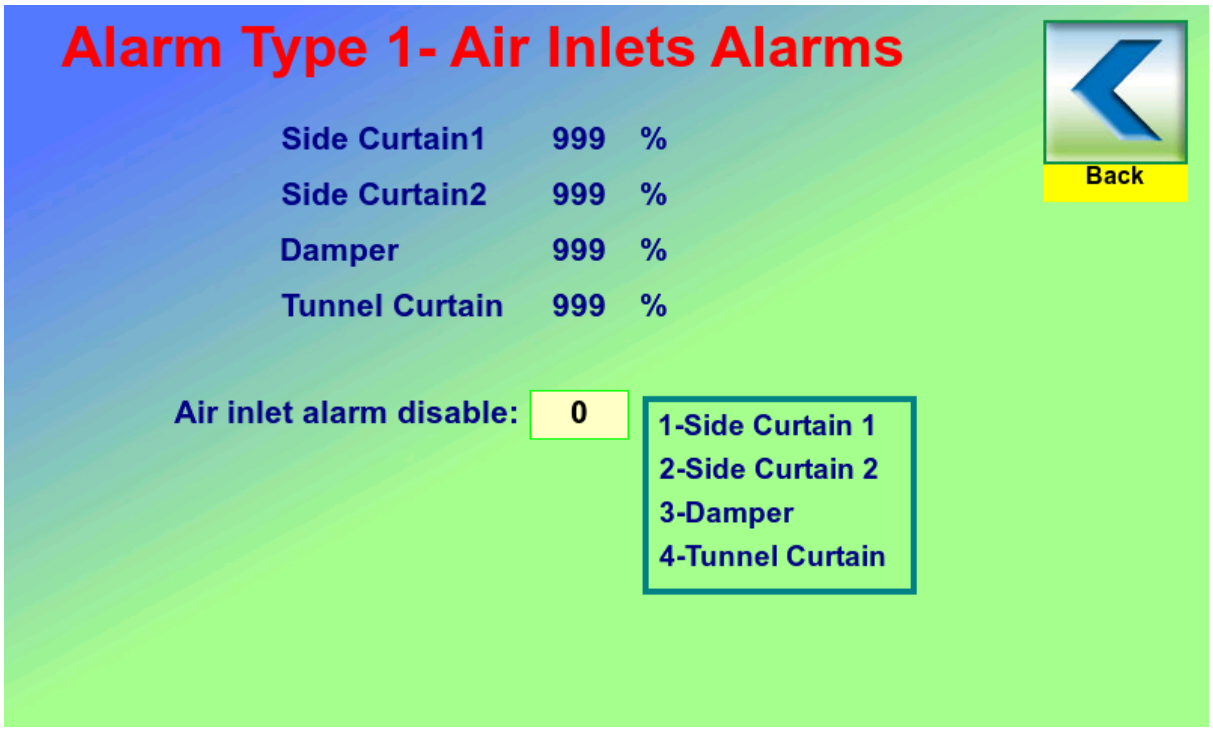
Set here the temperature increase, that if will take place in the time period we have defined, will trigger the alarm.

Example:
Required temperature: 23.5 degrees
Time period for temp change: 3 minutes
Max temp change in period: 3 degrees

The above means that if in any period of 3 minutes the house temperature will increase by 3 degrees (or more), the alarm will be triggered and go on. In this case, if in a period of 3 minutes the house temperature will decrease to the level of 26.5 degrees, then it will trigger the alarm.

NOTE: Hot alarm can happen in 2 of the above-mentioned scenarios. The first, is when the house temperature reaches the offset point. The second is when there is a sharp decrease in the house temperature in a certain period. It is possible to disable the cold alarm only if the second scenario takes place.

11.5 Air Inlet Alarm Screen



This screen shows the current opening for the side curtains, damper and tunnel curtain.

11.5.1 AIR INLET ALARM DISABLE

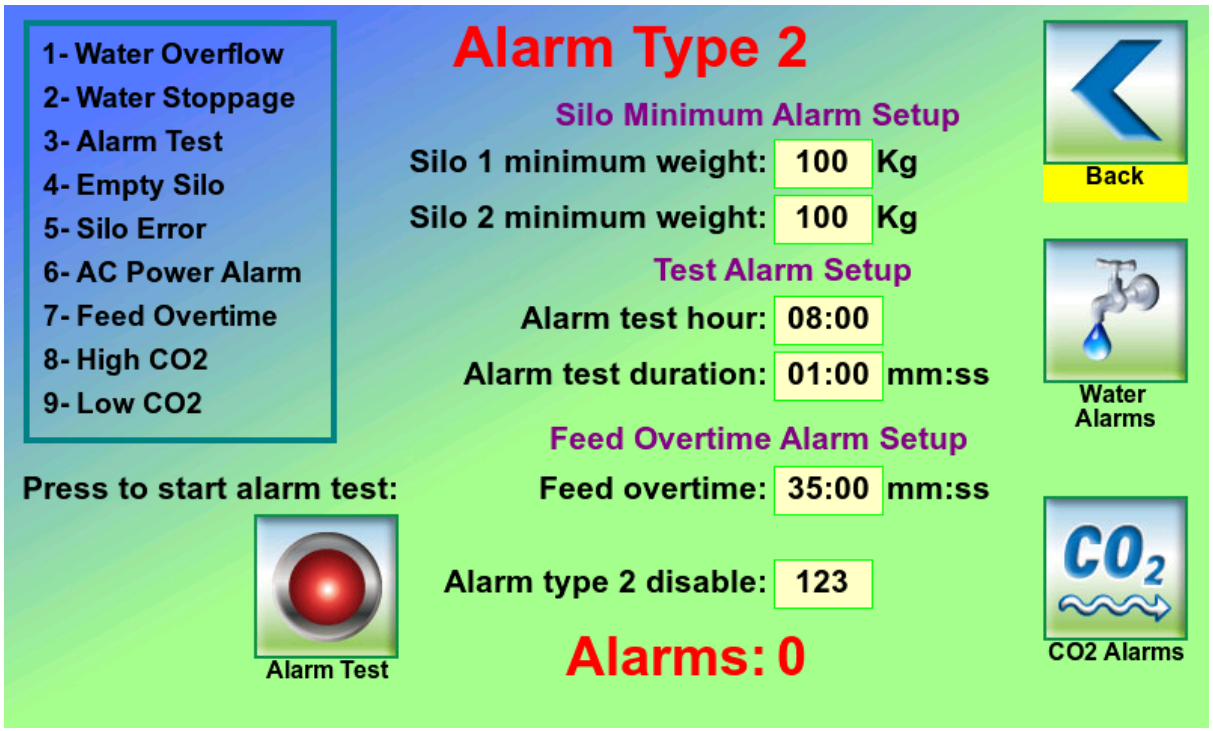
Enter 1 to disable curtain 1 alarm.

Enter 2 to disable curtain 2 alarm.

Enter 3 to disable the damper alarm.

Enter 4 to disable the cool curtain alarm.

11.6 Alarm Type Two Screen



11.6.1 SILO 1 / 2MINIMUM WEIGHT

The weight entered here will be used as the minimum silo weight. Weight less than this will activate the alarm relay.

Use the following 2 setting to test daily the alarm relay.

11.6.2 ALARM TEST HOUR

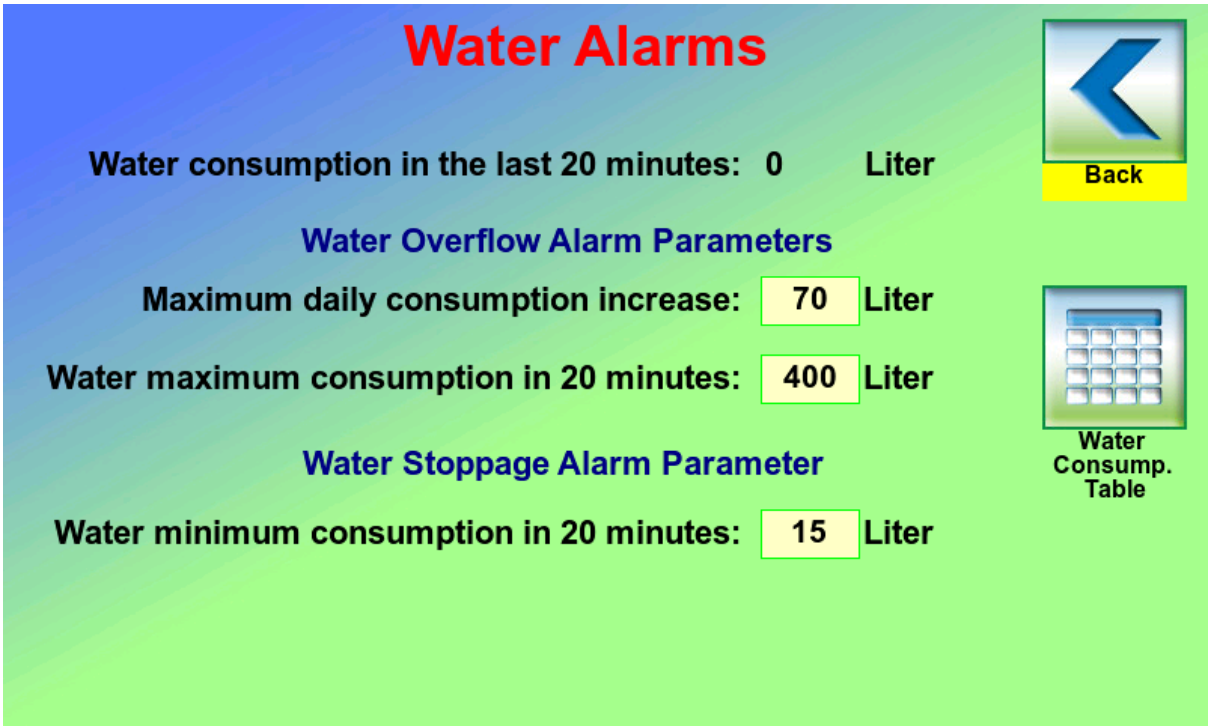
Time of day the test alarm will activate the alarm relay

11.6.3 ALARM TEST DURATION

Length of time the alarm relay will remain active.

.

11.7 Water Alarm Screen



11.8 Water overflow alarm parameters

The controller monitors water usage in 20-minute intervals, comparing current consumption to the previous day's. Alarms trigger under two conditions:

1. If today's 20-minute consumption exceeds yesterday's by the amount set in 'Water daily consumption increase in 20 minutes.'
2. If the 20-minute consumption exceeds the limit in 'Water maximum in 20 minutes.'

Set 'Water Addition' to 0 for the first 24 hours to enable baseline recording.

11.8.1 WATER MAXIMUM CONSUMPTION IN 20 MINUTES.

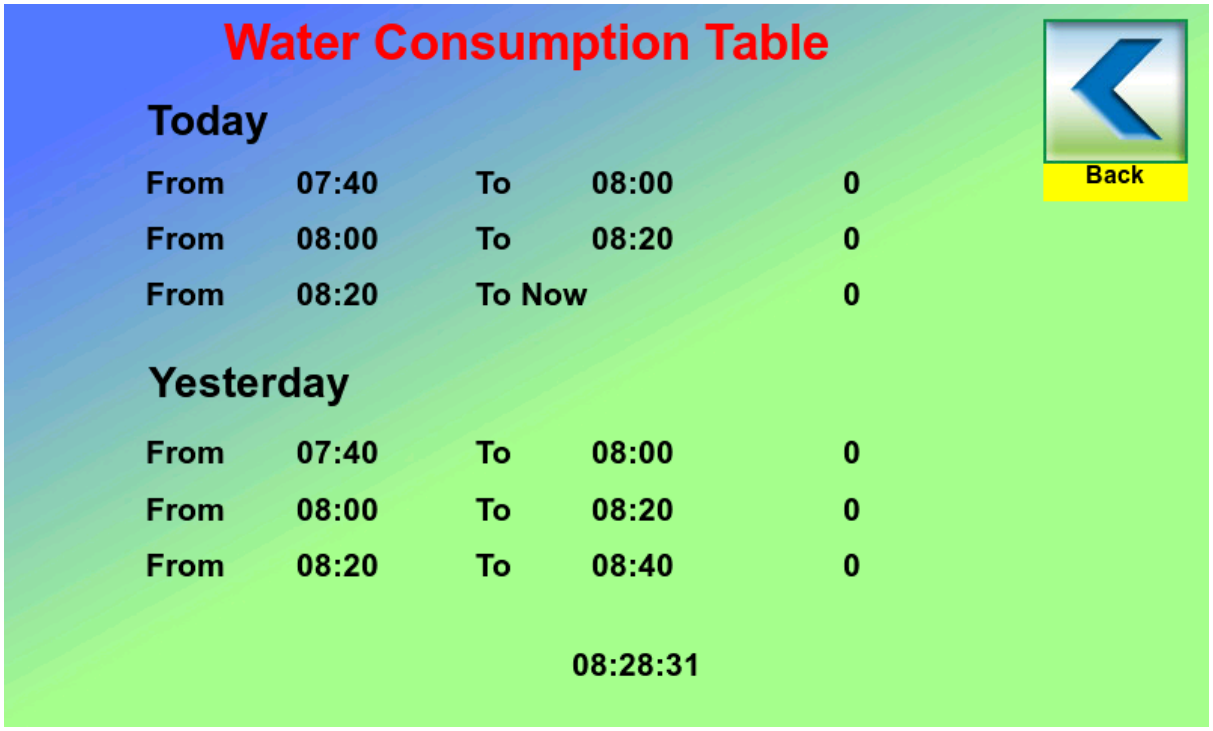
Water maximum in 20 minutes. Any consumption larger than this will be considered a water overflow.

11.9 Water Stoppage Alarm

11.9.1 WATER MINIMUM CONSUMPTION IN 20 MINUTES.

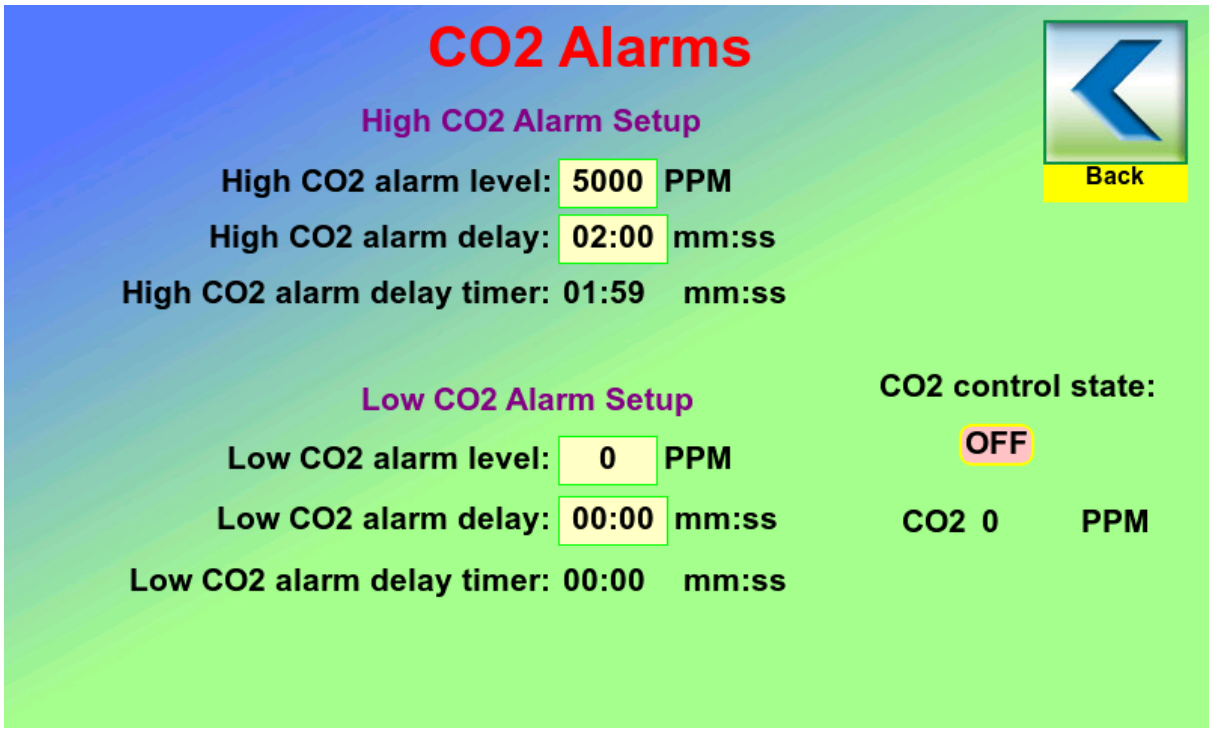
If the total water consumption over any 20 minutes is less than the value entered in *Water minimum in 20 minutes*, the alarm will be activated (minimum water consumption is not compared to yesterday's consumption and is only active when the light relay is on).

11.10 Water Alarm Consumption Table Screen



The water consumption table shows water usage every 20 minutes and compares it to the same time yesterday. This helps identify normal consumption patterns to set accurate water alarm levels and spot any unusual usage that triggered an alarm

11.11 CO2 Alarm Screen



11.11.1 HIGH CO2 ALARM LEVEL

Enter the maximum CO2 level for the house. Any reading above this level will set off the High CO2 level alarm and activate the alarm relay.

The high level alarm will bring in the next ventilation stage to help reduce the CO2 level.

11.11.2 HIGH CO2 ALARM DELAY

This is a time setting in minutes and seconds used as a delay before activating the High level CO2 alarm.

11.11.3 LOW CO2 ALARM LEVEL

Enter the minimum CO2 level for the house. Any reading below this level will set off the Low CO2 level alarm and activate the alarm relay.

11.11.4 LOW CO2 ALARM DELAY

This is a time setting in minutes and seconds used as a delay before activating the Low level CO2 alarm.

12. Silo Screen

12.1.1 CURRENT WEIGHT SILO 1/ 2

Current silo weight in Kg.

12.1.2 LAST FILL

The silo last filling in Kg.

12.1.3 SILO STATE

Normal; All is in order with the feeding system.

Detecting Fill; the feeding system has detected an increase of 300 kg or more in the feed silo weight. The program reacts to this as if the feed silo is being filled with feed.

Fill; the feed silo is being filled. The program will not allow the feed auger to run while it's in the Fill detect state.

Zero Calibration; the feed silo is being calibrated to zero.

Weight Calibration; the feed silo is being calibrated to a known weight.

Calibration Error; the calibration process did not succeed.

Unused; the feeding system is in this state while between batch times.

12.2 Silo Zero Calibration Screen

In order for the controller to weigh properly, first the system must be calibrated.

The Silo A/D load cell junction box is measuring the input from the load cells and converting it to a number that is transmitted to the Image III for processing.

When the silo is empty, this number is related to the ZERO weight, lets call it Z.

The load cell constant is the multiplier that must be used to display the correct weight, lets call it M.
The weight displayed on the Image III is calculated by the following formula:
(X-Z)*M where X is the output from the junction box.
When X=Z then the silo is empty, and the display is 0000.
In order to have a calibrated system; we must calculate Z and M. This can be done as follows:

Make sure the silo is empty.

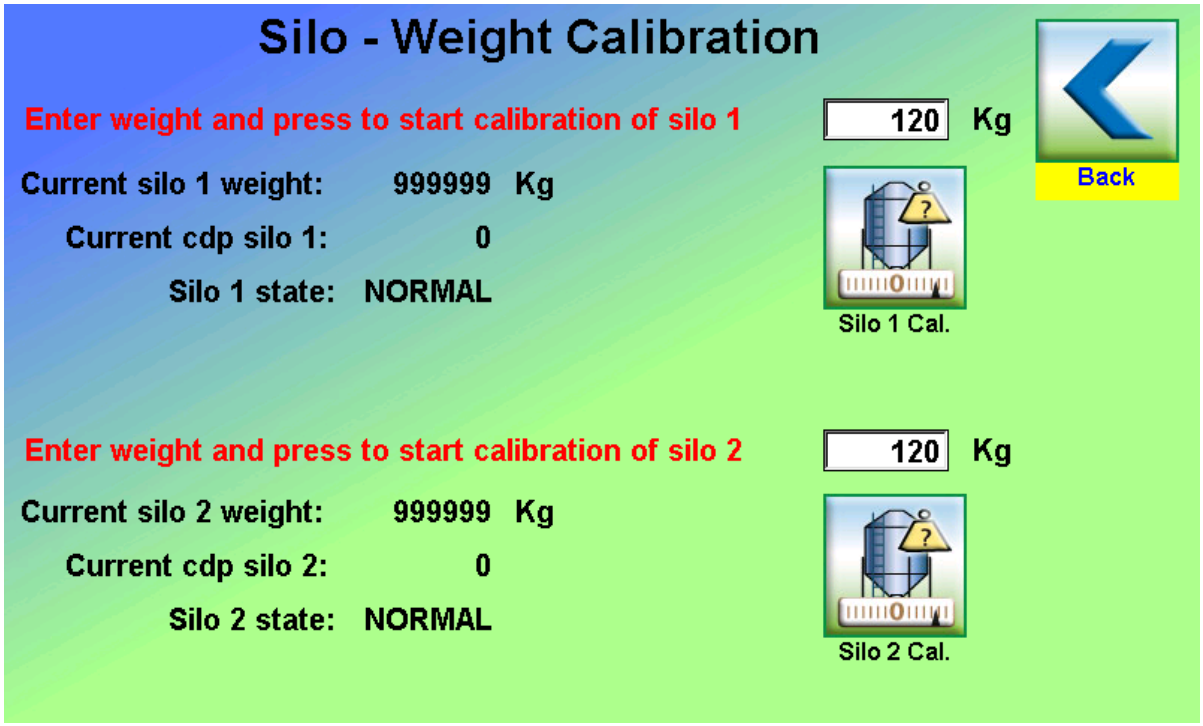
To start the zero-calibration process for silo 1, press on the Zero Cal 1 icon. To start the zero-calibration process for silo 2, press on the Zero Cal 2 icon

This calculates the Zero (Z) number automatically and stores it in the memory.

This number is constant for the installation. If it is changed for some reason, you can reenter it manually in the Constant Screen.

*Please record and save this number for future reference.

12.3 Silo Weight Calibration Screen



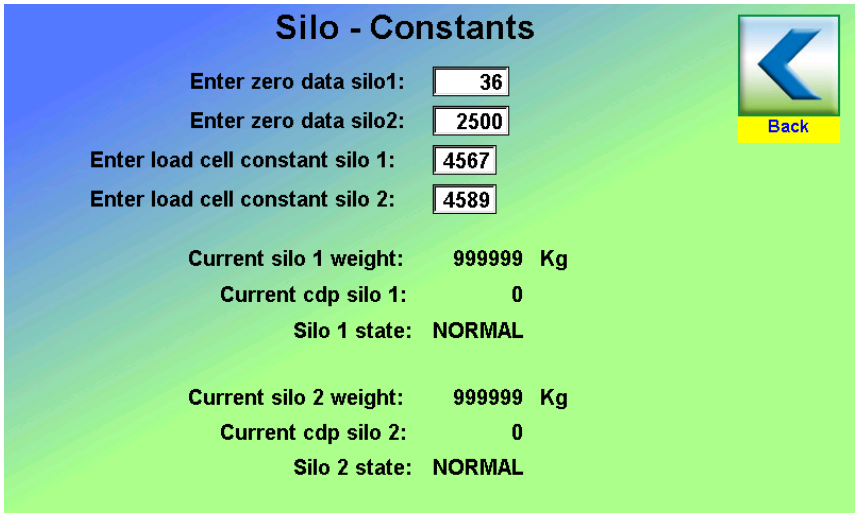
Once the zero calibration has been done, it is important to do a weight calibration.

Fill the silo with an accurate known weight. Enter this weight in the silo weight edit box.

The more exact the weight, the more precise the silo weighing will be.

Enter weight and press on the Silo Icon to start calibration of silo 1/2:

12.4 Silo Constants Screen

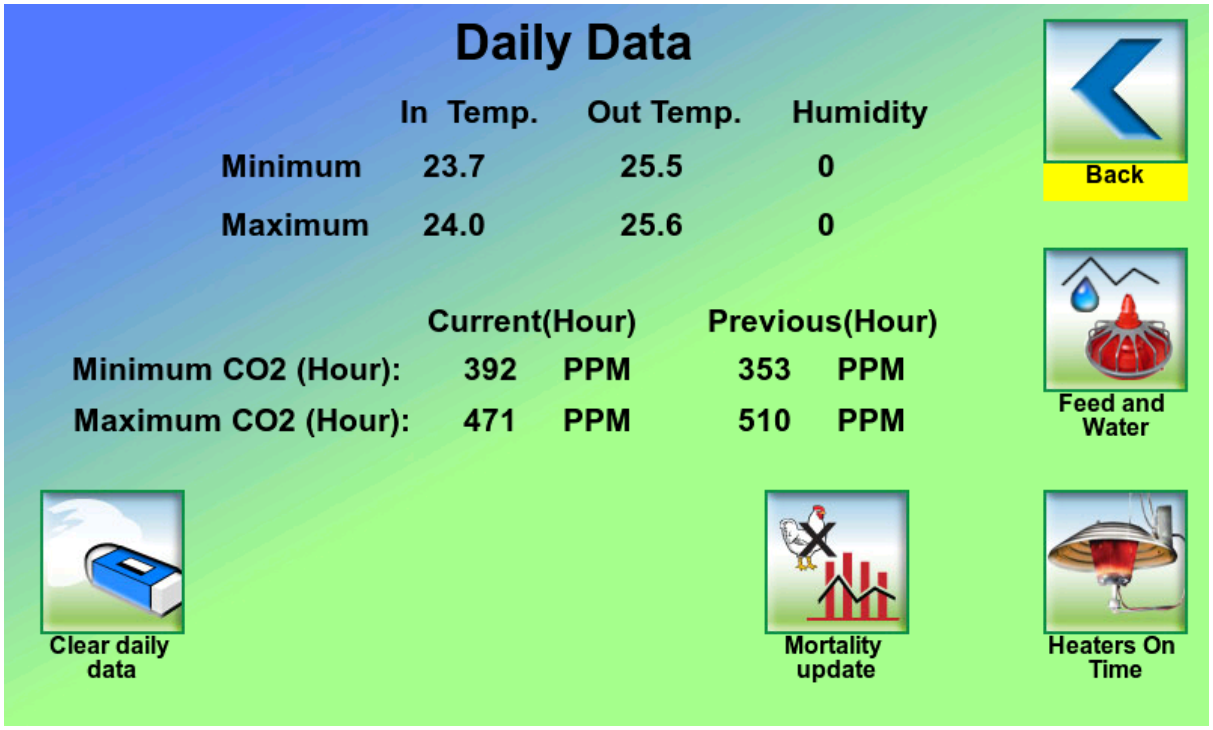


The Zero and load cell constant numbers are recorded automatically after Zero and Weight calibration has been done.

If for some reason the silo weighting program goes into an error alarm, check the zero and load cell constants. If they have changed you can re-enter them manually here.

*Copy these numbers and save them for future reference.

13. Daily Data Screen



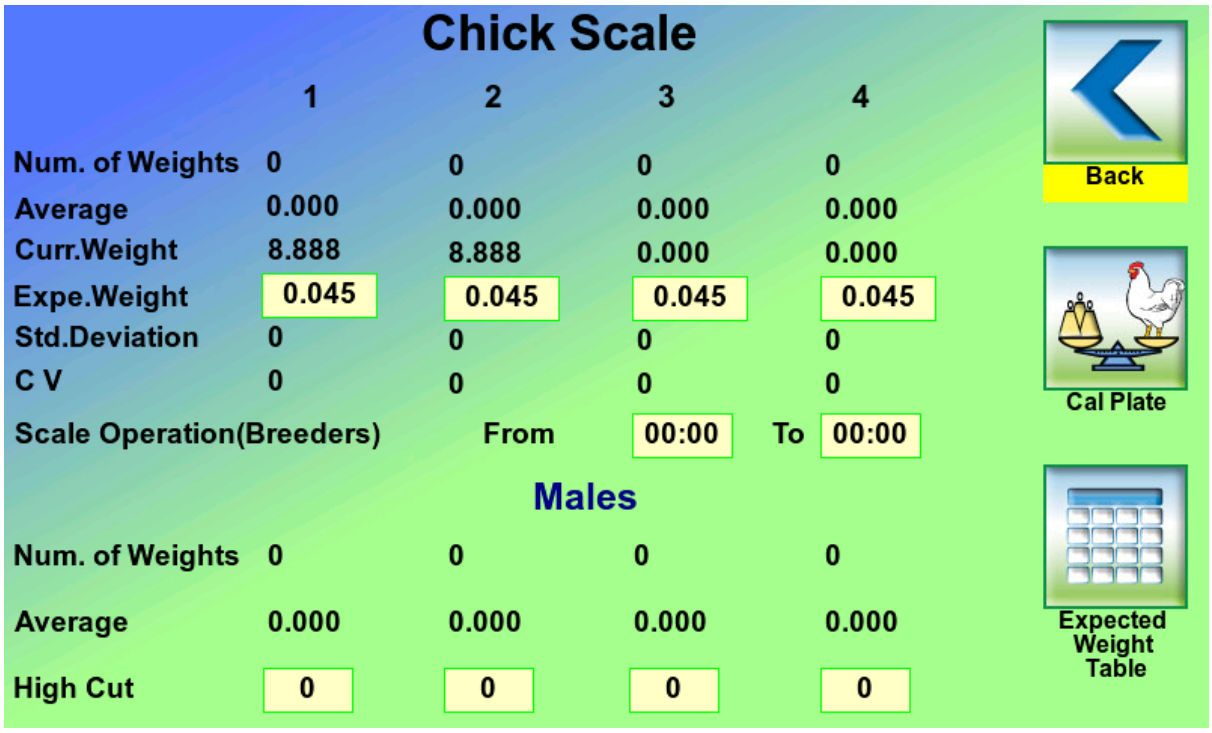
The controller collects and stores certain values on a day-by-day basis (above photo). A ‘day’ in this regard is the 24 hours' period that starts and ends at the time entered in the parameter Reset Time found in the Setup screen.

All collected and stored data can be seen in a graph and table forms.

For certain values, the total accumulated amounts from the beginning of the growing period are also calculated

14. Chick Scale Screen

If you have bird weighing platforms in your house, use the following screens to setup and



14.1.1 NUMBER OF WEIGHTS:

Displayed here is the number of birds weighed over a 24hr period. This number will be reset at the reset time.

14.1.2 AVERAGE WEIGHT:

Displayed here is the average weight of the birds over a 24hr period. This number will be reset at the reset time.

14.1.3 CURRENT WEIGHT:

Displayed here is the current weight on the chick scale plate.

14.1.4 EXPECTED. WEIGHT:

Before the *Image II* chick scale weighing can begin, it is necessary for the user to insert the expected average weight of one bird. This must be done only once at the beginning of the flock. Each day this value will automatically be adjusted.

14.1.5 STANDARD DEVIATION

Displayed here is the standard deviation in grams.
CV;
Displayed here is the CV calculation for the flock

The below fields are used mainly in pullet and breeder houses.

14.1.6 MALE AVERAGE;

Displayed here is the number of birds that have fallen in the Male Cut off and are considered males. This is for a 24hr period. This number will be reset at the reset time.
This is used only in pullet or breeder houses.

14.1.7 NO OF WEIGHTS;

If the Chick Scale is being used in a pullet or breeder houses, the average male weight will be shown here. Using the Male Cut percentage will help make the average.

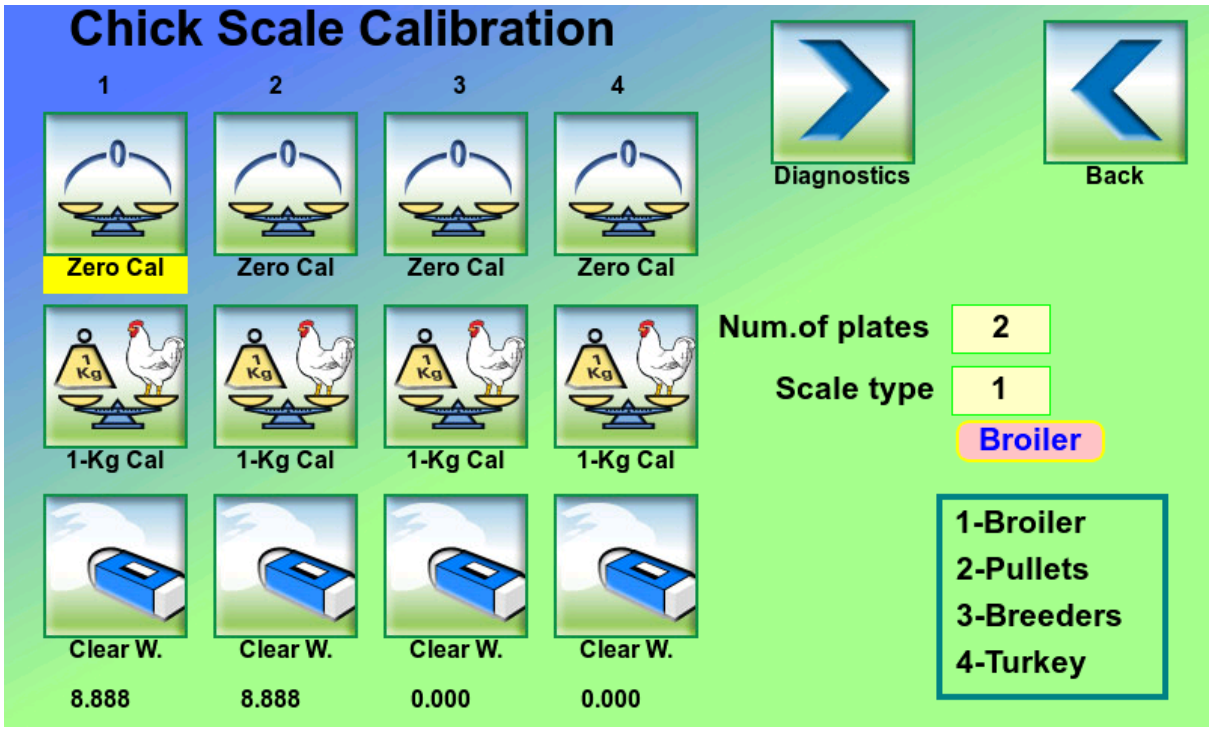
14.1.8 HIGH CUT;

A value set in percentage. This is the percentage above the female average weight that will be considered a male.
Example; High Cut=30. If the average female weight is 1.000kg, any bird that weighs more than 1.300kg will be considered a male.
This is used only in pullet or breeder houses.

14.1.9 FROM - TO;

This field sets the time frame that the Chick Scale will record weightings. This is used for breeds where restricted feeding is used and you do not want to weigh the birds after they have eaten.

14.2 Chick Scale Calibration Screen



14.2.1 SCALE TYPE;

The ChickScale plates may be used in four different types of rearing.

1 = Broilers. 2 = Pullets. 3 = Breeders. 4 = Turkeys.

Enter the number that fits the type of birds being raised in the house.

Before each flock it is necessary to reset all the data. To delete all data use the Clear W icon.

14.2.2 ZERO CALIBRATION

The scale must be zero calibrated before weighing may begin.

Make sure that there is nothing on the plate. Use the Zero Cal icon to start zero calibration. Once Zero calibration is completed, you must do the 1 kilo weight calibration.

14.2.3 1 KG CALIBRATION

Place a weight of exactly one kilo on the scale. Wait until a weight appears on the screen. This reading may not be exactly 1.00 kilo. Once the readout is steady, use the 1kg icon to start weight calibration

Note :The accuracy of the scale depends on the accuracy of the one kilo weight used.

Return to the main Chick Scale screen and enter the expected average weight.

14.3 Expected weight table

The expected weight table helps the controller deal with different growth rates. Each bird strain grows at a different rate and it may be necessary to use this table to help with the expected weight changes.

Note: To correctly set the table parameters it is important to know the expected weight increase of your particular strain of birds. A weight increase chart may be obtained from your integrator.

How the table works;

The table contains 5 lines, each line containing three values that must be entered by the user.

Start Weight	End Weight	Daily Add Grams	Factor
0 (cannot	0.16	0.017	1.0
0.17	0.31	0.030	1.01
0.32	0.53	0.045	1.0
0.54	1.01	0.065	1.0
1.02	Max	0.076	1.0

Start / End Weight;

The values entered here are the weight range for the first point. There are a total of 5 weight range points.

Example: Point 1: From 0 To 0.16. This creates a weight range between 0 to 160 grams.
Point 2: 0.17 To 0.31 is entered This creates a weight range between 0.170 to 0.310 grams
Points 3, 4, and 5 work on the same principle.

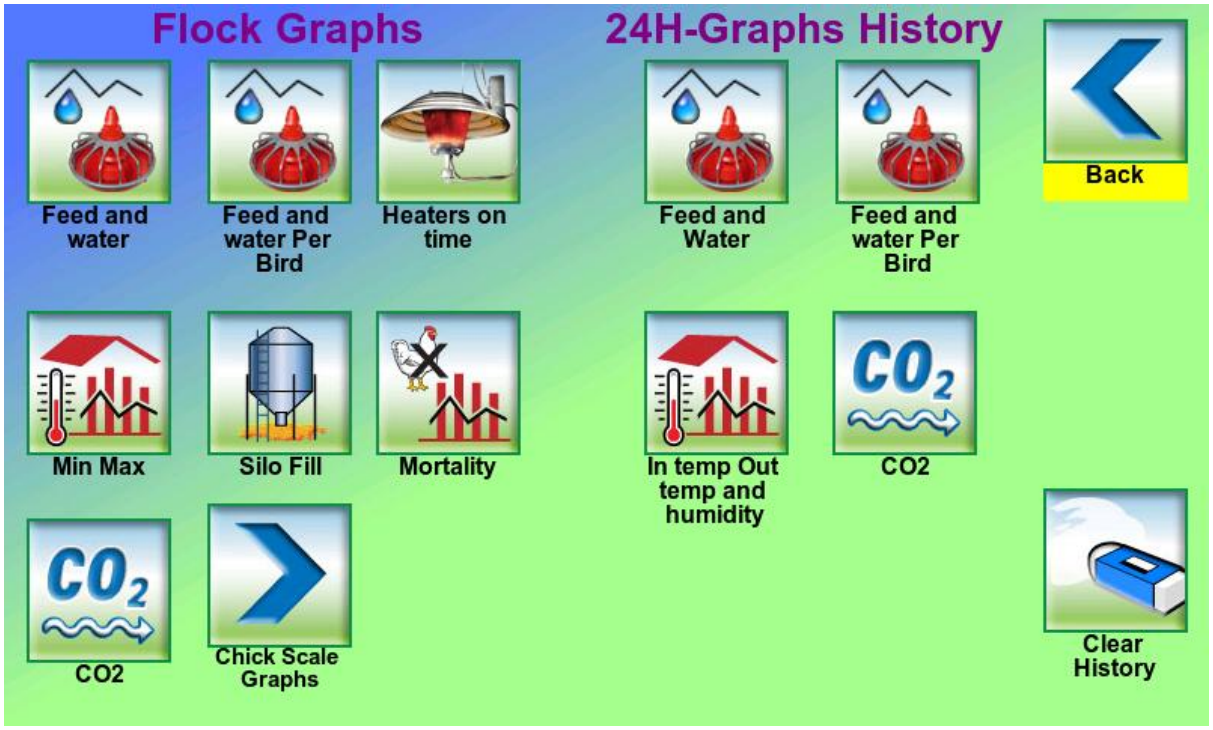
Daily Add Grams;

Enter here the daily weight increase in grams for each weight range.. This amount will be added onto the average weight at reset time and the result will become the new expected average weight.

Factor;

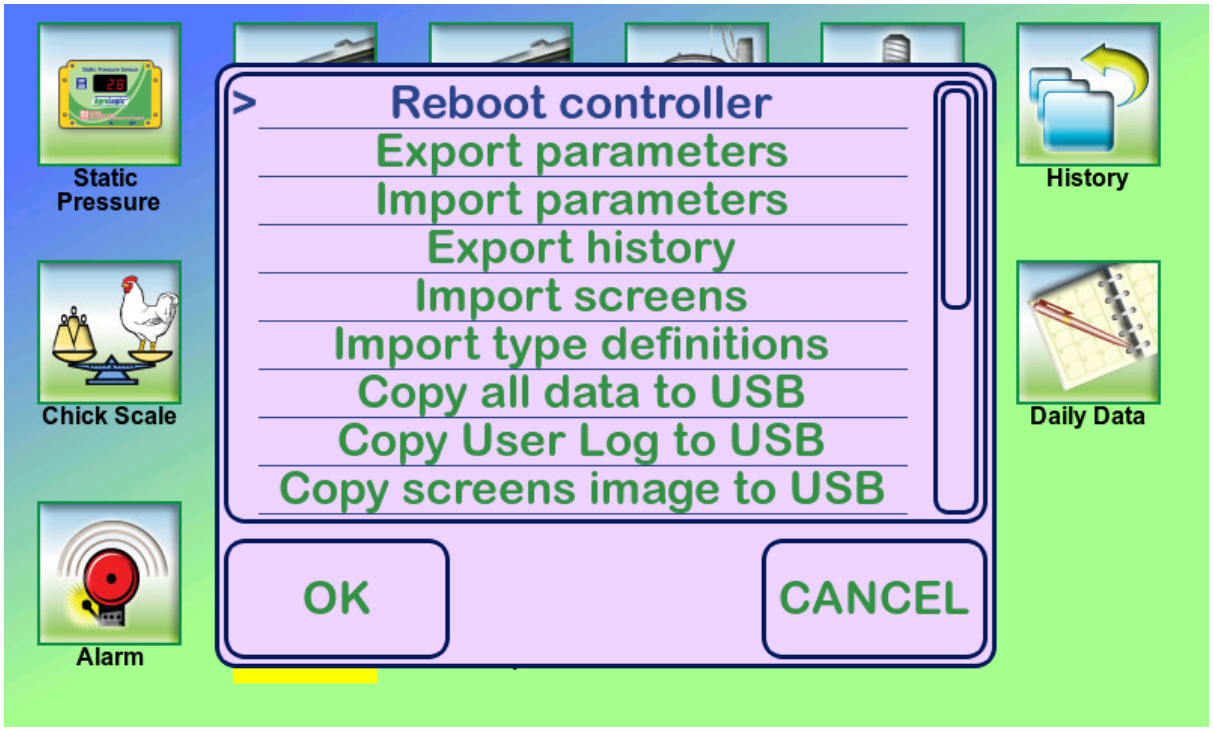
This value is used as a multiplier. The calculated average weight at reset time is multiplied by this value and the result becomes the new expected weight shown on the main display.

15. History Screen



The controller stores information collected over a 24 hour time period an hourly
This information can be viewed in a graph or table format.
At the beginning of a new flock, click on the Clear History icon to delete history.

16. Menu 2 Screen



Reboot Controller
Choosing this option will reboot the controller.

Export Parameters
Download all controller parameters to an external USB memory stick.

Import Parameters
Upload parameters to another controller using a USB memory stick.

Export History
Download controller history onto an external USB memory stick.
Not in use at the moment.

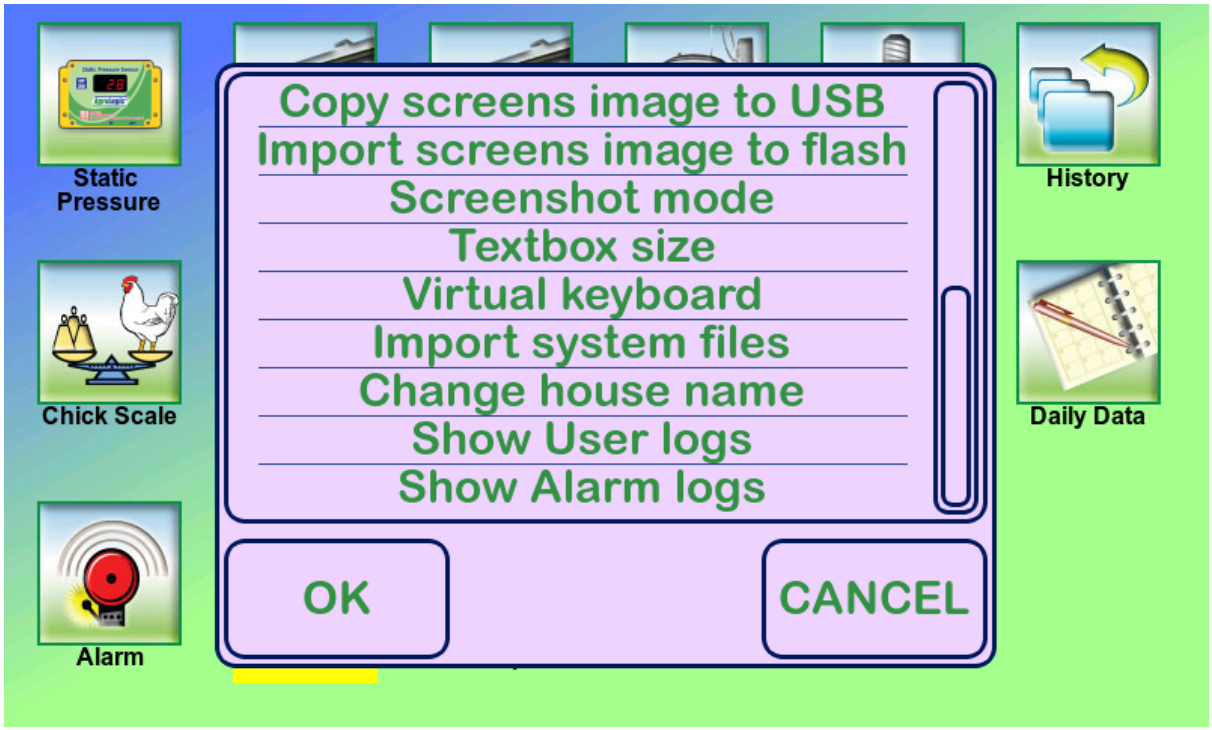
Import Screens
Use this option to upload new screens. This is done when the controller program, panel version or screens updates are needed.

Import Type Definitions
For Agrologic technical personnel.

Copy All Data To USB
For Agrologic technical personnel.

Copy User Log To USB
For Agrologic technical personnel.

Copy Screen Image to USB
For Agrologic technical personnel.



Import Screens image to Flash
For Agrologic technical personnel.

Screen Shot Mode
Allows you to take screen shots and save them to an external USB memory stick.
A USB memory stick must be inserted in the front panel USB slot.
Choose option Screenshot mode, choose Screen shot mode On. Go to the screen you would like to take the screen shot. Be sure the yellow cursor is not in an edit box. Press on keyboard 0 or Star key to take the screen shot.
When finished, go back to the Screenshot option, choose Screen shot mode Off, remove the USB memory stick.
The screen shots are located on the USB memory stick under the folder *Screen Shots*.

Text Box Size
Increases the font size of the edit boxes.

Virtual Keyboard
Enables a popup on screen keyboard. The onscreen keyboard will popup each time you try and enter a number one of the parameter edit boxes. By swiping up from the bottom of the screen a pop screen with MENU STAR and ESC will appear.
Import System Files

For Agrologic technical personnel.

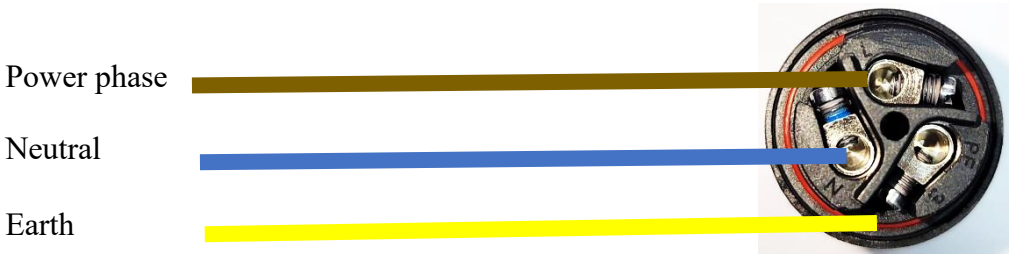
Change House Name
Use this option to change the farm name (displayed on the controller main screen).

Show Users Logs
This options opens a table showing all parameter changes. The table shows the date, grow day, user number, parameter description, old and new parameter value.

17. Basic Installation

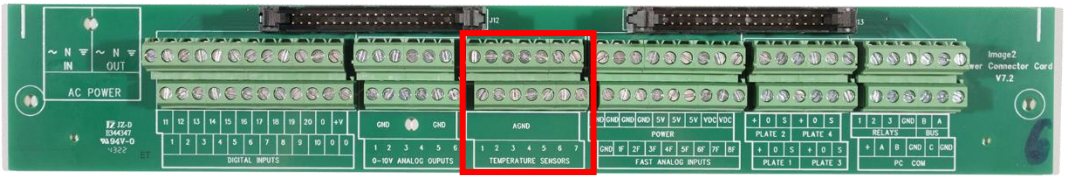
17.1 Input power connection

Use the supplied connected to connect to the controller to the main power supply.



17.2 Sensor connections

17.2.1 TEMPERATURE SENSORS

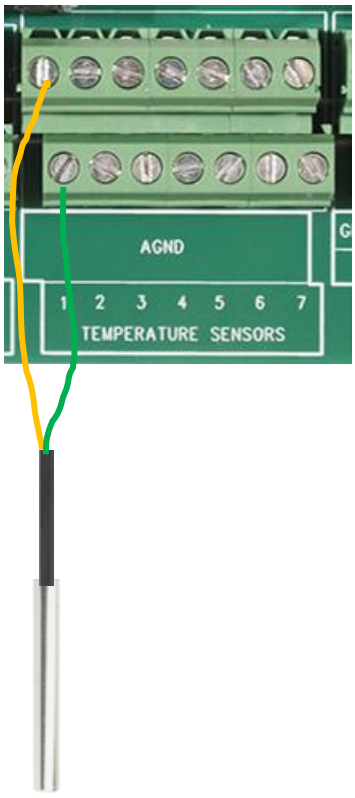


Seven temperature sensors can connect to the controller.

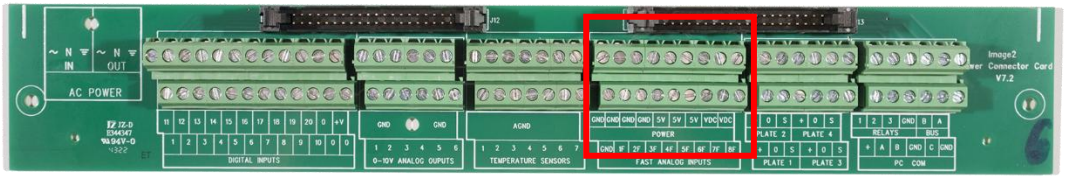
- Connect inside temperature sensor 1 to input 1 and AGND.
- Connect inside temperature sensor 2 to input 2 and AGND.
- Connect inside temperature sensor 3 to input 3 and AGND.
- Connect inside temperature sensor 4 to input 4 and AGND.
- Connect the outside temperature sensor to input 7 and AGND.

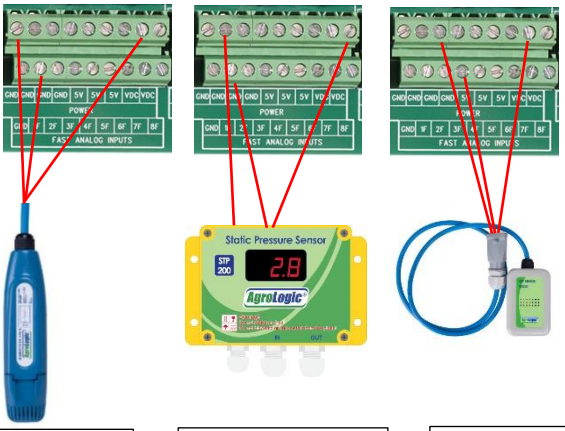
The sensors can be placed up to150 meters from the main unit using ordinary electrical wire.

The sensor wire has no polarity.



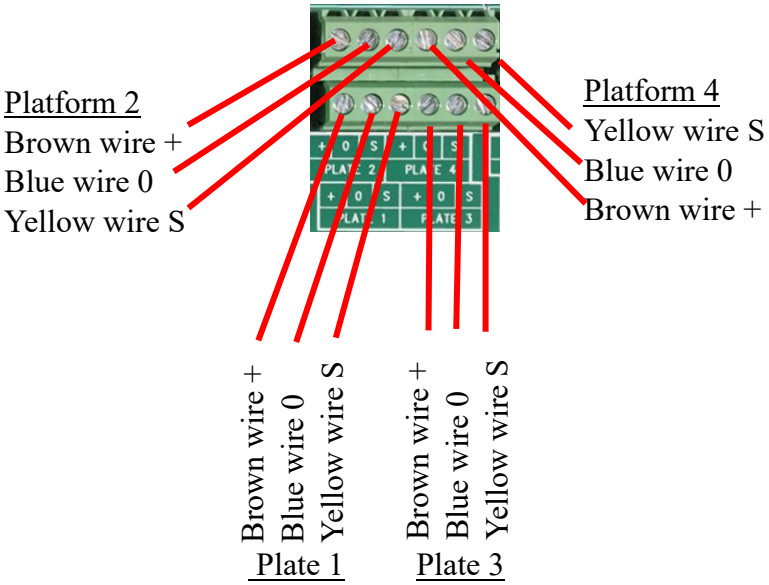
17.2.2 FAST ANALOG INPUTS



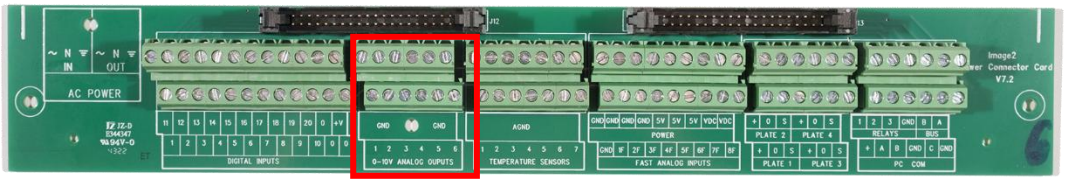


Brown wire = VDC Blue wire = GND Yellow wire = 1F	Brown wire = VDC Blue wire = GND Yellow wire = 2F	Brown wire = VDC Blue wire = GND Yellow wire = 3F

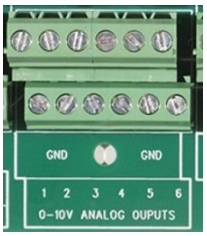
17.2.3 BIRD WEIGHING PLATFORMS



17.2.4 0-10V ANALOG



Use the 0-10V Analog outputs for variable speed fans and light dimming.



This program uses the 0-10V analog outputs for two variable speed fan groups

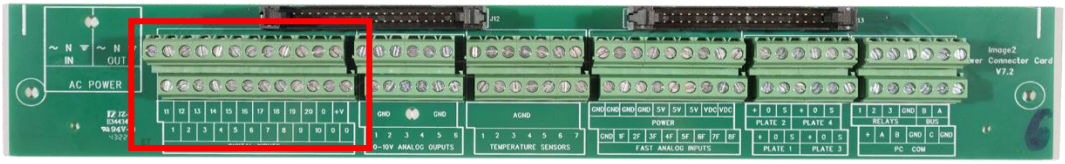
Use connector 1 and GND output for light dimmer inverter.

Use connector 2 and GND output for variable speed fan 1 inverter.

Use connector 3 and GND output for variable speed fan 2 inverter.

Outputs 4, 5 & 6 are reserve outputs.

17.2.5 DIGITAL INPUTS



Curtain 1 = Digital input 1 and 0

Curtain 2 = Digital input 2 and 0

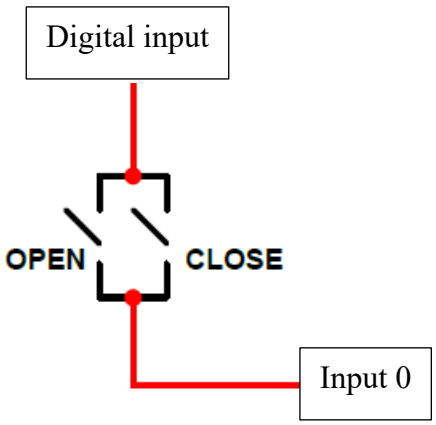
Damper = Digital input 3 and 0

Tunnel Curtain = Digital input 4 and 0

Water meter = Digital input 11 and 0

Feed auger = Digital input 12 and 0

Flap feedback



17.2.6 CONNECTION TABLE

Digital Inputs

1	SIDE CURTAIN 1 FEEDBACK	11	WATER COUNT
2	SIDE CURTAIN 2 FEEDBACK	12	AUGER FEEDBACK
3	DAMPER FEEDBACK	13	
4	TUNNEL CURTAIN FEEDBACK	14	
5		15	
6		16	
7		17	
8		18	
9		19	AC POWER ALARM
10		20	SILO (A TO D)

Analog Outputs 0 – 10 Volt

1	LIGHT DIMMER	4	LIGHT DIMMER (RESERVED)
2	SPEED FAN 1	5	SPEED FAN 1 (RESERVED)
3	SPEED FAN 2	6	SPEED FAN 2 (RESERVED)

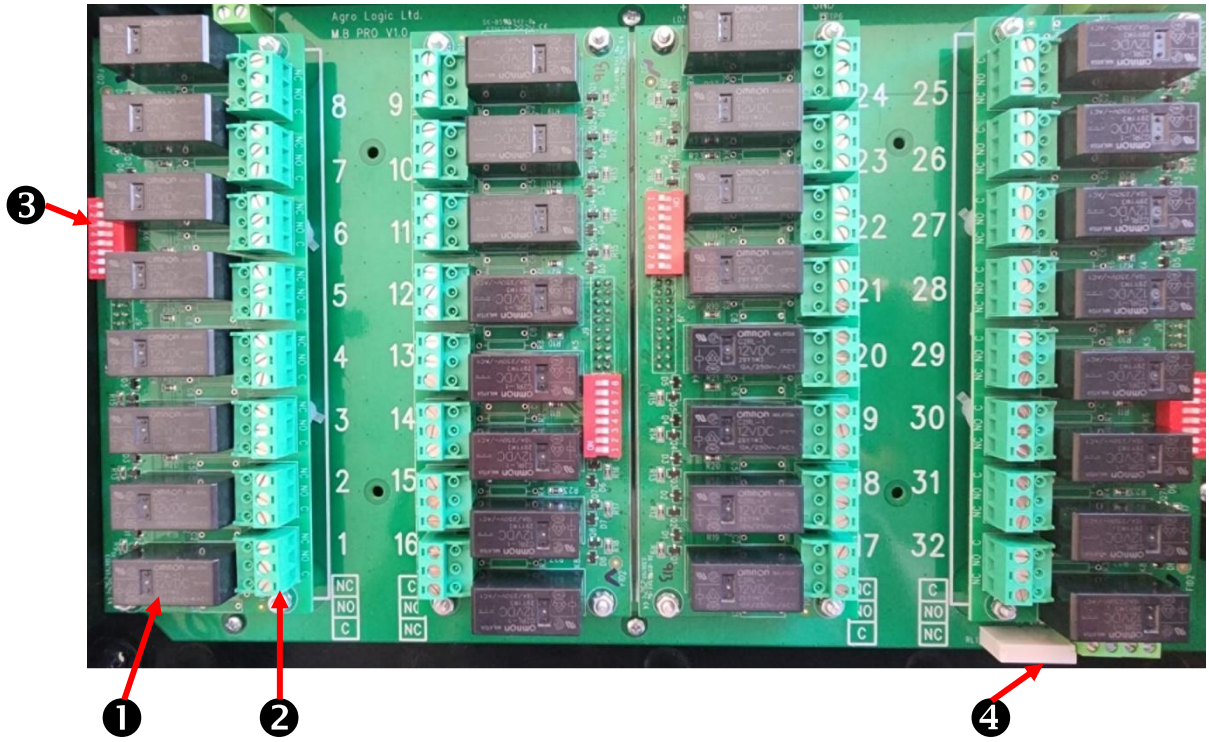
Temperature Sensors

1	TEMPERATURE SENSOR 1
2	TEMPERATURE SENSOR 2
3	TEMPERATURE SENSOR 3
4	TEMPERATURE SENSOR 4
5	TEMPERATURE SENSOR 5
6	TEMPERATURE SENSOR 6
7	OUT TEMPERATURE SENSOR

Fast Analog Inputs

		DIP Switch Position			
		SW1		SW2	
		OFF	ON	OFF	ON
1F	HUMIDITY SENSOR		*	*	
2F	STATIC PRESSURE SENSOR		*	*	
3F	CO2 SENSOR		*	*	
4F		*			*
5F		*			*
6F		*			*
7F		*			*
8F		*			*

17.2.7 RELAY OUTPUTS



❶ Alarm relay

The first relay (relay number 1) is always used as an Alarm relay. When there is no alarm the NO is closed and the NC is open. When the alarm relay is activated the NO opens and the NC closes.

❷ Removable connectors

All relay connectors are removable to help make the wiring easier.

❸ Relay dip switch

All module relay cards are equipped with dip switches. When these switches are set to the ON position, the relay will activate during an emergency situation.
An emergency situation occurs when there is a communication failure between the controller top panel and the relay board.

❹ Emergency relay

This relay is activated when there is an emergency situation.

By connecting this relay to an alarm unit, you can be alerted if there is an emergency situation.