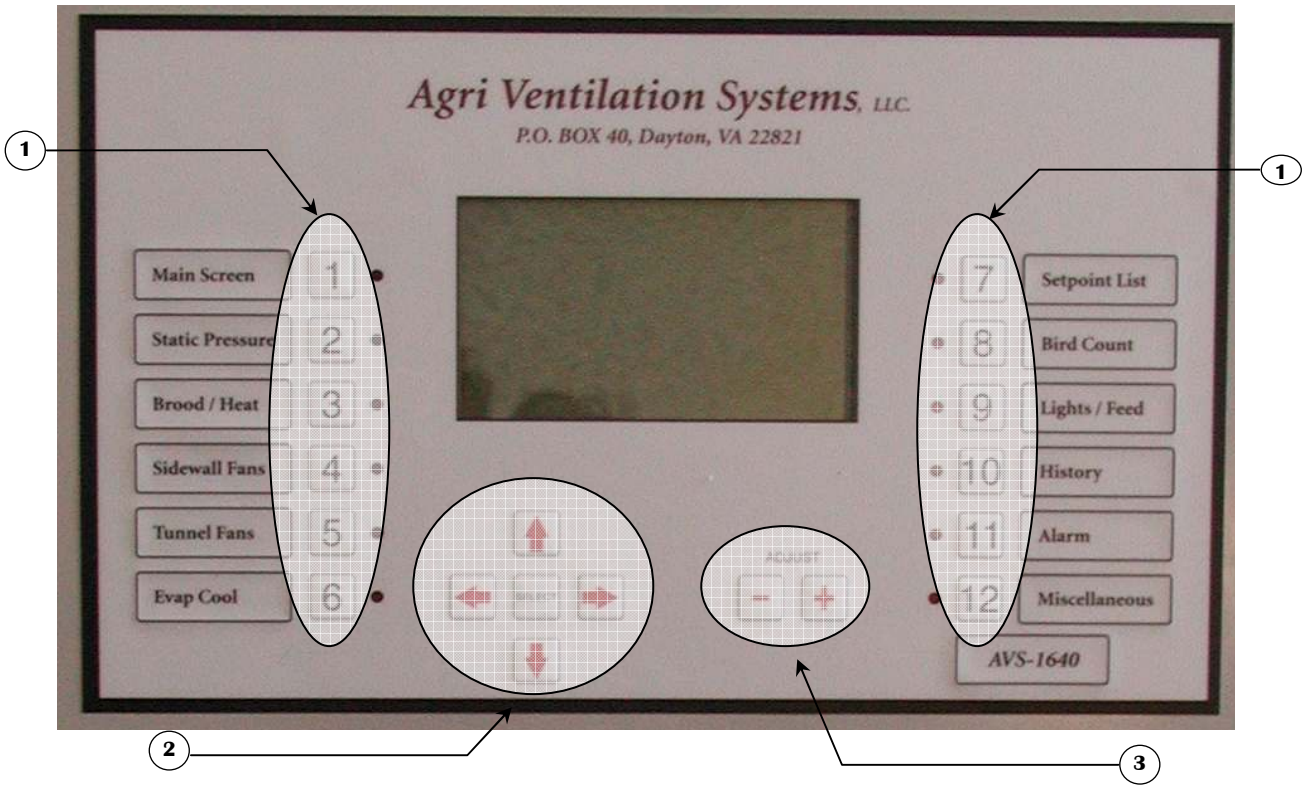
Agri Ventilation Systems, LLC

AVS-1640

User's Guide

AVS3_060831M5

PANEL LAYOUT



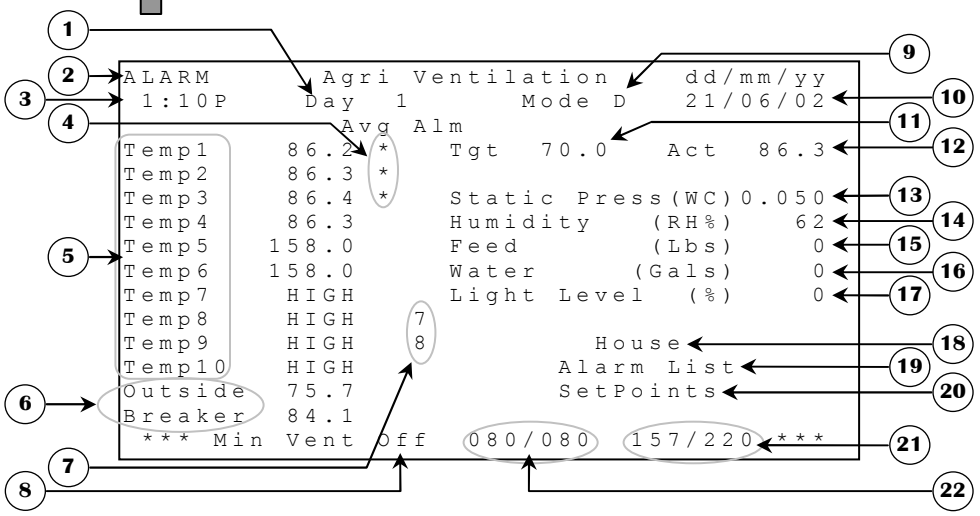
Panel Layout Description:

1. These buttons provide direct access to the various screens described in the User's Guide.

2. The arrow buttons move the cursor highlight to selectable items on the particular screen. These items may be settings that are operator changeable or may be access points to a subscreen. The SELECT button allows the User to access a specific subscreen. It is also used to confirm a choice when an option is presented. On the ALARM LIST subscreen, the SELECT button allows the User to acknowledge and clear alarms that have been triggered (see 11.1 in User's Guide).

3. The − and + buttons are used to decrease or increase highlighted settings on a particular screen. They are used to change a YES/NO option, which when chosen is triggered with the SELECT button. They also change the tunnel transition functions (described in Screen 5 in the User's Guide).

SCREEN 1 **MAIN SCREEN**



1. This parameter displays the actual ramping day even if RAMPING FUNCTION is set to OFF. It shows the same value as RAMPING STARTDAY parameter in the **SETPOINTS (1.2)** screen. This parameter is incremented by one each time the clock passes midnight.

2. This parameter appears on every screen when an alarm is activated. Refer to **ALARM LIST (11.1)** screen to find out which alarm(s) is currently in effect. It is possible to deactivate the alarm for a period of 5 minutes, see parameter SILENCE ALARM in **ALARM (11)** screen.

3. This parameter displays the actual time of day in AM/PM format. This time of day can be changed in the **DATE-CLOCK-PASSWORD (12.3)** screen with the ADJUST CLOCK parameter.

4. This column indicates every sensor used to calculate the actual average temperature. Each sensor will be marked with "*".

5. These parameters display the sensor readings available in the control. There is a possibility of 12 inside sensors if no "Outside" nor "Breaker" sensors are used. If there are only 4 inside probes selected in the INSIDE PROBES parameter in the **SYSTEM CONFIGURATION (12.5)** screen, only the first 4 inside probes will be shown. The range of these sensor readings goes from -63.8°F to 167.0°F.

6. These sensors have a feature more than the other inside probes. Sensor #11 can also be used as "Outside" sensor if the OUTSIDE PROBE is set to "Y" in the **SYSTEM CONFIGURATION (12.5)** screen. Sensor #12 can also be used as "Outside" if OUTSIDE PROBE is set to "Y". Sensor #12 can also be used as "Breaker" temp if BREAKER PROBE is set to "Y". The range of these sensor readings goes from -63.8°F to 167.0°F.

7. This parameter column indicates the backup sensor used for the respective inside sensor that is defective. The backup sensor will not be shown until this sensor is considered defective, otherwise a "*" will appear if the respective probe is included in the alarm.

8. This parameter displays the actual state (on/off) of the minimum ventilation timer.

9. This parameter displays the current mode the control is in. There are 10 different modes including the default mode. For more explanations on this feature, refer to the **MODES (12.1)** screen.

10. This parameter displays the current date and its format. Both values (date and format) can be changed in the **DATE-CLOCK-PASSWORD (12.3)** screen with the ADJUST DATE and ADJUST FORMAT parameters.

11. This parameter displays the actual target temperature, which can be changed in the **SETPOINTS (1.2)** screen.

12. This parameter displays the actual average temperature calculated with inside sensors selected in `AVERAGE TEMP` of the **PROBE CONFIGURATION (12.2)** screen.

13. This parameter displays the actual reading of the static pressure sensor. The range of this sensor goes from 0.000"WC to 0.200"WC.

14. This parameter displays the actual reading of the humidity sensor. The range of this sensor goes from 0 RH% to 100 RH%.

15. This parameter displays the total amount of feed in pounds (lbs) distributed since last midnight. This amount is incremented each time a pound of food is distributed depending on the feed calibration (lbs/min) parameter in the **SENSOR CALIBRATION (12.4)** screen.

16. This parameter displays the number of gallons that have been accumulated since last midnight. The number of gallons counted with each pulse can be set with the `WATER (GAL/PULSE)` parameter in the **SENSOR CALIBRATION (12.4)** screen.

17. This parameter displays the luminosity percentage of the light logic. This parameter will not be shown if no variable lights nor ON/OFF lights are used (`LIGHTS OUT#` is set to 0 in **OUTPUT CONFIGURATION (12.6)** screen and `LIGHT DIMMER` is set to "N" in **SYSTEM CONFIGURATION (12.5)** screen). This parameter can also display an ON/OFF light status if no variable lights are used and the light logic is used. This parameter is displayed to the nearest 1% from 0% to 100%.

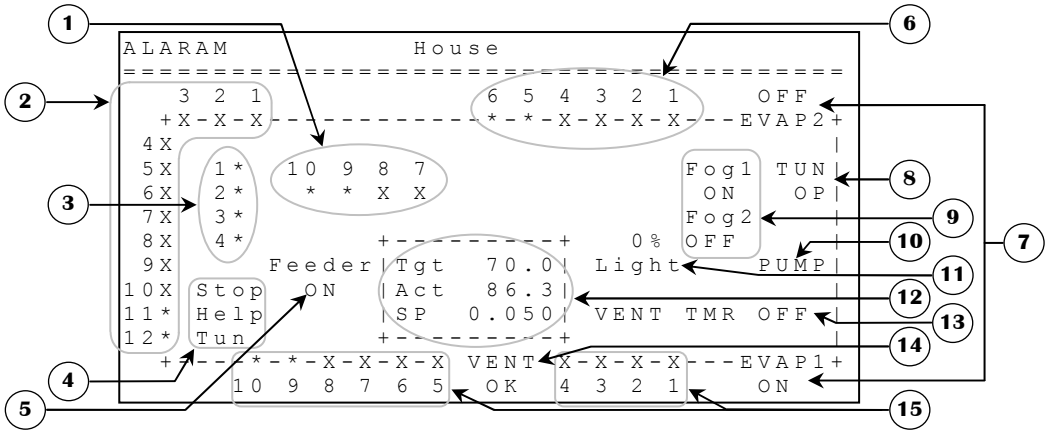
18. This parameter gives access to the **HOUSE (1.1)** screen.

19. This parameter gives access to the **ALARM LIST (11.1)** screen.

20. This parameter gives access to the **SETPOINTS (1.2)** screen.

21-22. These parameters display the time elapsed since the beginning of the ON or OFF portion of the minimum ventilation system. Minimum ventilation timer settings are adjustable in the **MIN VENT TIMER & RAMPING (4.1)** screen. Minimum ventilation timer settings are updated at the end of an ON or OFF portion.

SUB SCREEN 1.1 **HOUSE**



Note: It is possible to access a specific output screen from this sub screen by positioning the cursor on the desired output and pressing SELECT.

If an output number or name and its state are not shown, there is no relay associated to this respective output in the **OUTPUT CONFIGURATION (12.6)** screen. Otherwise output numbering and actual state are always shown (except for "PUMP" that is shown only if it's activated).

1. These parameters display the actual state of up to 10 possible brooders. Their state can be displayed with two different values, used and running (marked with "X") and used and not running (marked with "*").

2. These parameters display the actual state of up to 12 possible tunnel fans. Their state can be displayed with two different values, used and running (marked with "X") and used but not running (marked with "*").

3. These parameters display the actual state of the four possible stir fans. Their state can be displayed with two different values, used and running (marked with "X") and used but not running (marked with "*").

4. These parameters are used to display if any of the tunnel fan transitions of the **TUNNEL FANS (5)** screen are in effect.

5. This parameter displays the actual state of the feeder. Its state can be displayed with two different values, used and currently active (marked with "ON") and used and not currently active (marked with "OFF").

6. These parameters display the actual state of up to 10 possible heaters. Their state can be displayed with two different values, used and running (marked with "X") and used but not running (marked with "*").

7. These parameters display the actual state of the two possible evaporation-cooling cells. Their state can be displayed with two different values, used and running (marked with "ON") and used but not running (marked with "OFF").

8. This parameter displays the actual state of the tunnel inlet. Its state can be displayed with three different values, used and opening (marked with "OP"), used and closing (marked with "CL") and used but not moving (marked with "OK").

9. These parameters display the actual state of the two possible foggers. Their state can be displayed with two different values, used and running (marked with "ON") and used but not running (marked with "OFF").

10. This parameter displays the actual state of the pump. If this parameter is not shown, there is no relay associated to this output in the **OUTPUT CONFIGURATION (12.6)** or there is a relay associated to this output but the pump is not currently running. Otherwise, pump is shown only if it's currently running.

11. This parameter displays the luminosity percentage of the light output. If the light and its state are not shown, there is no relay associated to this output in the **OUTPUT CONFIGURATION (12.6)** screen and LIGHT DIMMER option is set to "N" in the **SYSTEM CONFIGURATION (12.5)** screen. Otherwise, light and its actual state are always shown and its state is displayed to the nearest 1% from 0% to 100%. This parameter can also display an ON/OFF light status if no variable lights are used and the light logic is used.

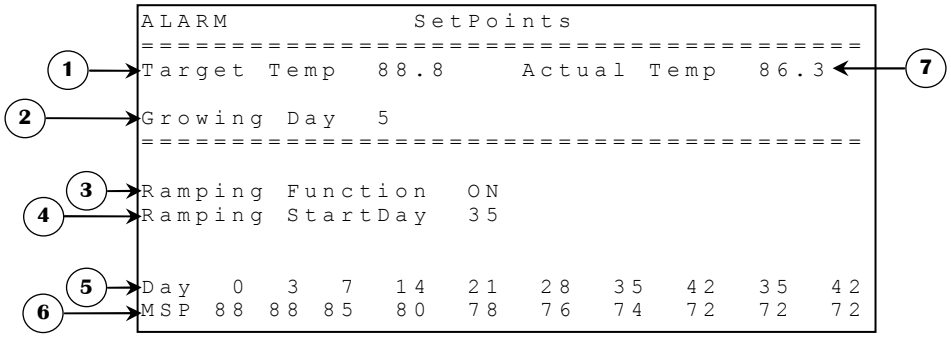
12. These parameters are used as readout and reference box only. The first parameter ("Tgt") displays the actual target temperature. The second parameter ("Act") displays the actual average temperature and the last parameter ("SP") displays the actual reading of the static pressure sensor.

13. This parameter displays the actual state (ON/OFF portion) of the minimum ventilation timer.

14. This parameter displays the actual state of the ventilation inlet. Its state can be displayed with three different values, used and opening (marked with "OP"), used and closing (marked with "CL") and used but not moving (marked with "OK").

15. These parameters display the actual state of up to 10 possible sidewall fans. Their state can be displayed with two different values, used and running (marked with "X") and used but not running (marked with "*").

SUB SCREEN **1.2** **SETPOINTS**



1. This parameter is used to set the temperature goal and it is also the reference temperature for all relative settings. This parameter can follow a ramping curve function if RAMPING FUNCTION is set to ON. This parameter cannot be modified if RAMPING FUNCTION is set to ON. TARGET TEMP is adjusted in 0.1°F increments from 32.0°F to 120.0°F.

2. This parameter displays the growth day, which is incremented (if not set to OFF) each time the clock passes midnight.

3. This parameter is used to set the ramping curve function ON or OFF. If this parameter is set to ON, TARGET TEMP will follow the curve function and user will not be able to modify it nor the DAY points and TARGET TEMP points.

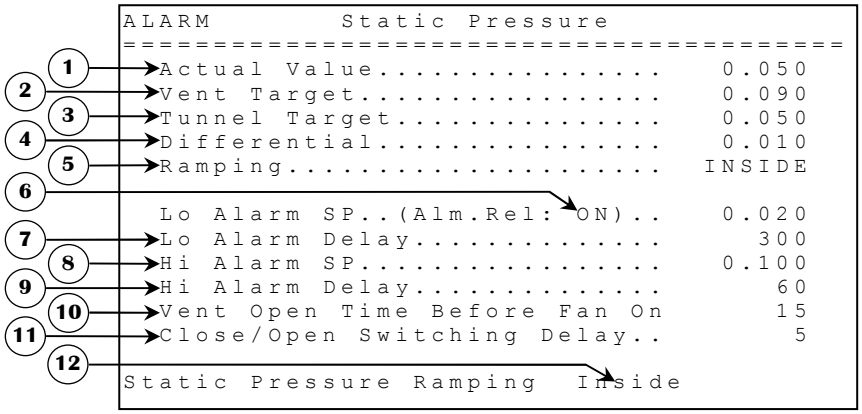
4. This parameter allows the user to adjust the RAMPING DAY, which is used for all ramping functions. The RAMPING DAY is incremented by 1 from OFF/0 to 365 days.

5. These parameters are used to set the days used in the ramping curve function. These parameters are adjusted in 1 day increments from day 0 to day 365.

6. These parameters are used to set the temperatures relative to the day in ramping functions. These parameters are adjusted in 1°F from 32°F to 120°F.

7. This parameter displays the actual average temperature calculated with inside sensors selected in AVERAGE TEMP in the **PROBE CONFIGURATION (12.2)** screen.

SCREEN 2 **STATIC PRESSURE**



If this screen is not accessible, be sure to check if STATIC PRESS option is set to "Y" in **SYSTEM CONFIGURATION (12.5)** screen.

1. This parameter displays the actual reading of the static pressure sensor. This sensor ranges from 0.000"WC to 0.200"WC.

2. This parameter is used to set the high and low static pressure setpoints when the control is in vent mode. The DIFFERENTIAL will be added and subtracted to this parameter to have the high and low setpoints. If static pressure is below VENT TARGET - DIFFERENTIAL, the ventilation inlet will close. If static pressure is above VENT TARGET + DIFFERENTIAL, the ventilation inlet will open. In tunnel mode, TUNNEL TARGET overrides this parameter and vent inlet closes continuously. This parameter is adjusted in 0.001"WC from 0.000"WC to 0.200"WC.

3. This parameter is used to set the high and low static pressure setpoints when the control is in tunnel mode. The DIFFERENTIAL will be added and subtracted to this parameter to have the high and low setpoints. If static pressure is below TUNNEL TARGET - DIFFERENTIAL, the tunnel inlet will close. If static pressure is above TUNNEL TARGET + DIFFERENTIAL, the tunnel inlet will open. In vent mode, tunnel inlet closes continuously. This parameter is adjusted in 0.001"WC from 0.000"WC to 0.200"WC.

4. This parameter establishes the static pressure differential for targets. This value will be added and subtracted from the target to get high and low setpoints for static pressure. This parameter is adjusted in 0.001"WC from 0.005"WC to 0.200"WC.

5. This parameter indicates which pressure settings are used by the control. If RAMPING is "OFF" control will use the VENT and TUNNEL TARGET. If RAMPING is "INSIDE", control will use the inside settings and functions.

6. This parameter is used to set the alarm relay ON or OFF on a low pressure alarm. Even if this option is set to "OFF", the alarm is triggered in the **ALARM LIST(11.1)** screen except that the alarm relay is not activated and "ALARM" will be shown in the top left corner of each screens.

7. This parameter is used to set a delay that allows the pressure to exceed the limit LO ALARM SP without activating the alarm. There is an alarm satisfy time fixed at 5 seconds that allows the static pressure to return above LO ALARM SP without reinitializing the delay LO ALARM DELAY. The LO ALARM DELAY is adjusted in 1 second increments from 10 seconds to 900 seconds.

Ex: LO ALARM SP = 0.020"WC;
LO ALARM DELAY = 300 seconds;
When static pressure is below 0.020"WC, the LO ALARM DELAY is activated. If the static pressure stays below 0.020"WC after the LO ALARM DELAY has expired, the alarm is activated. If static pressure returns above LO ALARM SP for more than 5 seconds, the low pressure alarm (or LO ALARM DELAY) will be reinitialized if it was already activated. Sidewall fans are affected by the low pressure alarm, they will turn on even if forced to close by tunnel "STOP" (Min Fan Stop) or "START" (Tunnel Start). They will turn off when the low static pressure alarm condition disappears.

8. This parameter is used to establish the high pressure alarm limit. When pressure is above HI ALARM SP, the HI ALARM DELAY is activated. This parameter can also be modified in the **ALARM (11)** screen. The HI ALARM SP is adjusted in 0.001"WC increments from 0.050"WC to 0.200"WC.

9. This parameter is used to set a delay that allows the pressure to exceed the limit HI ALARM SP without activating the alarm. The HI ALARM DELAY is adjusted in 1 second increments from 10 seconds to 900 seconds.

Ex: HI ALARM SP = 0.100"WC;
HI ALARM DELAY = 60 seconds;
When static pressure is above 0.100"WC, the HI ALARM DELAY is activated. If the static pressure stays above 0.100"WC after the HI ALARM DELAY has expired, the alarm is activated. Tunnel and ventilation inlet are also affected by the high pressure alarm, at this point both tunnel and ventilation inlet will be forced to follow static pressure settings of the current mode until the high static pressure alarm condition disappears.

10. When the temperature is below all sidewall fan and tunnel fan relative set points, the ventilation inlet will follow static pressure sensor and the parameter VENT OPEN TIME BEFORE FAN ON. The minimum ventilation timer has an ON time and an OFF time. Depending on the time chosen for the VENT OPEN TIME BEFORE FAN ON, the ventilation inlet will start opening during the minimum ventilation OFF time and will stop once the OFF time has expired. As the ON time begins, the fans will be activated and the ventilation inlet will operate according to the static pressure sensor. The VENT OPEN TIME BEFORE FAN ON is adjusted in 1 second increments from OFF, 3 seconds to 300 seconds.

Ex: All sidewall fans and tunnel fans are below their respective RSP;
VENT OPEN TIME BEFORE FAN ON = 40 seconds;
MIN VENT ON TIME = 120 seconds (see **MIN VENT TIMER & RAMPING**);
VENT CYCLE TIME = 5 minutes, the ventilation inlet will react as follow:
The fans are OFF for 3 minutes and ON for 2 minutes. The ventilation inlet follows static pressure sensor for all the ON time and for 2 minutes and 20 seconds of the OFF time. At 40 seconds of the end of minimum ventilation time OFF (3 minutes - 40 seconds = 2 minutes and 20 seconds), the ventilation inlet will open for 40 seconds (until the beginning of the ON time), and so on until a temperature demand.

Note: The CLOSE/OPEN SWITCHING DELAY affects this delay and overlaps VENT OPEN TIME BEFORE FAN ON.

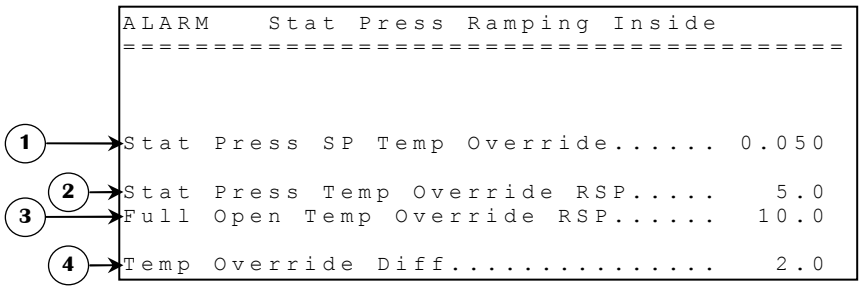
11. This parameter is used to set the delay the ventilation inlet will wait before changing state from open to close or close to open. The CLOSE/OPEN SWITCHING DELAY is adjusted in 1 second increments from 0 seconds to 30 seconds.

Ex: VENT OPEN TIME BEFORE FAN ON = 10 seconds;
CLOSE/OPEN SWITCHING DELAY = 5 seconds;
Inlet will open for 5 seconds.

12. This parameter gives access to the **STAT PRESS INSIDE (2.1)** screen.

13. This parameter is used to establish the low pressure alarm limit. When pressure is below LO ALARM SP, the LO ALARM DELAY is activated. This parameter can also be modified in the **ALARM (11)** screen. The LO ALARM SP is adjusted in 0.001"WC increments from 0.005"WC to 0.100"WC.

SUB SCREEN **2.1** **STAT PRESS RAMPING INSIDE**



1. This parameter is used to set the high and low static pressure limits for the ventilation inlet when temperature is above STAT PRESS TEMP OVERRIDE RSP. The DIFFERENTIAL parameter in **STATIC PRESSURE (2)** screen will be added and subtracted to this parameter to have the high and low setpoints. If static pressure is below STAT PRESS SP TEMP OVERRIDE - DIFFERENTIAL, the ventilation inlet will close. If static pressure is above STAT PRESS SP TEMP OVERRIDE + DIFFERENTIAL, the ventilation inlet will open. This parameter is adjusted in 0.001"WC from 0.000"WC to 0.200"WC.

2. This parameter establishes which settings the ventilation inlet must take depending on average temperature. If average temperature is below STAT PRESS TEMP OVERRIDE RSP, the ventilation inlet will follow VENT TARGET. If above STAT PRESS TEMP OVERRIDE RSP, the ventilation inlet will follow STAT PRESS HI/LO SP TEMP OVERRIDE. This parameter is adjusted in 0.1°F increments from 0.0°F to 50.0°F.

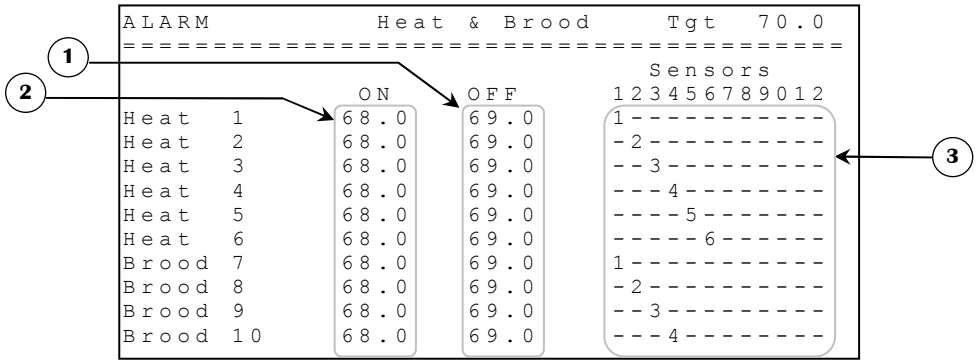
3. This parameter establishes at which temperature the ventilation inlet will enter full open mode. If average temperature increases to FULL OPEN TEMP OVERRIDE RSP, ventilation inlet will go in full open mode. When average temperature decreases below FULL OPEN TEMP OVERRIDE RSP the ventilation inlet will follow STAT PRESS HI/LO SP TEMP OVERRIDE. This parameter is adjusted in 0.1°F increments from 0.0°F to 50.0°F.

4. This parameter establishes the differential of FULL OPEN TEMP OVERRIDE RSP and STAT PRESS TEMP OVERRIDE RSP to avoid oscillations between ON and OFF. TEMP OVERRIDE DIFF is adjusted in 0.1°F increments from 0.0°F to 25.0°F.

Ex: STAT PRESS TEMP OVERRIDE RSP = 5.0°F;
FULL OPEN TEMP OVERRIDE RSP = 10.0°F;
TEMP OVERRIDE DIFF = 2.0°F;

TARGET TEMP = 70.0°F:
- Below 75.0°F, ventilation inlet will follow VENT TARGET.
- At 75.0°F and above, ventilation inlet will follow STAT PRESS HI/LO SP TEMP OVERRIDE.
- At 80.0°F and above, ventilation inlet will go full open mode.
- At 78.0°F, ventilation inlet will follow STAT PRESS HI/LO SP TEMP OVERRIDE.
- At 73.0°F, ventilation inlet will follow VENT TARGET.

SCREEN 3 **HEAT & BROOD**



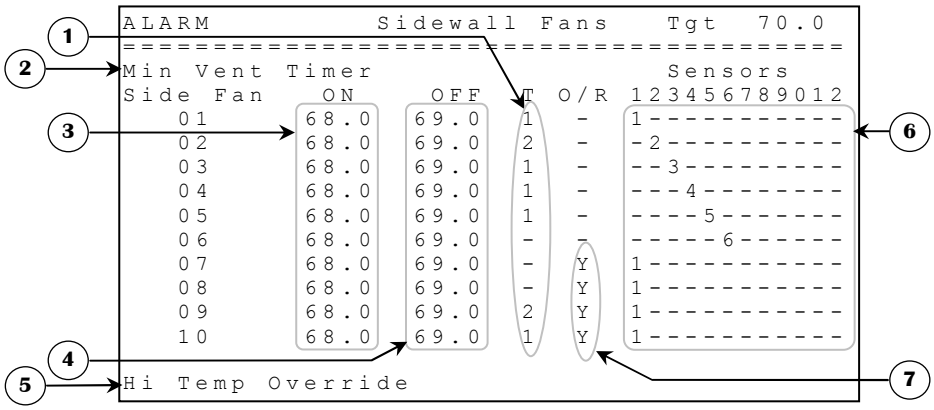
If this screen is not accessible, be sure to check if HEAT/BROOD option is set to "Y" in **SYSTEM CONFIGURATION(12.5)** screen and if at least one relay in **OUTPUT CONFIGURATION(12.6)** screen is correctly associated to one of these respective outputs.

1. These parameters are used to set the heater/brooder differentials. The respective heater/brooder deactivates when its respective sensor(s) select average temperature increases to HEAT/BROOD # OFF. These parameters are affected by the respective HEAT/BROOD # ON parameter. These parameters are adjusted in 0.1°F increments from its respective HEAT/BROOD # ON parameter + 0.5°F to its respective HEAT/BROOD # ON parameter + 10.0°F.

2. These parameters are used to set the heater/brooder set points. The respective heater/brooder is activated when its respective sensor(s) select average temperature decreases to HEAT/BROOD # ON. Changing one of these parameters will affect the respective HEAT/BROOD # OFF parameter. These parameters are affected by the TARGET TEMP parameter. These parameters are adjusted in 0.1°F increments from TARGET TEMP - 50.0°F to TARGET TEMP.

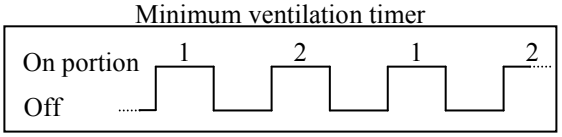
3. These parameters are used to set an individual associated temperature to the respective output. The temperatures associated to these heaters/brooders are a combination of the inside probes that are used.

SCREEN 4 **SIDEWALL FANS**



If this screen is not accessible, be sure to check if SIDEWALL FANS option is set to "Y" in **SYSTEM CONFIGURATION(12.5)** screen and if at least one relay in **OUTPUT CONFIGURATION(12.6)** screen is correctly associated to one of these respective outputs.

1. These parameters are used to establish on which portion of the minimum ventilation timer the respective sidewall fan will be activated. If a parameter is set to none of the portions of the timer, the respective sidewall fan will be activated only when it has a demand. These parameters can be set to portion #1, #2 or none. If some fans (including tunnel fans) are set to portion #1 and none on portion #2 (or some fans are set on portion #2 and none on portion #1), fans on timer activate on portion #1 and #2. If none of the sidewall fans and tunnel fans run on the minimum ventilation timer then the timer will stop to restart on the off portion as soon as one of these fans needs to run on minimum ventilation timer.



2. This parameter gives the access to the **MIN VENT TIMER & RAMPING(4.1)** screen.

3. These parameters are used to set the sidewall fan set points. The respective sidewall fan is activated when its respective sensor(s) select average temperature increases to SIDEWALL FAN # ON. Changing one of these parameters will affect the respective SIDEWALL FAN # OFF parameter. These parameters are affected by the TARGET TEMP parameter. These parameters are adjusted in 0.1°F increments from TARGET TEMP to TARGET TEMP + 60.0°F.

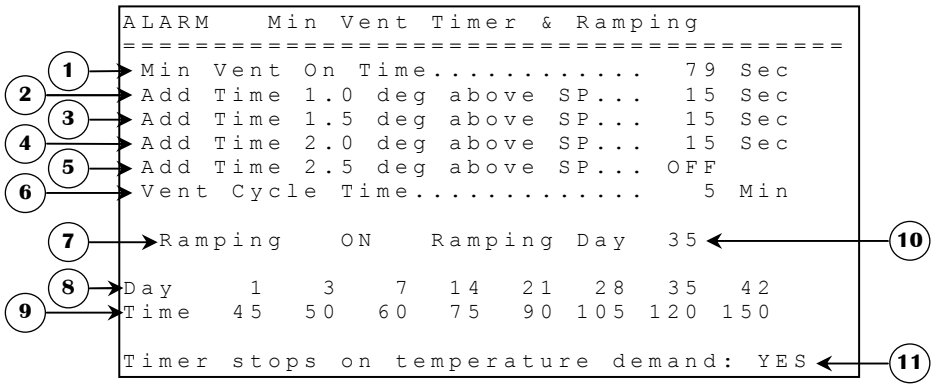
4. These parameters are used to set the sidewall fan differentials. The respective sidewall fan deactivates when its respective sensor(s) select average temperature decreases to SIDEWALL FAN # OFF. These parameters are affected by the respective SIDEWALL FAN # ON parameter. These parameters are adjusted in 0.1°F increments from its respective SIDEWALL FAN # ON - 20.0°F to its respective SIDEWALL FAN # ON - 0.5°F parameter.

5. This parameter gives the access to the **FAN STOP OVERRIDE(4.2)** screen.

6. These parameters are used to set an individual associated temperature to the respective output. The temperatures associated to these sidewall fans are a combination of the inside probes that are used.

7. This parameter allows the user to have sidewall fans activate if HIGH TEMP OVERRIDE is reached, regardless of tunnel mode and timers. If HIGH TEMP OVERRIDE is reached, sidewall fans with the option "Y" will activate.

SUB SCREEN **4.1** **MIN VENT TIMER & RAMPING**



1. This parameter is used to establish the minimum ventilation ON time when the average temperature is below the TARGET TEMP + 1.0°F. If MIN VENT ON TIME is longer than VENT CYCLE TIME then timer will always be ON. The MIN VENT ON TIME is adjusted in 1 second increments from 2 seconds to 900 seconds.

2. This parameter is used to increase the minimum ventilation ON time when the average temperature is 1.0°F above the TARGET TEMP. The value set at this parameter will be added to the MIN VENT ON TIME. The ADD TIME 1.0 DEG ABOVE SP is adjusted in 1 second increments from OFF / 3 seconds to 60 seconds.

3. This parameter is used to increase the minimum ventilation ON time when the average temperature is 1.5°F above the TARGET TEMP. The value set at this parameter will be added to the MIN VENT ON TIME. The ADD TIME 1.5 DEG ABOVE SP is adjusted in 1 second increments from OFF / 3 seconds to 60 seconds.

4. This parameter is used to increase the minimum ventilation ON time when the average temperature is 2.0°F above the TARGET TEMP. The value set at this parameter will be added to the MIN VENT ON TIME. The ADD TIME 2.0 DEG ABOVE SP is adjusted in 1 second increments from OFF / 3 seconds to 60 seconds.

5. This parameter is used to increase the minimum ventilation ON time when the average temperature is 2.5°F above the TARGET TEMP. The value set at this parameter will be added to the MIN VENT ON TIME. The ADD TIME 2.5 DEG ABOVE SP is adjusted in 1 second increments from OFF / 3 seconds to 60 seconds.

6. This parameter is used to establish the cycle time of the minimum ventilation timer. The VENT CYCLE TIME is adjusted in 1 minute increments from 1 to 15 minutes.

Ex: MIN VENT ON TIME = 30 seconds;
VENT CYCLE TIME = 5 minutes;
TARGET TEMP = 70.0°F;
ADD TIME 1.5 DEG ABOVE SP = 15 seconds;
ADD TIME 1.0 DEG ABOVE SP = 15 seconds;
The minimum ventilation timer follows these steps as the average temperature increases so, when average temperature is:

- Below 71.1°F, the minimum ventilation timer will be ON 30 seconds and OFF 4 minutes and 30 seconds.

- Between 71.1°F and 71.5°F, the minimum ventilation timer will be ON 45 seconds and OFF 4 minutes and 15 seconds.
- At and above 71.6°F, the minimum ventilation timer will be ON 60 seconds and OFF 4 minutes.

7. This parameter is used to set the ramping curve function ON or OFF for the minimum ventilation timer. If the parameter is set to ON, `MIN VENT ON TIME` will follow the curve function and user will not be able to manually modify this parameter nor the `DAY` points and `TIME` points.

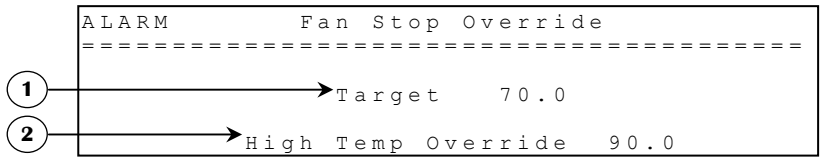
8. These parameters are used to set the days used for the ramping curve function for minimum ventilation timer. These parameters are adjusted in 1 day increments from day 0 to day 365.

9. These parameters are used to set the time of the minimum ventilation timer, relative to the day for ramping function. These parameters are adjusted in 1 second increments from 2 seconds to 900 seconds.

10. This parameter displays the current ramping day for the minimum ventilation timer. This ramping day reflects the `RAMPING STARTDAY` parameter in **SETPOINTS(1.2)** screen and can not be modified from this screen.

11. This parameter is used to deactivate the minimum ventilation timer when a fan starts on a temperature demand. If set to YES, when a fan starts on a temperature demand, minimum ventilation logic will be deactivated. If set to NO, all fans that are selected to run with minimum ventilation timer will follow the timer even if a fan is running on a temperature demand.

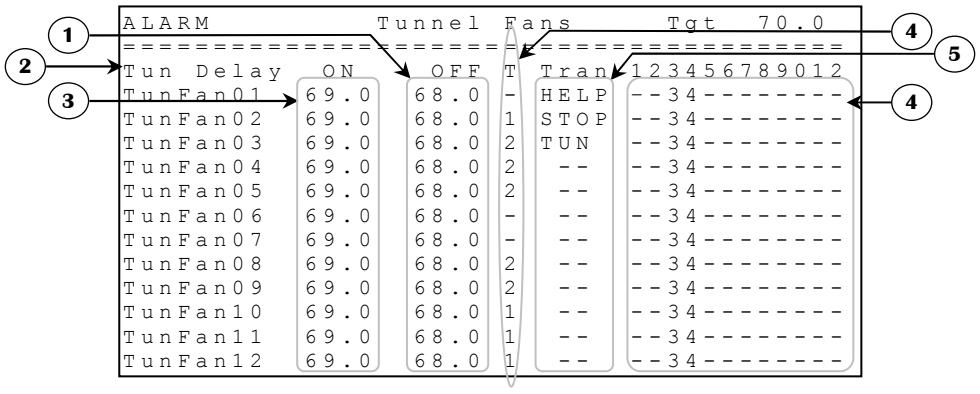
SUB SCREEN **4.2** **FAN STOP OVERRIDE**



1. This parameter reflects the `TARGET TEMP` of the **SETPOINTS(1.2)** screen.

2. This parameter sets the temperature at which sidewall fans will activate, regardless of tunnel mode and timers. If this absolute temperature is reached, sidewall fans with the option "Y" in the **SIDEWALL FANS(4.0)** screen at `SIDEWALL FAN # OVERRIDE OPTION` parameter will activate. There is a fixed differential of 0.3°F. The `HIGH TEMP OVERRIDE` is adjusted in 0.1°F increments from 0.0°F to 120.0°F.

SCREEN **5** **TUNNEL FANS**



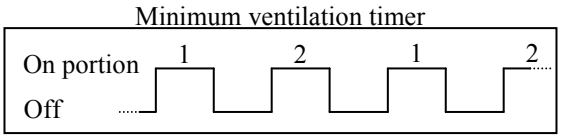
If this screen is not accessible, be sure to check if TUNNEL FANS option is set to "Y" in **SYSTEM CONFIGURATION (12.5)** screen and if at least one relay in **OUTPUT CONFIGURATION (12.6)** screen is correctly associated to one of these respective outputs.

1. These parameters are used to set the tunnel fan differentials. The respective tunnel fan deactivates when its respective sensor(s) select average temperature decreases to TUNNEL # OFF. These parameters are affected by the respective TUNNEL # ON parameter. These parameters are adjusted in 0.1°F increments from its respective TUNNEL # ON - 10.0°F to its respective TUNNEL # ON - 0.5°F.

2. This parameter gives the access to the **TUNNEL DELAYS(5.1)** screen.

3. These parameters are used to set the tunnel fan set points. The respective tunnel fan is activated when its respective sensor(s) select average temperature increases to TUNNEL # ON. Changing one of these parameters will affect the respective TUNNEL # OFF parameter. These parameters are affected by the TARGET TEMP parameter and are adjusted in 0.1°F increments from TARGET TEMP to TARGET TEMP + 40.0°F.

4. These parameters are used to establish on which portion of the minimum ventilation timer the respective tunnel fan will be activated. If a parameter is set to none of the portions of the timer, the respective tunnel fan will be activated only when it has a demand. These parameters can be set to portion #1, #2 or none. If some fans (including sidewall fans) are set to portion #1 and none on portion #2 (or some fans are set on portion #2 and none on portion #1), fans on timer activate on portion #1 and #2. If none of the sidewall fans and tunnel fans run on the minimum ventilation timer then the timer will stop to restart on the off portion as soon as one of these fans needs to run on minimum ventilation timer.



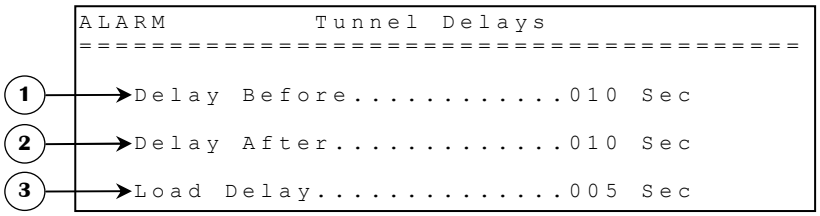
5. These parameters are used to set on which tunnel fan the transition functions will be activated. Two different parameter settings cannot have the same value (ex: if TUNNEL FAN 1 TRANSITION is set to "HELP" none of the other TUNNEL FAN # TRANSITION parameters can be set to "HELP"). These parameters can be set to "STOP", "HELP" or "TUN" by pressing (−) (+) buttons. If a TRANSITION TUNNEL FAN 1 to TRANSITION TUNNEL FAN 12 is set to "TUN", then TUNL CURT will take the same settings as that tunnel fan.

6. These parameters are used to set an individual associated temperature to the respective output. The temperatures associated to these tunnel fans are a combination of the inside probes that are used.

Notes: **1-** The transition "STOP" is used to deactivate sidewall fans. When the tunnel fan that has the transition setting "STOP" is activated, all the sidewall fans will deactivate. They will reactivate when this same tunnel fan shuts OFF. When the tunnel fan that has the transition setting "HELP" is activated, the ventilation inlet opens continuously and tunnel inlet follows the static pressure. When the temperature decreases and tunnel fan shuts off, the ventilation inlet will follow the static pressure sensor and tunnel inlet will close continuously. When the tunnel fan that has the transition setting "TUN" is activated, tunnel mode will begin (minimum ventilation ends). Once this tunnel fan deactivates, minimum ventilation restarts (tunnel mode ends). If none of the tunnel fans have this transition setting, no tunnel will be done. If no tunnel fan has the transition "STOP" or "HELP", the respective functions will be inactive.

2- All changes on settings will be effective only when exiting this screen.

SUB SCREEN 5.1 TUNNEL DELAYS



1. This parameter establishes the delay that is used when entering the tunnel mode. When the tunnel fan that has the transition setting "TUN" is activated, tunnel inlet opens, sidewall fans are deactivated, tunnel fans except the tunnel fan that has the transition setting "TUN" are deactivated, the ventilation inlet holds its present state. After the DELAY BEFORE has expired, respective tunnel fans are reset to the state they were before entering in tunnel mode, tunnel inlet follows static pressure sensor and ventilation inlet closes continuously. The DELAY BEFORE is adjusted in 1 second increments from 2 seconds to 900 seconds.

Ex: TUNNEL FAN 1 TRANSITION = "STOP";
TUNNEL FAN 2 TRANSITION = "HELP";
TUNNEL FAN 3 TRANSITION = "TUN";
TUNNEL FAN 1 ON = 75.0°F;
TUNNEL FAN 2 ON = 77.0°F;
TUNNEL FAN 3 ON = 78.0°F;
All TUNNEL FAN # OFF = respective TUNNEL FAN # ON - 1.0°F;

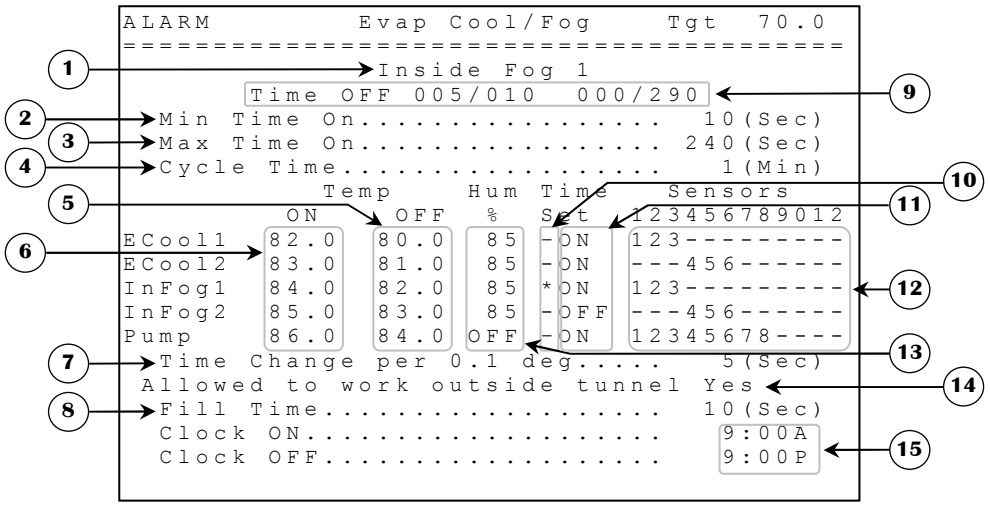
- At 75.0°F, all sidewall fans are deactivated
- At 77.0°F, ventilation inlet opens continuously and tunnel inlet follows static pressure sensor.
- At 78.0°F, DELAY BEFORE is activated; all tunnel fans are deactivated except tunnel fan 3. The ventilation inlet holds its present state and tunnel inlet opens. After the DELAY BEFORE has expired, tunnel fans, evaporative cooling cells and foggers are allowed to function, ventilation inlet closes and tunnel inlet follows static pressure sensor. Control is now in tunnel mode.
- When temperature decreases to 77.0°F, the ventilation inlet opens, tunnel inlet follows the static pressure sensor, tunnel fans follow their TUNNEL FAN # ON and sidewall fans stay deactivated.
- When temperature decreases to 76.0°F, ventilation inlet follows the static pressure sensor and tunnel inlet closes continuously.
- When temperature decreases to 74.0°F, sidewall fans are allowed to reactivate.

2. This parameter establishes the time delay that the vent inlet must open continuously when the system exits the tunnel mode. Tunnel fan transition "HELP" overrides this parameter if selected. When the temperature decreases and reaches the TUNNEL FAN # OFF of the tunnel fan that has the transition setting "TUN", DELAY AFTER is activated, the ventilation inlet opens continuously, tunnel inlet closes, sidewall ventilation fans are reactivated and tunnel fans are reset to the state they were before entering in tunnel mode. Once the delay has expired, the ventilation inlet follows static pressure sensor. The DELAY AFTER is adjusted in 1 second increments from 2 seconds to 900 seconds.

Ex: - When the tunnel fan that has the transition setting "TUN" is turned off (exit tunnel mode), the ventilation inlet opens during the DELAY AFTER.
- Once DELAY AFTER is finished, the static pressure sensor will control the ventilation inlet.
- The time the ventilation inlet takes to open enough to prevent a static pressure surge must be set in DELAY AFTER. Note that the CLOSE/OPEN SWITCHING DELAY reduces the opening time of the ventilation inlet.

3. This parameter establishes the time between the activation of multiple fans. This delay allows the fans to activate with a delay between them to reduce the chance of a power shortage due to too many fans activating at the same time. This delay is adjusted 1 second increments from 2 seconds to 900 seconds.

SCREEN 6 **EVAP COOL/FOG**



If this screen is not accessible, be sure to check if EVAP COOL/FOG option is set to "Y" in **SYSTEM CONFIGURATION(12.5)** screen and if at least one relay in **OUTPUT CONFIGURATION(12.6)** screen is correctly associated to one of these respective outputs.

1. This parameter is used to display the chosen output timer settings with parameter TIME SET.

2. This parameter is used to establish the minimum timer ON time. The MIN TIME ON is adjusted in 1 second increments from 1 second to 600 seconds.

3. This parameter is used to establish the maximum timer ON time. The MAX TIME ON is adjusted in 1 second increments from 1 second to 600 seconds.

4. This parameter is used to establish the timer cycle time. The OFF portion of a respective timer at the beginning of a sequence is equal to CYCLE TIME - MIN TIME ON. The CYCLE TIME is adjusted in 1 minute increments from 1 minute to 10 minutes.

5. These parameters are used to set the evaporative cooling cell, fogger and pump differentials. These parameters are affected by the respective TEMP ON parameter. These parameters are adjusted in 0.1°F increments from its respective TEMP ON - 30.0°F to its respective TEMP ON - 0.5°F.

6. These parameters are used to set the evaporative cooling cell, fogger and pump set points. The respective output is activated on timer when its respective sensor(s) select average temperature increases to its respective TEMP ON. Changing one of these parameters will affect the respective TEMP OFF parameter. These parameters are affected by the TARGET TEMP parameter. These parameters are adjusted in 0.1°F increments from TARGET TEMP to TARGET TEMP + 40.0°F.

7. This parameter is used to select how much adjustment is to be made to actual on time when respective temperature is equal to or above TEMP ON set point + 0.1°F. For every 0.1 degrees above the TEMP ON, respective timer adds the TIME CHANGE PER 0.1 DEG after every cycle until it reaches the MAX TIME ON or the CYCLE TIME. The same pattern is used to decrease the on time when respective temperature is equal to or below TEMP ON - 0.1°F until it decreases to or below the MIN TIME ON, at this point the output will be activated one more cycle with MIN TIME ON before it deactivate until it reaches TEMP ON again. This parameter is adjustable in 1 second increments from 1 second to 60 seconds.

8. This parameter is used to select the time it takes to fill water lines before cooling begins. For the first fill time activation, FILL TIME is not included in CYCLE TIME. Respective output will be activated at the end of its OFF period, for a period of time equal to FILL TIME before its OFF period finishes. Once this FILL TIME is elapsed, the output will be activated according to its respective timer. This parameter is adjustable in 1 second increments from 1 second to 300 seconds.

9. These parameters show the respective timer state, ON time and OFF time of the chosen output, which is displayed at parameter 1.

10. These parameters are used to select an output to view its respective timer and settings at the top of the screen. Press SELECT on one of these parameters to show its timer. The timer shown is the output's timer which have a "*" displayed alongside of it.

11. These parameters are used to activate the respective output on its timer or continuously activate this respective output. If set to ON, respective output follows its own timer, otherwise this respective output will be continuously activated if its set point has been reached.

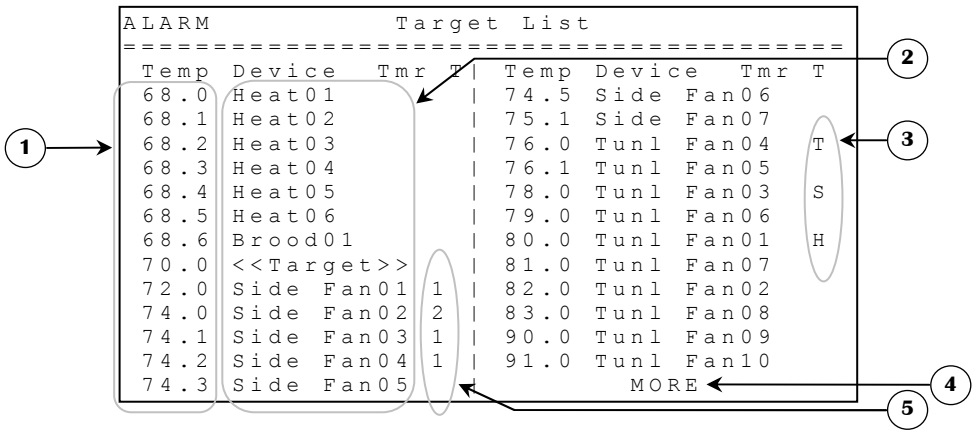
12. These parameters are used to set an individual associated temperature to the respective output. The temperatures associated to these outputs are a combination of the inside probes that are used.

13. These parameters establish the high humidity for the cooling. The cooling will not start or will deactivate if actual humidity is equal to or greater than this parameter. A humidity differential of 3 RH% is set to avoid oscillations. To deactivate this option, adjust to OFF. If the humidity probe is defective or unplugged, the control will act as if the humidity was very low, so this will not affect this logic. These parameters are adjustable in 1 RH% increments from 0 RH% to 99 RH%/OFF.

14. This parameter allows the user to choose whether the outputs mentioned in this screen will be permitted to active all the time or only when in tunnel mode.

15. These parameters are used to establish the time where the cooling (evaporative cooling, fogger and pump) may be activated. When the clock is between CLOCK ON and CLOCK OFF, cooling can be turned ON if there is a demand. Outside this time, cooling will not be allowed to function. These parameters are adjusted in 1 minute increments from 12:00A to 11:59P.

SCREEN 7 **TARGET LIST**



This screen shows a list of all outputs sorted by set point temperatures, including the TARGET TEMP. The output that has the lowest set point will be listed at the top of the list.

1. This column set points list is in numerical order. These parameters are linked to the device name beside them.

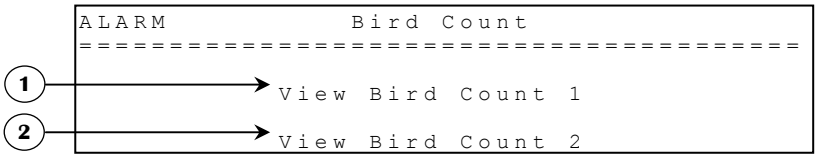
2. This column displays the output associated to the set points on left (except for tunnel curt, there is no output relay associated to this device name).

3. This column indicates which fan is selected for tunnel fan transition. (T for TUN, H for HELP, S for STOP).

4. This parameter is shown only if this screen is not enough to display all outputs, this parameter allows the access to a similar screen that displays the rest of the list.

5. This column indicates on which portion of the minimum ventilation timer the output on the left is (applies only to sidewall and tunnel fans).

SCREEN 8 **BIRD COUNT**

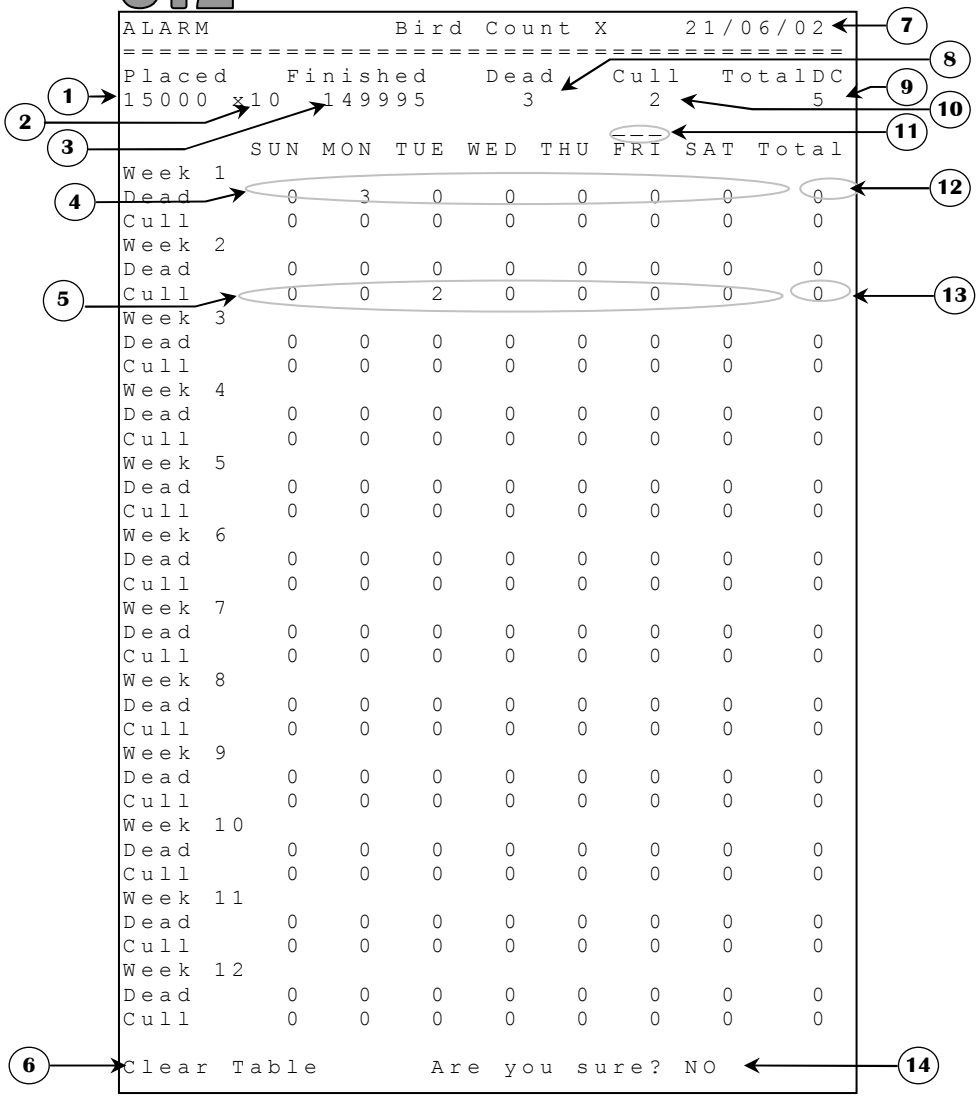


1. This parameter gives the access to the **BIRD COUNT 1(8.1)** screen.

2. This parameter gives the access to the **BIRD COUNT 2(8.2)** screen.

SUB SCREENS **8.1** **BIRD COUNT 1**

8.2 **BIRD COUNT 2**



1. This parameter is used to set the total amount of birds initially placed in the building. This setting affects the FINISHED and TOTALDC parameters. The PLACED parameter is adjusted in 1 bird increments from 0 birds to 32767 birds

2. This parameter multiplies the number of birds placed by its value to obtain a very high number of birds in the building. For a number of birds higher than 32767, user must enter a lower number in the PLACED parameter and increase this parameter to multiply the number of placed birds. This value will not affect any dead count parameters, only the FINISHED parameter.

3. This parameter is used to show how many birds are still living. This parameter cannot be changed manually but PLACED, DEAD and CULL parameters affect it.

4. These 7 parameters (one for each day) are used to count the amount of birds dead from a natural cause. There are 12 different weeks and each week has 7 different days to keep track of the number of deaths each day. These parameters are adjusted in 1 death increments from 0 deaths to 999 deaths.

5. These 7 parameters (one for each day) are used to count the amount of birds killed intentionally. There are 12 different weeks and each week has 7 different days to keep track of the number of deaths each day. These parameters are adjusted in 1 death increments from 0 deaths to 999 deaths.

6. This parameter is used to clear all values contained in this screen. Press the SELECT button on this parameter and a confirmation text and choice will appear beside this parameter, the cursor will be positioned on the choice confirmation.

7. This parameter displays the current date.

8. This parameter is used to show the total amount of birds that are already dead. This parameter cannot be changed manually. This parameter is calculated by adding all `WEEK # TOTAL DEAD` parameters.

9. This parameter is used to show the total amount of dead birds. This parameter cannot be changed manually and is calculated by adding the `DEAD` and `CULL` parameters.

10. This parameter is used to show the total amount of birds that were killed intentionally. This parameter cannot be changed manually and is calculated by adding all `WEEK # TOTAL CULL` parameters.

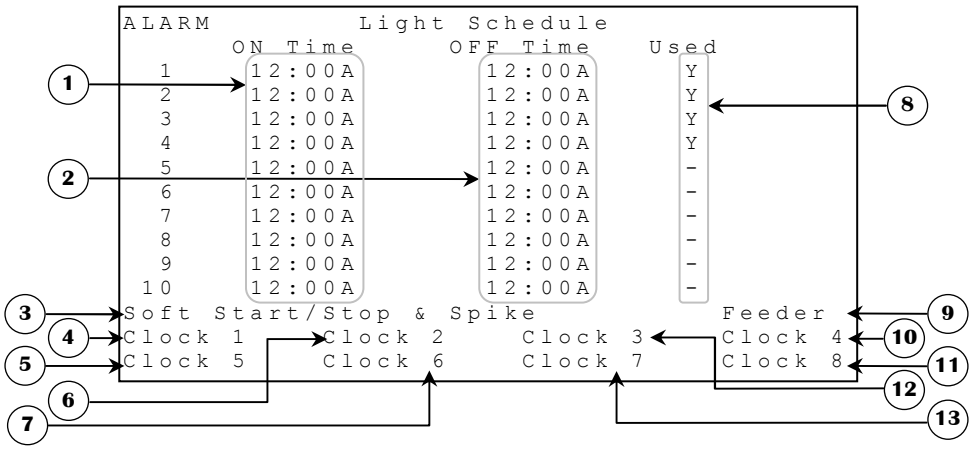
11. This symbol is at the top of the current day.

12. These parameters (one for each week) are used to display the total amount of birds dead from a natural cause in one week. Each parameter is calculated by its respective death inventory in the same week for `DEAD` parameters.

13. These parameters (one for each week) are used to display the total amount of birds killed intentionally in one week. Each parameter is calculated by its respective death inventory in the same week for `CULL` parameters.

14. This parameter is used to confirm ("YES") or refuse ("NO") the action of clearing all values contained in this screen. Select your choice and press the SELECT button. If choice is "YES", all values are reset to 0 (except for `PLACED` parameter that is reset to 15 000) and the cursor will be positioned on `PLACED` parameter.

SCREEN 9 **LIGHT SCHEDULE**



If this screen is not accessible, be sure to check if `LIGHT DIMMER` option is set to "Y" in **SYSTEM CONFIGURATION(12.5)** screen or a relay is correctly associated to one of the outputs mentioned in this screen in **OUTPUT CONFIGURATION(12.6)** screen.

1. These parameters are used to establish the beginning of an activation period. When lights are activated by LIGHT # ON TIME, the light comes on by SOFT START/STOP to LIGHT LO INTENSITY. These parameters are adjusted in 1 minute increments from 12:00A to 11:59P.

2. These parameters are used to establish the end of an activation period. These parameters are adjusted in 1 minute increments from 12:00A to 11:59P.

3. This parameter gives the access to the **SOFT START/STOP & SPIKE(9.1)** screen.

4. This parameter gives the access to the **CLOCK 1(9.3)** screen.

5. This parameter gives the access to the **CLOCK 5(9.7)** screen.

6. This parameter gives the access to the **CLOCK 2(9.4)** screen.

7. This parameter gives the access to the **CLOCK 6(9.8)** screen.

8. These parameters allow the user to set which light period will be active or not. When a parameter USED is set to "Y", the respective activation period will be active, otherwise the respective activation period will not be considered.

9. This parameter gives the access to the **FEEDER SCHEDULE(9.2)** screen.

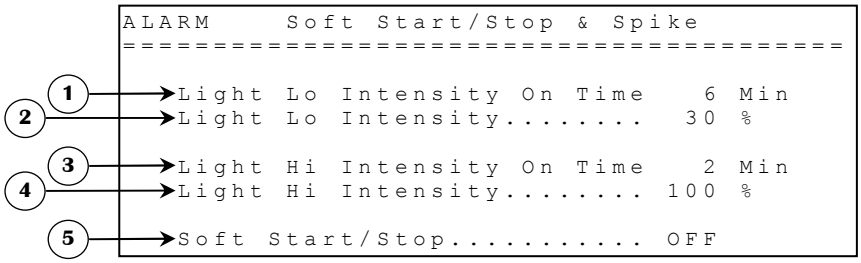
10. This parameter gives the access to the **CLOCK 4(9.6)** screen.

11. This parameter gives the access to the **CLOCK 8(9.10)** screen.

12. This parameter gives the access to the **CLOCK 3(9.5)** screen.

13. This parameter gives the access to the **CLOCK 7(9.9)** screen.

SUB SCREEN **9.1** **SOFT START/STOP & SPIKE**



If this screen is not accessible, be sure to check if LIGHT DIMMER option is set to "Y" in **SYSTEM CONFIGURATION(12.5)** screen.

1. This parameter is used to establish the amount of time the light intensity will stay at LIGHT LO INTENSITY. At the end of LIGHT LO INTENSITY ON TIME, the light increases its intensity for SOFT START/STOP from LIGHT LO INTENSITY to LIGHT HI INTENSITY. The LIGHT LO INTENSITY ON TIME is adjusted in 1 minute increments from 10 minutes to 900 minutes.

2. This parameter is used to establish the light's low intensity. The LIGHT LO INTENSITY is adjusted in 1% increments from OFF / 1% to 100%.

3. This parameter is used to establish the amount of time the light intensity will stay at LIGHT HI INTENSITY. At the end of LIGHT HI INTENSITY ON TIME, the light decreases its intensity by SOFT START/STOP to LIGHT LO INTENSITY. The LIGHT HI INTENSITY ON TIME is adjusted in 1 minute increments from OFF/1 minute to 90 minutes.

4. This parameter is used to establish the light's high intensity. Take note that the LIGHT HI INTENSITY must be higher than LIGHT LO INTENSITY. The LIGHT HI INTENSITY is adjusted in 1% increments from OFF/1% to 100%.

5. This parameter is used to establish the light's modulation time from the low intensity (LIGHT LO INTENSITY or OFF) to the high intensity (LIGHT LO INTENSITY or LIGHT HI INTENSITY) or vice-versa. The SOFT START/STOP is adjusted in 1 minute increments from OFF/1 minute to 20 minutes.

Ex: SOFT START/STOP = 1 minute;
LIGHT HI INTENSITY ON TIME = 3 minutes;
LIGHT HI INTENSITY = 75%;
LIGHT LO INTENSITY ON TIME = 10 minutes;
LIGHT LO INTENSITY = 25%;
LIGHT ON TIME = 3:00A;
LIGHT OFF TIME = 5:00A;
At 2:59A, the light if OFF,

First step...

- Between 3:00A and 3:01, the light increases its intensity from 0% to 25%.

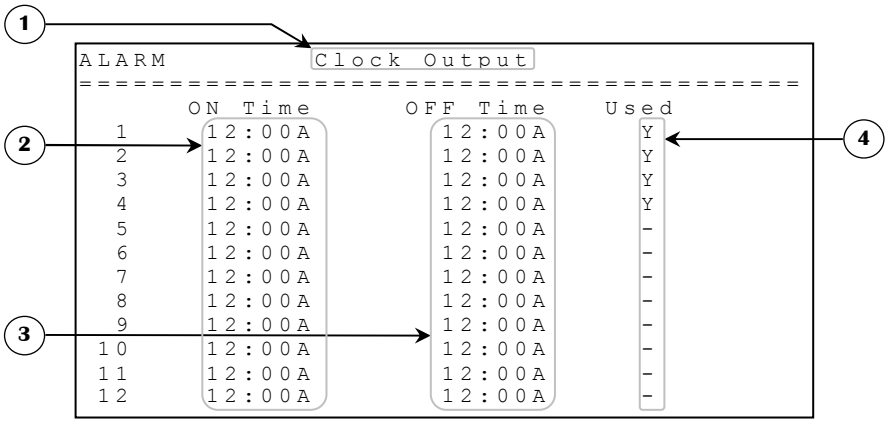
Others steps…

- The lights stay at 25% for 10 minutes and then the light increases their intensity from 25% to 75% for 1 minute to stay at 75% for 3 minutes. When 3 minutes are elapsed then light intensity decreases from 75% to 25% for 1 minute.

These steps continue cycling like a recycle timer until the clock reaches 4:59A, lights will then decreases their intensity from where it was at 4:59A to 0%.

Notes:
- All settings must be set out of an activation period and all activation periods can't overlap otherwise unwanted light conditions may happen.
- At the return of a power failure, the lights will restart at the beginning of the cycle and will stop at respective LIGHT # OFF TIME.
- If lights SOFT START/STOP is set to OFF and the light dimmer option is set to "N" in **SYSTEM CONFIGURATION(12.5)** screen, variable lights become ON/OFF lights.
- If this parameter is set to OFF while the light dimmer option is set to "Y" in **SYSTEM CONFIGURATION(12.5)** screen, when in an activation period, variable lights demand will equal to the LIGHT LO INTENSITY parameter.

SUB SCREENS 9.2-8 CLOCK OUTPUTS



There are eight clock outputs and a feeder output that may be used in this configuration: Each of these outputs has its own schedule screen used to set the activation and deactivation times. Every output used must have an associated relay in **OUTPUT CONFIGURATION(12.6)** screen to be activated. A deactivated clock output will not have a schedule screen. In addition, FEED option must be set to "Y" in **SYSTEM CONFIGURATION(12.5)** to use the feeder. The first four clock outputs have 12 activation periods and the last four (**SUB SCREENS(9.6-10)**) have 6 activation periods. Clock 7 and Clock 8 have both a skip day option, see **CLOCK OUTPUTS(9.9-10)** parameters description. The feeder schedule has 10 activation periods.

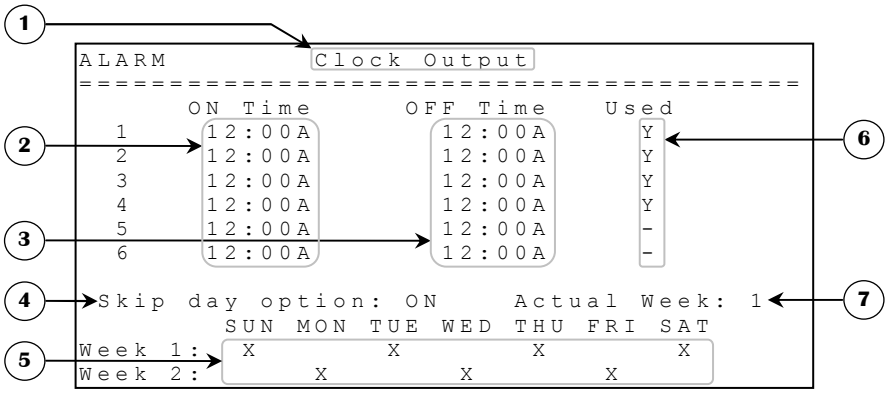
1. This title will indicate the name of the clock or feeder output currently being scheduled. The name of the output will always be the same as the parameter used to access the sub-screen.

2. These parameters are used to establish the beginning of an activation period. These parameters are adjusted in 1 minute increments from 12:00A to 11:59P.

3. These parameters are used to establish the end of an activation period. These parameters are adjusted in 1 minute from 12:00A to 11:59P.

4. These parameters allow the user to set which periods will be active or not. When a parameter USED is set to "Y", the respective activation period will be active, otherwise the respective activation period will not be considered.

SUB SCREENS 9.9-10 CLOCK OUTPUTS



1. This title will indicate the name of the clock (Clock 7 or Clock 8) output currently being scheduled. The name of the output will always be the same as the parameter used to access the sub-screen.

2. These parameters are used to establish the beginning of an activation period. These parameters are adjusted in 1 minute increments from 12:00A to 11:59P.

3. These parameters are used to establish the end of an activation period. These parameters are adjusted in 1 minute from 12:00A to 11:59P.

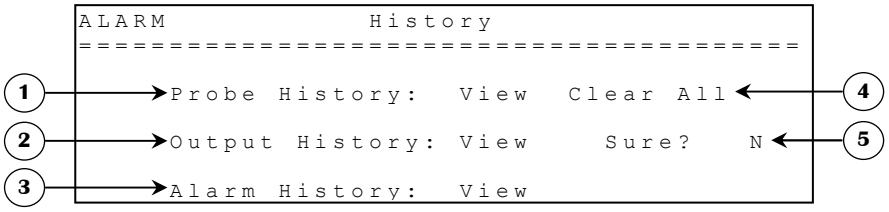
4. This parameter is used to set ON or OFF the skip day option on the respective clock output. If set to OFF, parameters below and beside will become invisible.

5. These parameters are used to select a day on which the respective clock output will not be activated. If SKIP DAY OPTION is adjusted from OFF to ON then, ACTUAL WEEK will be the same as the other output (Clock 7 or Clock 8 in occurrence) if this last output's skip day option was already set to ON. Otherwise, the ACTUAL WEEK will start at 1. When week 2 is done, ACTUAL WEEK returns to 1. To select a skip day, place the cursor on the chosen day and press the SELECT button.

6. These parameters allow the user to set which periods will be active or not. When a parameter USED is set to "Y", the respective activation period will be active, otherwise the respective activation period will not be considered.

7. This parameter displays which week is currently used to skip output activation. Respective Clock 7 and Clock 8 ACTUAL WEEK are linked.

SCREEN **10** **HISTORY**



1. This parameter gives the access to the **PROBE HISTORY(10.1)** screen.

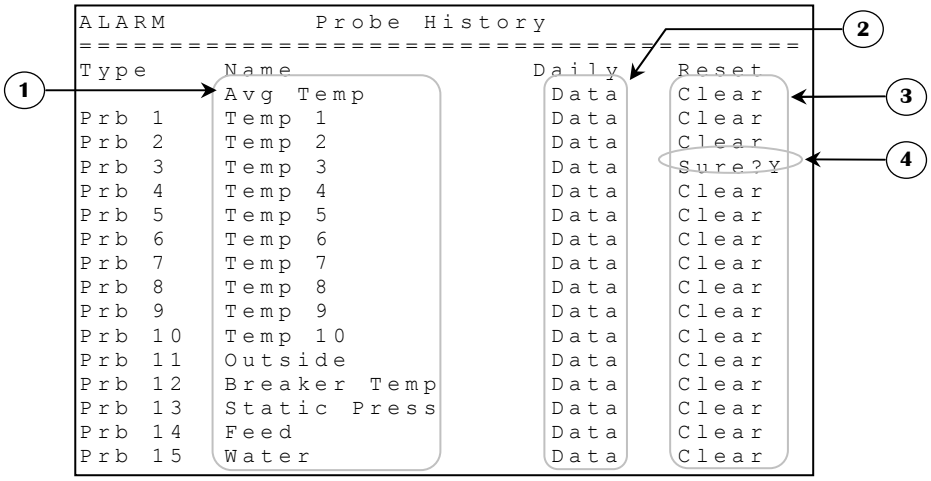
2. This parameter gives the access to the **OUTPUT HISTORY(10.2)** screen.

3. This parameter gives the access to the **ALARM HISTORY(11.2)** screen.

4. This parameter is used to clear all history values for all probes. Press the SELECT button on this parameter. A confirmation choice will then appear and cursor will be positioned on the confirmation choice. At this point, the confirmation choice is to confirm ("Y") or refuse ("N") the action of clearing all history values for all probes. Select your choice and press the SELECT button. If the choice was "Y", then all history values are erased.

5. This parameter is used to clear all history values for all outputs. Press the SELECT button on this parameter. A confirmation choice will then appear and cursor will be positioned on the confirmation choice. At this point, the confirmation choice is to confirm ("Y") or refuse ("N") the action of clearing all history values for all outputs. Select your choice and press the SELECT button. If the choice was "Y", then all history values are erased.

SUB SCREEN **10.1** **PROBE HISTORY**



1. These parameters display what kind of sensor is used for the respective probe emplacement. These parameters cannot be manually modified.

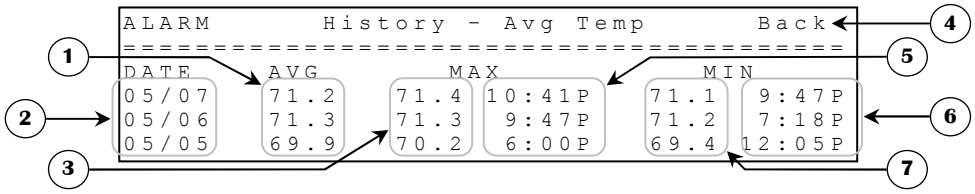
2. These parameters are used to access the acquisition data for each probe. By pressing the SELECT button on one of these parameters, control goes in a screen that lists all acquisition data for this respective probe. See example on next page

3. These parameters are used to clear all values contained in the respective acquisition data screen. Press SELECT button on one of these parameters. A confirmation choice will then appear beside this parameter and cursor will be positioned on the confirmation choice.

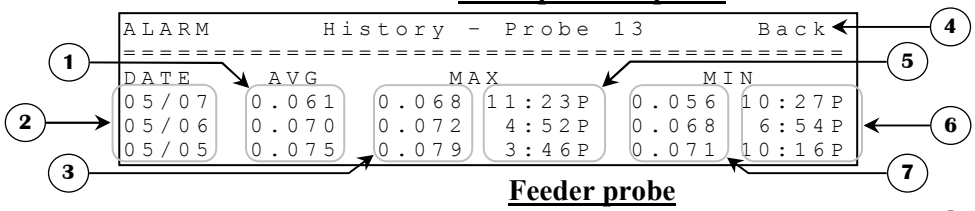
4. These parameters are used to confirm ("Y") or refuse ("N") the action of clearing all values contained in this respective acquisition data screen. Select your choice and press the SELECT button. If the choice was "Y", then all acquisition values are erased and the cursor will be positioned on CLEAR parameter.

History example:

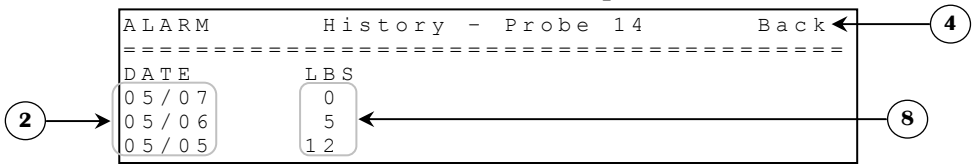
Average temperature and temperature probes



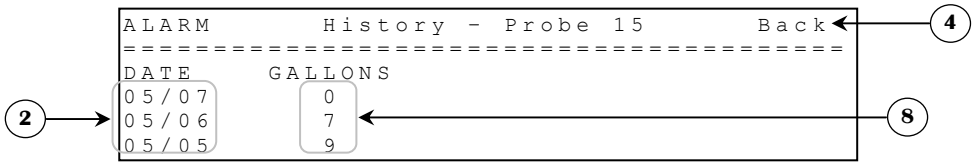
Static pressure probe



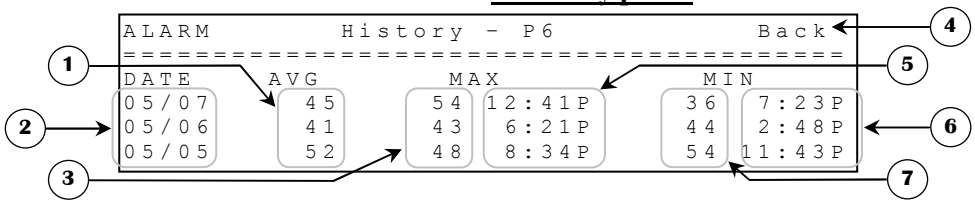
Feeder probe



Water probe



Humidity probe



1. These parameters display the average of the data acquired in an entire day or since the beginning of the current day.

2. These parameters display the date of the specific acquisition line. At midnight a new acquisition line is added at the top of the list.

3. These parameters display the maximum data value acquired in a specific day.

4. This parameter returns to the **PROBE HISTORY(10.1)** screen.

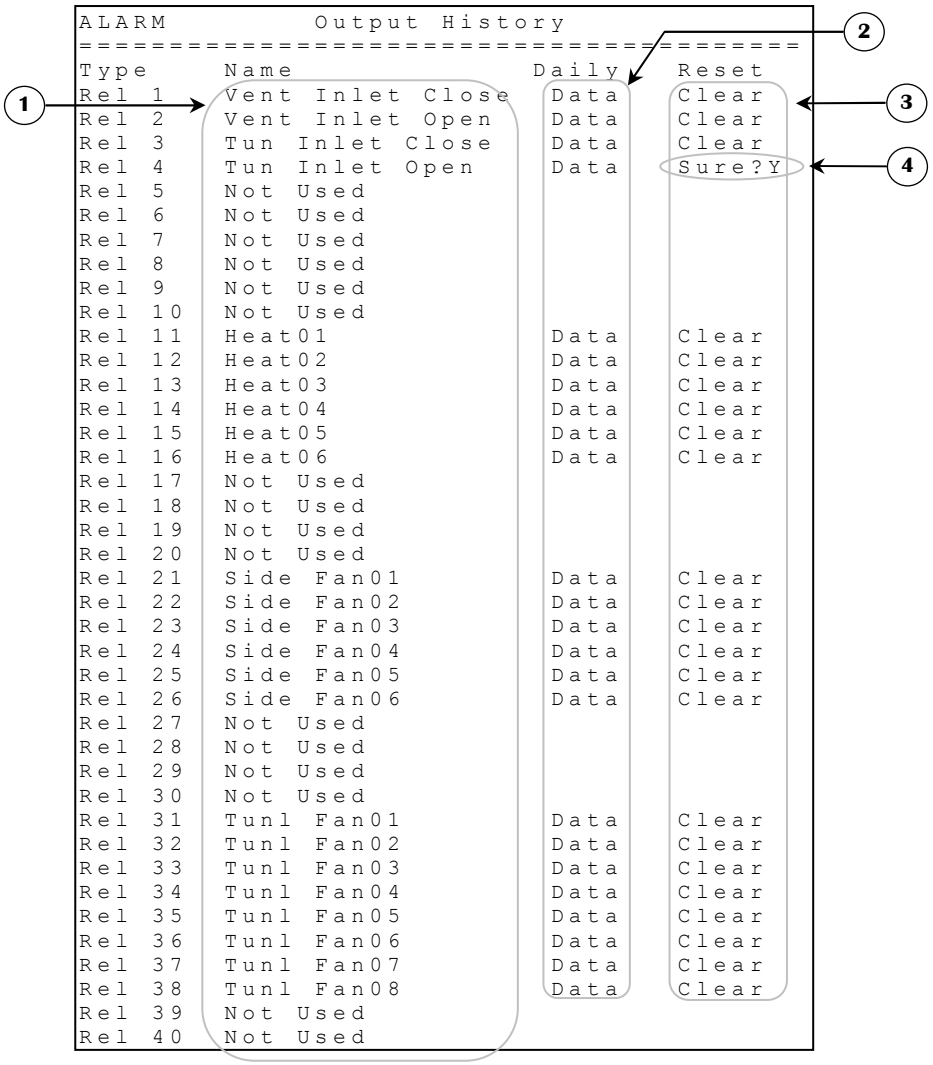
5. These parameters display the daytime at which the maximum data value was acquired in a specific day.

6. These parameters display the daytime at which the minimum data value was acquired in a specific day.

7. These parameters display the minimum data value acquired in a specific day.

8. This parameter displays the daily total feeding time as read by feeder input. These parameters are displayed in lbs but the control keeps track of the seconds. In the case of the water history, this parameter displays the daily total of water pulses.

SUB SCREN **10.2** **OUTPUT HISTORY**



ALARM Output History

Type	Name	Daily	Reset
Rel 1	Vent Inlet Close	Data	Clear
Rel 2	Vent Inlet Open	Data	Clear
Rel 3	Tun Inlet Close	Data	Clear
Rel 4	Tun Inlet Open	Data	Sure?Y
Rel 5	Not Used		
Rel 6	Not Used		
Rel 7	Not Used		
Rel 8	Not Used		
Rel 9	Not Used		
Rel 10	Not Used		
Rel 11	Heat01	Data	Clear
Rel 12	Heat02	Data	Clear
Rel 13	Heat03	Data	Clear
Rel 14	Heat04	Data	Clear
Rel 15	Heat05	Data	Clear
Rel 16	Heat06	Data	Clear
Rel 17	Not Used		
Rel 18	Not Used		
Rel 19	Not Used		
Rel 20	Not Used		
Rel 21	Side Fan01	Data	Clear
Rel 22	Side Fan02	Data	Clear
Rel 23	Side Fan03	Data	Clear
Rel 24	Side Fan04	Data	Clear
Rel 25	Side Fan05	Data	Clear
Rel 26	Side Fan06	Data	Clear
Rel 27	Not Used		
Rel 28	Not Used		
Rel 29	Not Used		
Rel 30	Not Used		
Rel 31	Tunl Fan01	Data	Clear
Rel 32	Tunl Fan02	Data	Clear
Rel 33	Tunl Fan03	Data	Clear
Rel 34	Tunl Fan04	Data	Clear
Rel 35	Tunl Fan05	Data	Clear
Rel 36	Tunl Fan06	Data	Clear
Rel 37	Tunl Fan07	Data	Clear
Rel 38	Tunl Fan08	Data	Clear
Rel 39	Not Used		
Rel 40	Not Used		

1. These parameters display what kind of output is used for the respective relay emplacement.

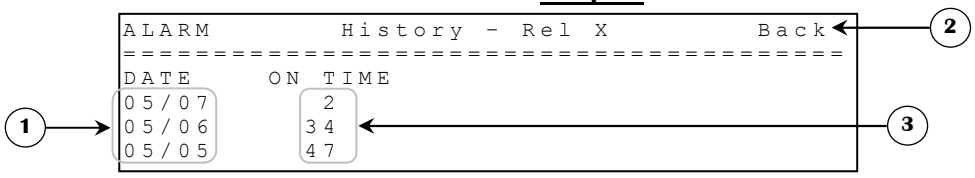
2. These parameters are used to access the acquisition data for each relay. By pressing [SELECT] while on one of these parameters, the control goes in a screen that lists all acquisition data for this respective relay. See example on next page.

3. These parameters are used to clear all values contained in the respective acquisition data screen. To do so, press the SELECT button on one of these parameters. A confirmation choice will then appear and cursor will be positioned on the confirmation choice.

4. These parameters are used to confirm ("Y") or refuse ("N") the action of clearing all values contained in this respective acquisition data screen. Select your choice and press the SELECT button. If choice was "Y", then all acquisition values are erased and the cursor will be positioned on CLEAR parameter.

History example:

Outputs

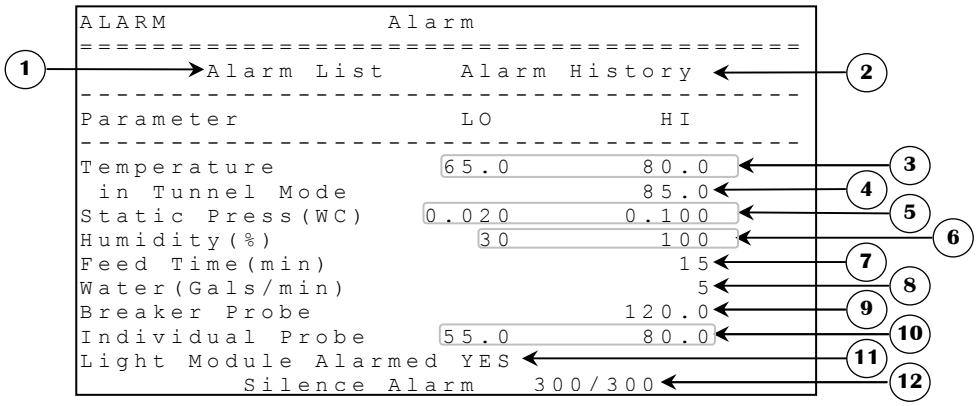


1. These parameters display the date of the specific acquisition line. At midnight, a new acquisition line is added at the top of the list.

2. This parameter returns to the **OUTPUT HISTORY(10.2)** screen.

3. These parameters display the daily total time that the respective output was ON. These parameters are displayed in minutes but the control keeps track of the seconds.

SCREEN 11 **ALARM**



1. This parameter gives the access to the **ALARM LIST(11.1)** screen.

2. This parameter gives the access to the **ALARM HISTORY(11.2)** screen.

3. These parameters are used to establish the low and high temperature limits. Below ALARM TEMPERATURE LO limit or above ALARM TEMPERATURE HI limit, an alarm occurs. Both parameters are relative to the target but are displayed as absolute set points and are adjusted in 0.1°F increments from 32.0°F to 120.0°F.

4. This parameter is used to establish the high temperature limit when in tunnel mode. Above this limit, an alarm occurs. This parameter is adjusted in 0.1°F from 32.0°F to 120.0°F.

5. These parameters are used to establish the low and high pressure alarm limits. When static pressure is below LO ALARM SP, the LO ALARM DELAY is activated. It is possible to deactivate the LO ALARM SP by

setting it to OFF. The LO ALARM SP is adjusted in 0.001“WC increments from OFF / 0.000“WC to 0.100“WC. When pressure is above HI ALARM SP, the HI ALARM DELAY is activated. The HI ALARM SP is adjusted in 0.001“WC increments from 0.050“WC to 0.200“WC. These parameters can also be modified in **STATIC PRESSURE(2)** screen.

6. These parameters are used to establish the low and high humidity limits. When humidity sensor is below ALARM HUMIDITY LO limit or above ALARM HUMIDITY HI limit, an alarm occurs. Both parameters are adjusted in 1%RH increments from 0%RH to 100%RH.

7. This parameter is used to set the delay that the feed system is allowed to run constantly before activating the alarm. The ALARM FEED TIME is adjusted in 1 minute increments from OFF / 1 minute to 30 minutes.

8. This parameter establishes the water distribution limit in gallons per minute. Above this limit, an alarm occurs. The ALARM WATER is adjusted in 1 gallon from OFF/1 gallon to 1000 gallons.

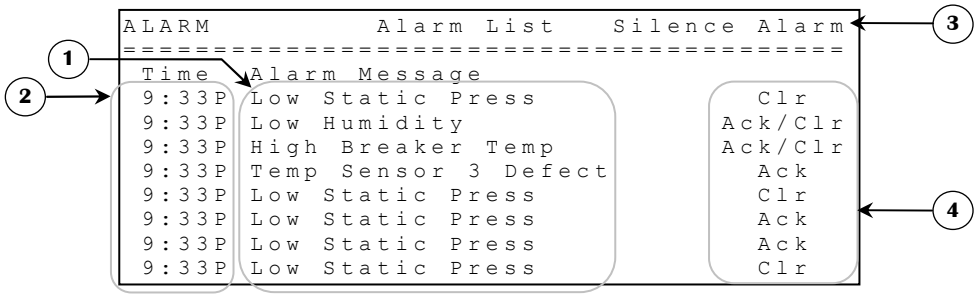
9. This parameter establishes the temperature limit for the breaker probe. Above this limit, an alarm occurs. The ALARM BREAKER PROBE is adjusted in 0.1°F from 32.0°F to 160.0°F.

10. These parameters are used to establish the low and high individual temperature limits. If a sensor selected to be individually alarmed (see the **PROBE CONFIGURATION (12.2)** screen) exceeds these limits, the alarm will be activated. Both parameters are adjusted in 0.1°F increments from 32.0°F to 120.0°F.

11. This parameter is used to disable the alarm on light module.

12. This parameter shuts off of the alarm for 5 minutes by pressing the SELECT button. A countdown will begin and time left will be shown under this parameter.

SUB SCREEN **11.1** **ALARM LIST**



1. This column shows the alarms that have previously occurred. These alarm messages are listed in order. The first alarm shown is the latest one.

2. These parameters indicate the time at which the respective alarm occurred.

3. This parameter silences the alarm for 5 minutes by pressing the SELECT button.

4. These parameters are used to acknowledge or clear an alarm that has been triggered. An alarm that has been triggered will display “Ack” until the alarm is acknowledged. This is done by pressing the SELECT button while positioned on the corresponding line. When this is done, the display will change to “Clr”. If the user presses the SELECT button again while on the parameter, the alarm entry will disappear and the alarm condition will be reinitialized. If a non-critical alarm occurs (Power Failure or Prb not alarmed) or a high/low

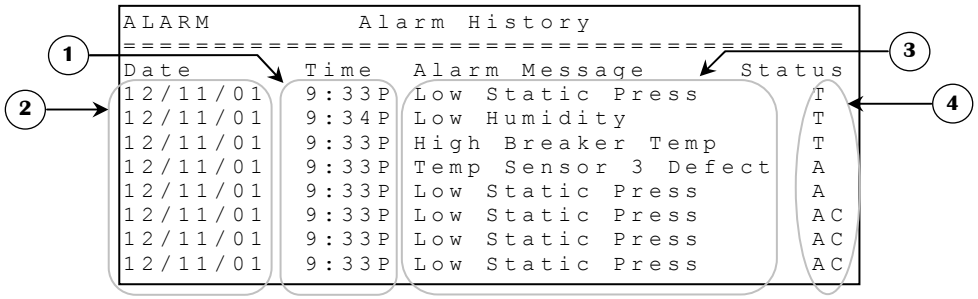
probe has returned within the acceptable limits, the display will be "Ack/Clr" and pressing the SELECT button will both acknowledge and clear the alarm situation.

Notes: - If only the "PRB not alarmed" message is displayed in the alarm list, then the alarm relay will not be activated, "WARNING" will be shown in the top left corner of the screen. This message will be displayed at midnight only. After acknowledging or clearing the latest "PRB not alarmed" message, "WARNING" will disappear until this message must be displayed again. When a power failure occurs, "WARNING" will also be shown in the top left of the screen

- If an alarm message (except for the "PRB not alarmed" or "Power Failure") is displayed and the respective alarm condition is still true, then the alarm relay will be activated and a flashing "ALARM" message will appear in the top left corner of the screen. If the alarm condition is corrected, then the alarm relay will be deactivated and the "ALARM" message stop flashing.

- There are some exceptions; high and low static pressure alarm, breaker/inside temperature defective, water/feeder defective, humidity probe/relay board/light module not responding. When one of these alarm occurred, even if the alarm condition is corrected the alarm relay will stay activated and the flashing "ALARM" message will stay at the top left corner of the screen. User must clear the respective alarm message to deactivate the alarm relay and the flashing alarm message.

SUB SCREEN 11.2 ALARM HISTORY



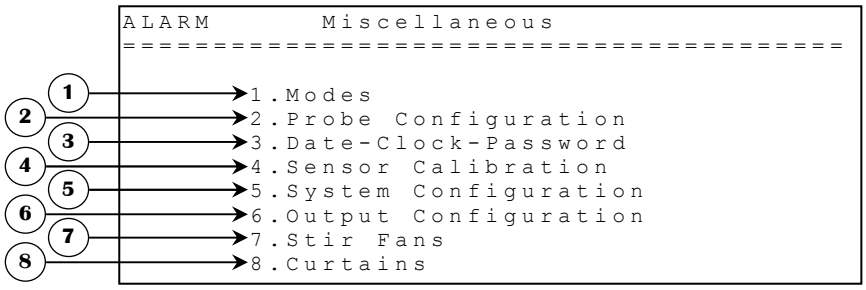
1. These parameters indicate the daytime at which the respective alarm occurred or changed states.

2. These parameters indicate the date at which the respective alarm occurred or changed states.

3. This column shows the alarms that have occurred or changed states. These alarm messages are listed in chronological with the most recent.

4. This parameter displays the status of the alarm for the corresponding date and time. There are 4 possible statuses that may be displayed. "T" represents the time at which the alarm was triggered. "A" indicates the time at which the alarm was acknowledged, "C" represents the time at which the alarm was cleared and "AC" represents the time at which the alarm was acknowledged and cleared.

SCREEN 12 **MISCELLANEOUS**



1. This parameter gives the access to the **MODES(12.1)** screen.

2. This parameter gives the access to the **PROBE CONFIGURATION(12.2)** screen.

3. This parameter gives the access to the **DATE-CLOCK-PASSWORD(12.3)** screen.

4. This parameter gives the access to the **SENSOR CALIBRATION(12.4)** screen.

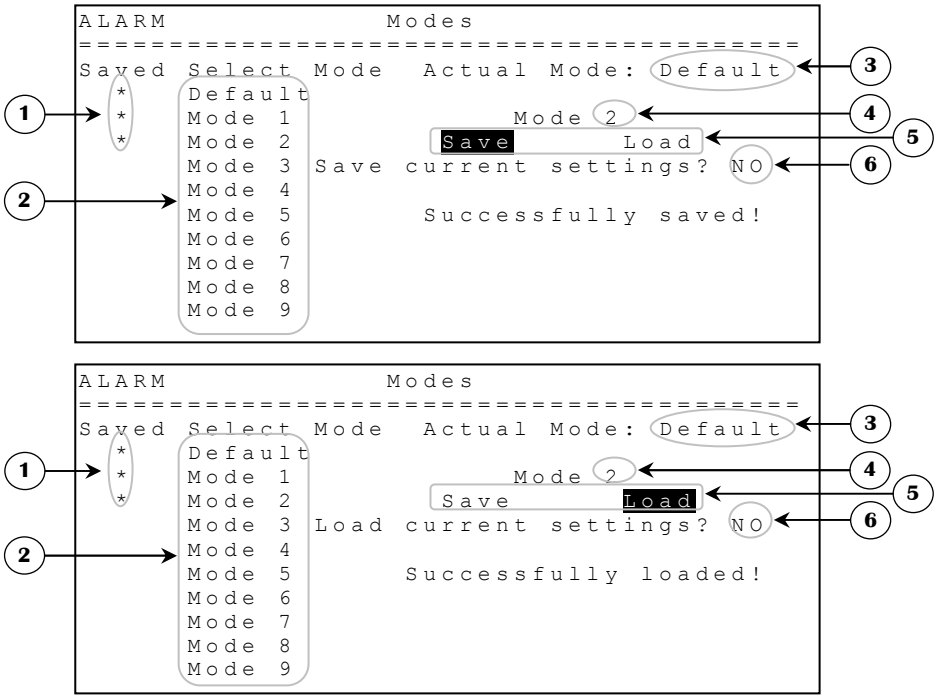
5. This parameter gives the access to the **SYSTEM CONFIGURATION(12.5)** screen.

6. This parameter gives the access to the **OUTPUT CONFIGURATION(12.6)** screen.

7. This parameter gives the access to the **STIR FANS(12.7)** screen.

8. This parameter gives the access to the **CURTAINS(12.8)** screen.

SUB SCREEN 12.1 **MODES**



This version may not be merged with any of the preceding ones because of mode saving and loading modifications.

1. This column indicates which mode has settings in it by placing a star besides the mode.

2. This column is used to select which mode the user wants to load or save. By pressing the [SELECT] button, the option to load or save will appear on the right.

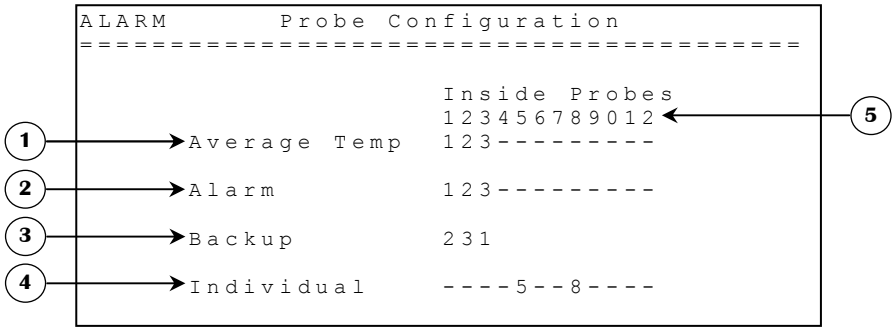
3. This parameter indicates the mode currently used.

4. This parameter displays the mode that will be saved or loaded.

5. These choices appear when a mode on the left is selected.

6. This parameter is used to validate the choices you have made (save or load the mode).

SUB SCREEN 12.2 PROBE CONFIGURATION



1. This sensor select is used to set which probes will be calculated in the average temperature.

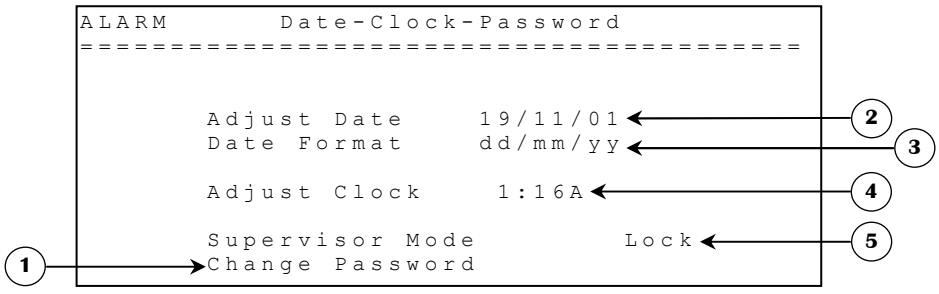
2. This parameter gives the opportunity to activate the alarm for the respective sensor that is selected or deactivate it for the sensors that are not selected.

3. These parameters allow the selection of an available backup sensor for each inside temperature sensor. This means that if an inside sensor becomes defective or is malfunctioning, the system will use the backup sensor instead. In the case that a backup sensor is defective too, the system will use the TARGET TEMP setting to simulate a sensor reading.

4. This parameter is used to activate or deactivate the individual alarm for the respective sensor. When a sensor selected in this parameter exceeds the individual probe limits of the **ALARM(11)** screen, the alarm will activate.

5. This parameter shows the possible inside probes that can be used for average temperature.

SUB SCREEN 12.3 DATE-CLOCK-PASSWORD



1. This parameter is used to change the current password. Press SELECT and the control will ask you to enter the new password. Enter the new password by using the − + and SELECT buttons. Once the new password is entered, the control will ask you to confirm the password by entering it once again. The control will display the message "Password changed" if the good password is entered or "Wrong password" if the 2 passwords are not identical.

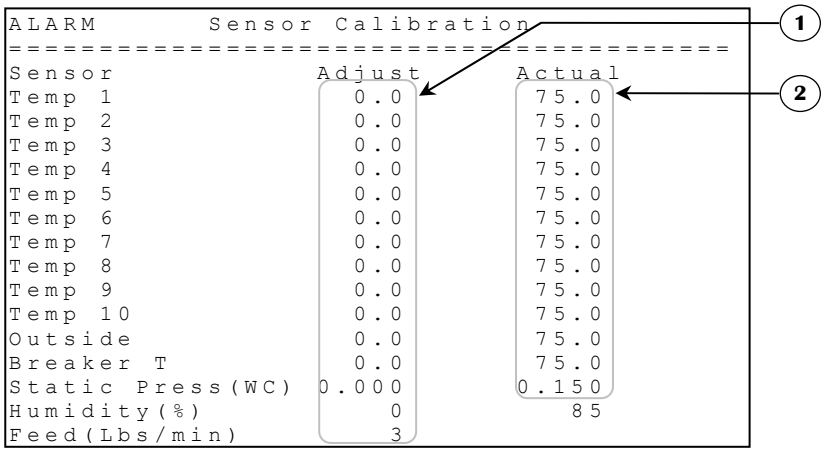
2. This parameter is used to change the date of the system, refer to the parameter below for the date format.

3. This parameter is used to change the date format used by the system. There are 3 different possible formats, “mm/dd/yy”, “dd/mm/yy” and “yy/mm/dd”.

4. This parameter is used to change the time. Hours and minutes are incremented separately. Hours are adjusted in 1 hour increments from 12:00A to 11:00P. Minutes are adjusted in 1 minute increments from 0 minutes to 59 minutes.

5. This parameter is used to display the status of the supervisor mode and is also used to lock and unlock the supervisor mode. This code is entered by pressing the SELECT button and then using the (−) (+) buttons, enter the first number of the password and press the SELECT button; then enter the second number and press SELECT and so on. The status will change if the good password is entered. Otherwise the message “wrong password” will appear.

SUB SCREEN 12.4 SENSOR CALIBRATION



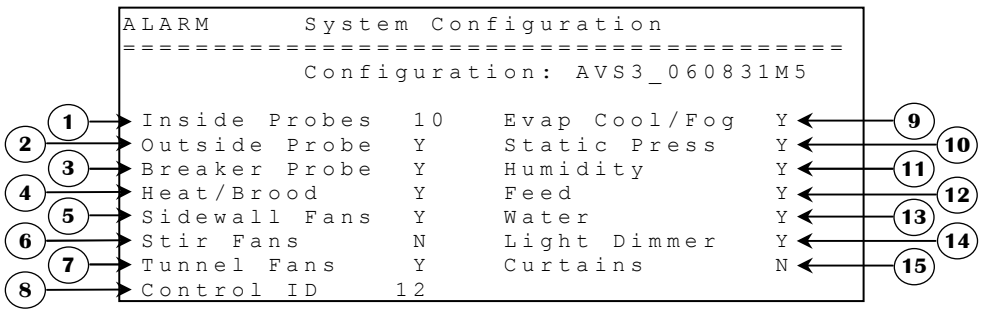
1. These parameters are used to adjust the reading of the respective probe. The adjustments are:

a. Increments of 0.1°F from -20.0°F to 20.0°F for temp sensors 1-12 (including Breaker and Outside sensors)
b. Increments of 0.001”WC from -0.150”WC to 0.150”WC for static pressure
c. Increments of 1RH% from -50RH% to 50RH%
d. Increments of 1 Lbs/min from 1 Lbs/min to 100 Lbs/min
e. Increments of 1 Gal/pulse from 1 Gal/pulse to 1000 Gal/pulse

2. These parameters display the reading of the respective probe with the correction of the respective calibration parameter.

Notes: A changed setting will only be effective 4 seconds after the system has detected that none of these settings have been changed.

SUB SCREEN **12.5** **SYSTEM CONFIGURATION**



This screen displays different control options ("Y" and "N"). If "Y" is shown beside a parameter, it means the parameter is used/activated and "N" means it's deactivated.

1. This parameter establishes the number of inside probes that are available. This parameter affects all sensor selects. `OUTSIDE PROBE` and `BREAKER PROBE` affect this parameter, if `INSIDE PROBES` is set to 12 and `OUTSIDE PROBE` and `BREAKER PROBE` are both set to "N" and `OUTSIDE PROBE` setting is changed to "Y" then `INSIDE PROBES` will automatically drop to 11 inside probes. This parameter is adjusted by 1 probe increments from 2 inside probes to 12 inside probes (if `OUTSIDE PROBE` and `BREAKER PROBE` are set to "N").

2. This parameter is used to activate or deactivate the outside probe (it will also activate or deactivate **STAT PRESS RAMPING OUTSIDE(2.2)** screen). This parameter can affect the `INSIDE PROBES` parameter. This parameter can be set to "Y" or "N".

3. This parameter is used to activate or deactivate the breaker probe. This parameter can affect the `INSIDE PROBES` parameter.

4. This parameter is used to activate or deactivate the heater and brooder outputs. If this parameter is set to "Y", then **HEAT & BROOD(3)** screen will be accessible (if at least one relay in **OUTPUT CONFIGURATION(12.6)** screen is correctly associated to one of these respective outputs) and all these outputs can work normally. If this setting is set to "N", then **HEAT & BROOD(3)** screen will not be accessible and all relays associated to these outputs in **OUTPUT CONFIGURATION(12.6)** screen will be reinitialized and not available.

5. This parameter is used to activate or deactivate the sidewall fan outputs. If this parameter is set to "Y", then **SIDEWALL FANS(4)** screen will be accessible (if at least one relay in **OUTPUT CONFIGURATION(12.6)** screen is correctly associated to one of these respective outputs) and all these outputs can work normally. If this setting is set to "N", then **SIDEWALL FANS(4)** screen will not be accessible and all relays associated to these outputs in **OUTPUT CONFIGURATION(12.6)** screen will be reinitialized and not available.

6. This parameter is used to activate or deactivate the stir fan outputs. If this parameter is set to "Y", then **STIR FANS(12.6)** screen will be accessible (if at least one relay in **OUTPUT CONFIGURATION(12.6)** screen is correctly associated to one of these respective outputs) and all these outputs can work normally. If this setting is set to "N", then **STIR FANS(12.6)** screen will not be accessible and all relays associated to these outputs in **OUTPUT CONFIGURATION(12.6)** screen will be reinitialized and not available.

7. This parameter is used to activate or deactivate the tunnel fan outputs. If this parameter is set to "Y", then **TUNNEL FANS(5)** screen will be accessible (if at least one relay in **OUTPUT**

CONFIGURATION(12.6) screen is correctly associated to one of these respective outputs) and all these outputs can work normally. If this setting is set to "N", then **TUNNEL FANS(5)** screen will not be accessible and all relays associated to these outputs in **OUTPUT CONFIGURATION(12.6)** screen will be reinitialized and not available.

8. This parameter is used to set the control ID. This number is used by AVSLink, a remote access software, to single out the control amongst the other ones.

9. This parameter is used to activate or deactivate the evaporative cooling cell and fogger outputs. If this parameter is set to "Y", then **EVAP COOL/FOG(6)** screen will be accessible (if at least one relay in **OUTPUT CONFIGURATION(12.6)** screen is correctly associated to one of these respective outputs) and all these outputs can work normally. If this setting is set to "N", then **EVAP COOL/FOG(6)** screen will not be accessible and all relays associated to these outputs in **OUTPUT CONFIGURATION(12.6)** screen will be reinitialized and not available (the pump relay setting is also affected by this parameter).

10. This parameter is used to activate or deactivate the static pressure sensor (it will also activate or deactivate **STATIC PRESSURE(2)**, **STAT PRESS RAMPING INSIDE(2.1)** and **STAT PRESS RAMPING OUTSIDE(2.2)** screens).

11. This parameter is used to activate or deactivate the humidity sensor.

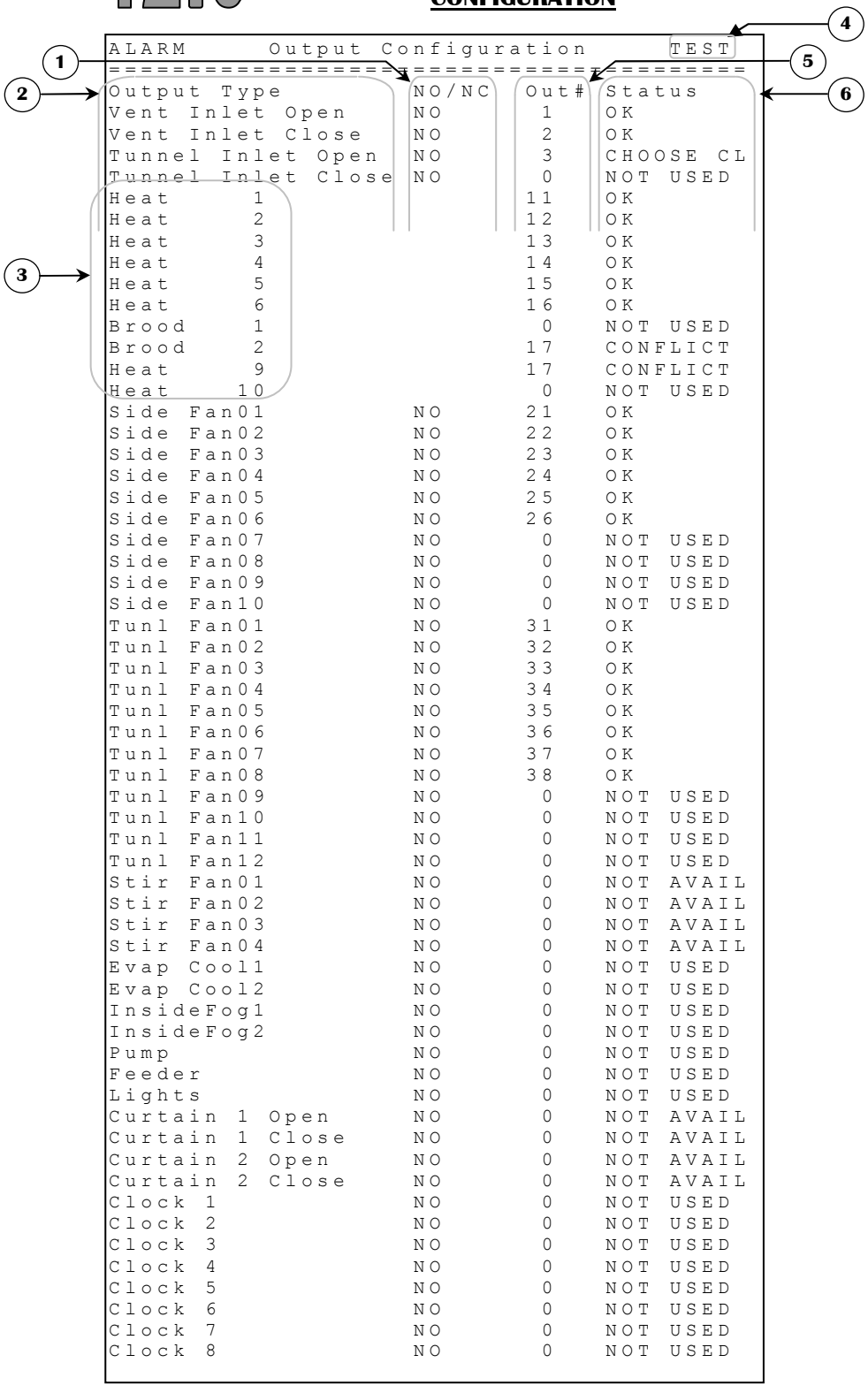
12. This parameter is used to activate or deactivate the feeder sensor (it will also activate or deactivate **FEEDER SCHEDULE(9.2)** screen).

13. This parameter is used to activate or deactivate the water counter, which is displayed on the **MAIN SCREEN(1)**.

14. This parameter is used to activate or deactivate the light dimmer. If this parameter is set to "Y", then **SOFT START/STOP & SPIKE(9.1)** screen will be accessible and light can work normally. If set to "N", **SOFT START/STOP & SPIKE(9.1)** screen will not be accessible and light will function as an on/off output.

15. This parameter is used to activate or deactivate the curtain outputs. If this parameter is set to "Y", then **CURTAINS(12.7)** screen will be accessible (if at least one relay in **OUTPUT CONFIGURATION(12.6)** screen is correctly associated to one of these respective outputs) and all these outputs can work normally. If this setting is set to "N", then **CURTAINS(12.7)** screen will not be accessible and all relays associated to these outputs in **OUTPUT CONFIGURATION(12.6)** screen will be reinitialized and not available.

SUB SCREEN **12.6** **OUTPUT CONFIGURATION**



ALARM Output Configuration TEST

Output Type	NO/NC	Out#	Status
Vent Inlet Open	NO	1	OK
Vent Inlet Close	NO	2	OK
Tunnel Inlet Open	NO	3	CHOOSE CL
Tunnel Inlet Close	NO	0	NOT USED
Heat 1		11	OK
Heat 2		12	OK
Heat 3		13	OK
Heat 4		14	OK
Heat 5		15	OK
Heat 6		16	OK
Brood 1		0	NOT USED
Brood 2		17	CONFLICT
Heat 9		17	CONFLICT
Heat 10		0	NOT USED
Side Fan01	NO	21	OK
Side Fan02	NO	22	OK
Side Fan03	NO	23	OK
Side Fan04	NO	24	OK
Side Fan05	NO	25	OK
Side Fan06	NO	26	OK
Side Fan07	NO	0	NOT USED
Side Fan08	NO	0	NOT USED
Side Fan09	NO	0	NOT USED
Side Fan10	NO	0	NOT USED
Tunl Fan01	NO	31	OK
Tunl Fan02	NO	32	OK
Tunl Fan03	NO	33	OK
Tunl Fan04	NO	34	OK
Tunl Fan05	NO	35	OK
Tunl Fan06	NO	36	OK
Tunl Fan07	NO	37	OK
Tunl Fan08	NO	38	OK
Tunl Fan09	NO	0	NOT USED
Tunl Fan10	NO	0	NOT USED
Tunl Fan11	NO	0	NOT USED
Tunl Fan12	NO	0	NOT USED
Stir Fan01	NO	0	NOT AVAIL
Stir Fan02	NO	0	NOT AVAIL
Stir Fan03	NO	0	NOT AVAIL
Stir Fan04	NO	0	NOT AVAIL
Evap Cool1	NO	0	NOT USED
Evap Cool2	NO	0	NOT USED
InsideFog1	NO	0	NOT USED
InsideFog2	NO	0	NOT USED
Pump	NO	0	NOT USED
Feeder	NO	0	NOT USED
Lights	NO	0	NOT USED
Curtain 1 Open	NO	0	NOT AVAIL
Curtain 1 Close	NO	0	NOT AVAIL
Curtain 2 Open	NO	0	NOT AVAIL
Curtain 2 Close	NO	0	NOT AVAIL
Clock 1	NO	0	NOT USED
Clock 2	NO	0	NOT USED
Clock 3	NO	0	NOT USED
Clock 4	NO	0	NOT USED
Clock 5	NO	0	NOT USED
Clock 6	NO	0	NOT USED
Clock 7	NO	0	NOT USED
Clock 8	NO	0	NOT USED

1. This column is used to set the respective output's relay on normally open (NO) or normally close (NC). The respective parameter reflects the corresponding output only if this output's status is "OK", otherwise the last normally open/close valid settings will be used.

2. This column is the output list. Every output of the control is in this list.

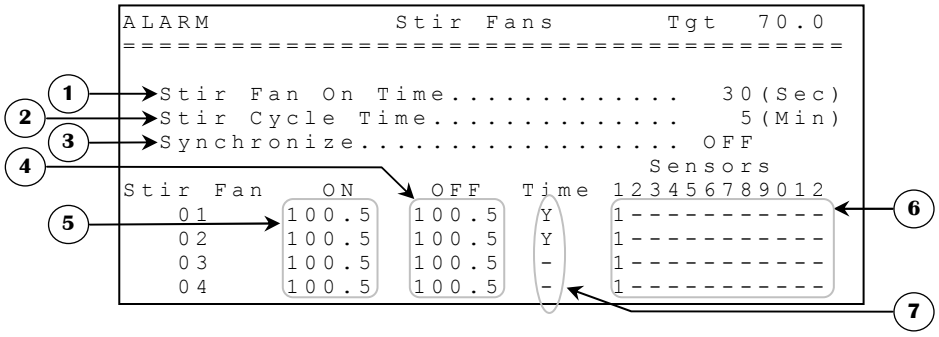
3. The heater outputs can also be changed to brooder and the number to the right can also be changed to match the brooder numbering. These output numbers are incremented by 1 from 1 to 10.

4. This parameter allows the testing of all relays. By pressing the [SELECT] button, all relays will shut off. The user will be able to activate the relays only by placing the cursor on a relay. The user also has the possibility to change the relay that is highlighted. The relay corresponding to the new value will then be the one activated. To cancel or finish this test, the user has to go back on the TEST button and press [SELECT] or change screens.

5. This column is used to set the respective output on the desired relay.

6. This column indicates the status of the output on the relay. If the relay is ok, message "OK" will be shown. If there are 2 outputs on the same relay, the message "CONFLICT" will appear beside the conflicting relays. If output relay is 0, the message "NOT USED" will appear meaning that this output has no relay attached to it. If message is "NOT AVAIL", it means the output or outputs are deactivated and no relay can be assigned to them. If message is "CHOOSE OP" or "CHOOSE CL", it means that another output linked to this output must be set to a valid relay.

SUB SCREEN **12.7** **STIR FANS**



If this screen is not accessible, be sure to check if STIR FANS option is set to "Y" in **SYSTEM CONFIGURATION(12.5)** screen and if at least one relay in **OUTPUT CONFIGURATION(12.6)** screen is correctly associated to one of these respective outputs.

1. This parameter is used to establish the ON time portion of the stir fan timer. The ON time is adjusted in 1 second increments from 2 seconds to 900 seconds.

2. This parameter is used to calculate the OFF time portion of the stir fan timer. The OFF time is equal to STIR CYCLE TIME – STIR FAN ON TIME. This parameter is adjusted in 1 minute increments from 1 minute to 15 minutes.

3. This parameter is used to establish the time for which stir fans on timer will activate during the OFF time portion of the minimum ventilation timer. This feature will not activate the stir fans when minimum ventilation timer is not in its OFF portion or is inactive. SYNCHRONIZE TIME is adjusted in 1 second increments from OFF/1 second to a maximum of 900 seconds.

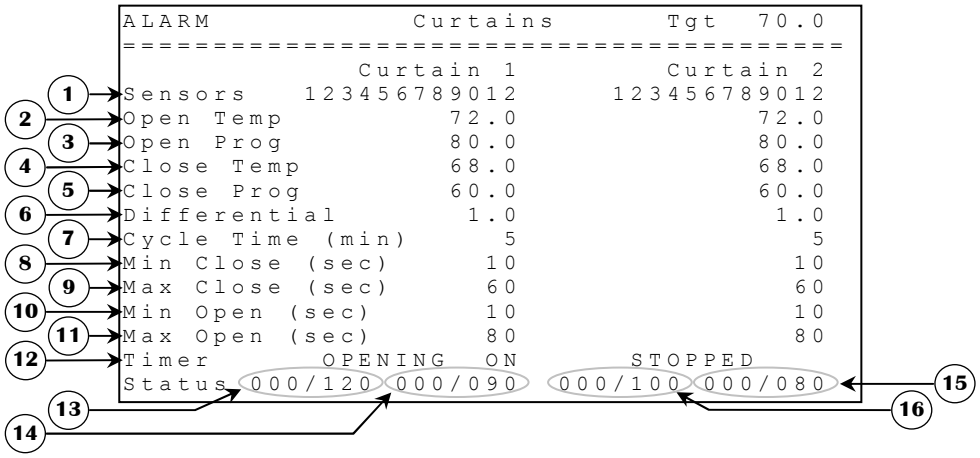
4. These parameters are used to set the stir fan differentials. The respective stir fan deactivates when its respective sensor(s) select average temperature decreases to STIR FAN # OFF. These parameters are affected by the respective STIR FAN # ON parameter and are adjusted in 0.1°F increments from its respective STIR FAN # ON - 10.0°F to its respective STIR FAN # ON - 0.5°F.

5. These parameters are used to set the stir fan set points. The respective stir fan is activated when its respective sensor(s) select average temperature increases to STIR FAN # ON. Changing one of these parameters will affect the respective STIR FAN # OFF parameter. These parameters are affected by the TARGET TEMP parameter and are adjusted in 0.1°F increments from TARGET TEMP to TARGET TEMP + 40.0°F.

6. These parameters are used to set an individual associated temperature to the respective output. The temperatures associated to these stir fans are a combination of the inside probes that are used.

7. These parameters are used to establish if the respective stir fan will run on a timer according to STIR FAN ON TIME and STIR CYCLE TIME parameters. If one of these parameters is not on "Y", the respective stir fan will run only on temperature demand or synchronize timer.

SUB SCREEN **12.8** **CURTAINS**



If this screen is not accessible, be sure to check if CURTAINS option is set to "Y" in **SYSTEM CONFIGURATION(12.5)** screen and if at least one set of linked relays (Open and Close) in **OUTPUT CONFIGURATION(12.6)** screen is correctly associated to two of these outputs.

1. These parameters are used to set an individual associated temperature to the respective curtain. The temperatures associated to these curtains are a combination of the inside probes that are used.

2. These parameters are used to set the temperature at which the respective curtain will start to open on a timer according to MIN OPEN and CYCLE TIME parameters. When respective sensor(s) select temperature is between CLOSE TEMP and OPEN TEMP, then respective curtain doesn't move. These parameters are relative to the MSP and are adjusted in 0.1°F increments from MSP - 40.0°F to MSP + 40.0°F.

3. These parameters are used to set the temperature at which the respective curtain will open for MAX OPEN. The open time modulates from MIN OPEN, when respective sensor(s) select temperature reaches OPEN TEMP, to MAX OPEN, when respective sensor(s) select temperature reaches OPEN PROG. These parameters are relative to the OPEN TEMP and are adjusted in 0.1°F increments from OPEN TEMP to OPEN TEMP + 40.0°F.

4. These parameters are used to set the temperature at which the respective curtain will start to close on a timer according to MIN CLOSE and CYCLE TIME parameters. When respective sensor(s) select temperature is between CLOSE TEMP and OPEN TEMP then respective curtain doesn't move. These parameters are relative to the MSP and are adjusted in 0.1°F increments from MSP - 40.0°F to MSP + 40.0°F.

5. These parameters are used to set the temperature at which the respective curtain will close for MAX CLOSE. The close time modulates from MIN CLOSE, when respective sensor(s) select temperature reaches CLOSE TEMP, to MAX CLOSE, when respective sensor(s) select temperature reaches OPEN PROG. These parameters are relative to the CLOSE TEMP and are adjusted in 0.1°F increments from CLOSE TEMP to CLOSE TEMP + 40.0°F.

6. These parameters establish the differential for the OPEN TEMP and CLOSE TEMP. This differential is adjusted in 0.1°F from 0.5°F to 10.0°F.

7. These parameters are used to establish the OFF time of the respective curtain. During that time, the curtain will not move. The OFF time is equal to CYCLE TIME – MIN/MAX OPEN/CLOSE. These CYCLE TIME parameters are adjusted in 1 minute increments from 1 minute to 15 minutes.

8. These parameters establish the minimum closing time of the respective curtain when respective sensor(s) select temperature has reached CLOSE TEMP. These MIN CLOSE parameters are adjusted in 1 second increments from 2 seconds to 900 seconds.

9. These parameters establish the maximum closing time of the respective curtain when respective sensor(s) select temperature has reached CLOSE PROG. These MAX CLOSE parameters are adjusted in 1 second increments from 2 seconds to 900 seconds.

10. These parameters establish the minimum opening time of the respective curtain when respective sensor(s) select temperature has reached OPEN TEMP. These MIN OPEN parameters are adjusted in 1 second increments from 2 seconds to 900 seconds.

11. These parameters establish the maximum opening time of the respective curtain when respective sensor(s) select temperature has reached OPEN PROG. These MAX OPEN parameters are adjusted in 1 second increments from 2 seconds to 900 seconds.

12. These parameters indicate the respective status of the curtain; “OPENING ON”, “OPENING OFF”, “CLOSING ON”, “CLOSING OFF” or “STOPPED”.

13. This parameter displays the time elapsed since the beginning of the ON portion of the curtain 1 timer that is either opening or closing. Curtain 1 movement status is shown on top of this parameter.

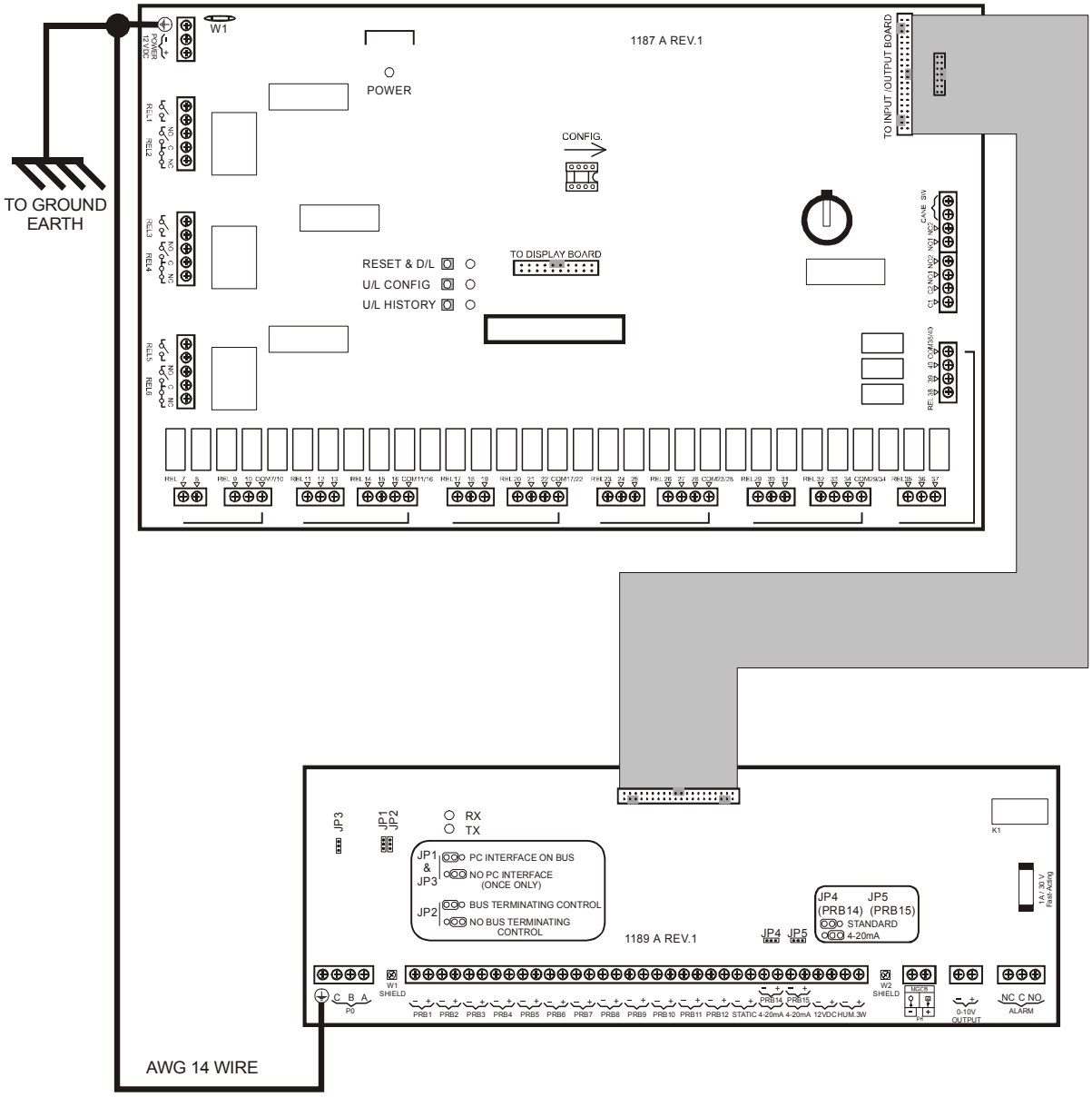
14. This parameter displays the time elapsed since the beginning of the OFF portion of the curtain 1 timer that is either opening or closing. Curtain 1 movement status is shown on top of this parameter.

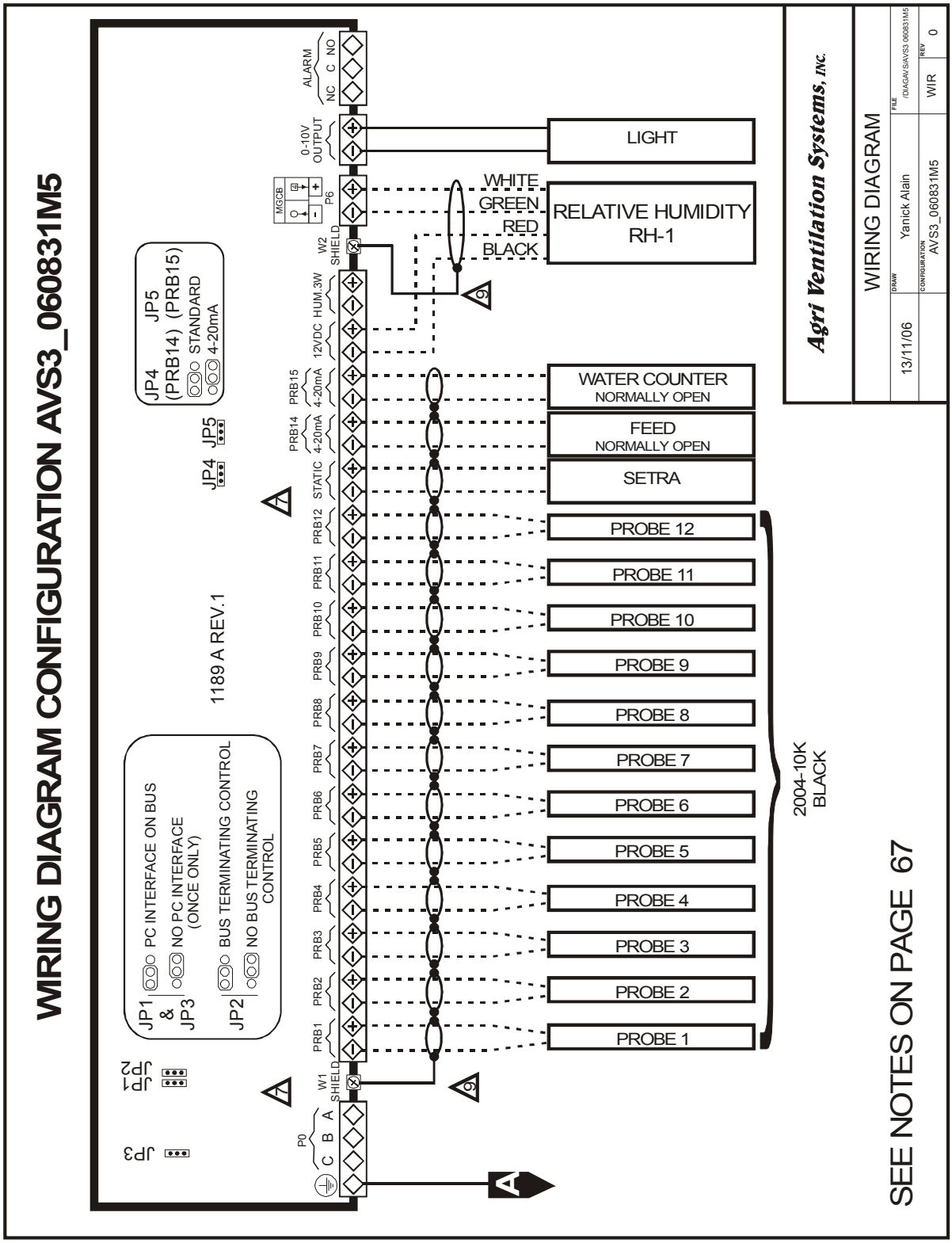
15. This parameter displays the time elapsed since the beginning of the OFF portion of the curtain 2 timer that is either opening or closing. Curtain 2 movement status is shown on top of this parameter.

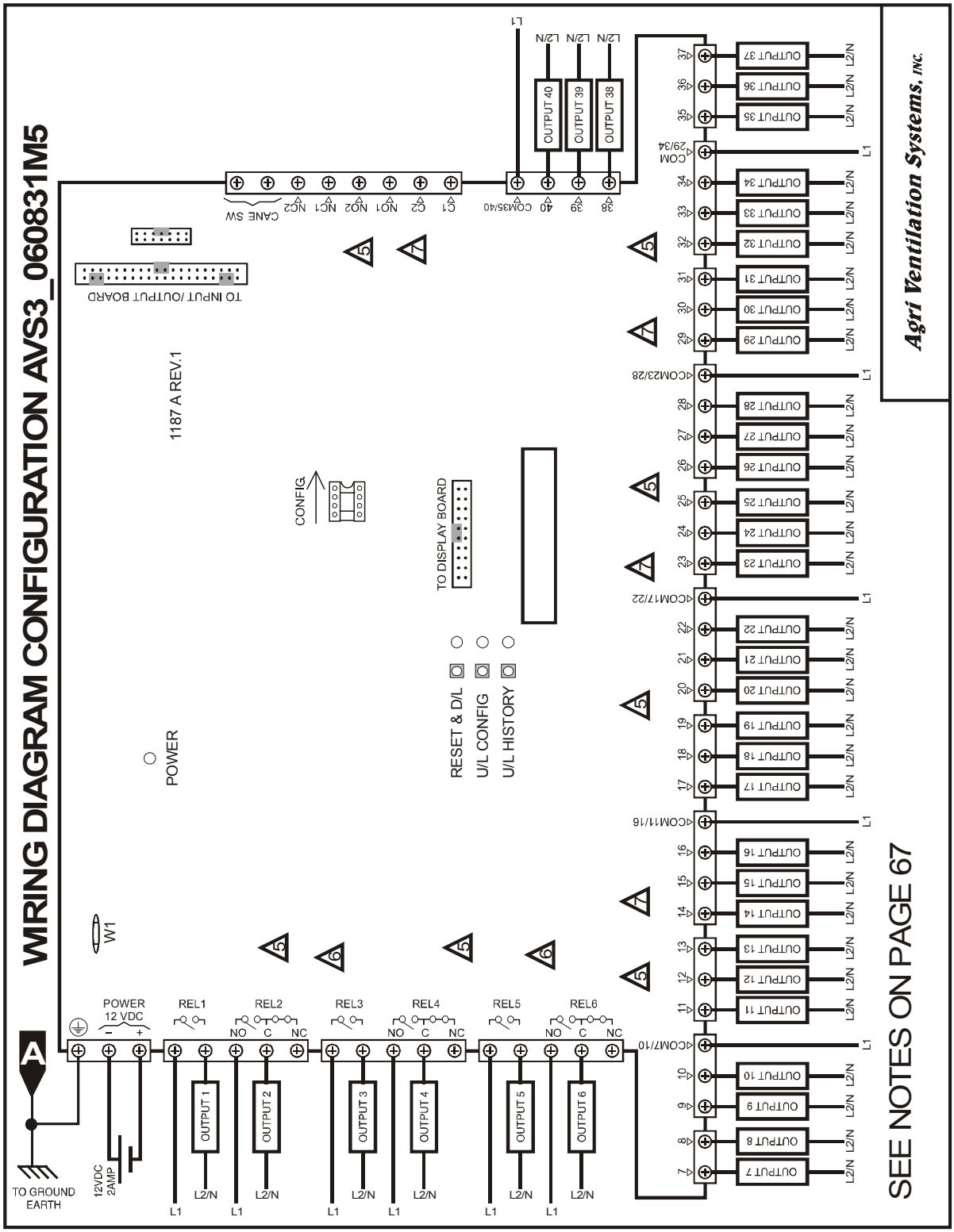
16. This parameter displays the time elapsed since the beginning of the ON portion of the curtain 2 timer that is either opening or closing. Curtain 2 movement status is shown on top of this parameter.

Messages List	
Messages	**Causes**
Temperature high	- Average temperature is above TEMPERATURE ALARM HI while in ventilation mode. - Average temperature is above TEMPERATURE IN TUNNEL MODE ALARM HI while in tunnel mode.
Temperature low	- Average temperature is below TEMPERATURE ALARM LO.
Temp Probe # high	- Temperature probe # is above TEMPERATURE ALARM HI while in ventilation mode. - Average temperature is above TEMPERATURE IN TUNNEL MODE ALARM HI while in tunnel mode. (Corresponding probe has to be alarmed to get this message)
Temp Probe # low	- Temperature probe # is below TEMPERATURE ALARM LO. (Corresponding probe has to be alarmed to get this message)
Ind Prb # Excd Limits	- Temperature probe # is above INDIVIDUAL PROBE HI. - Temperature probe # is below INDIVIDUAL PROBE LO.
Temp Probe # Defect	- Temperature probe # is defective (open / short circuit). - Temperature probe # is missing/unplugged and the INSIDE PROBES OPTION setting in **SYSTEM CONFIGURATION (12.5)** screen is above this probe #. (Corresponding probe has to be alarmed to get this message)
Breaker Temp high	- Breaker probe is above BREAKER PROBE ALARM.
Breaker Probe Defect	- Breaker probe is defective (open / short circuit). - Breaker probe is missing/unplugged and the BREAKER PROBE OPTION in **SYSTEM CONFIGURATION (12.5)** screen is set to "Y".
Static Press high	- Static pressure probe is above HI ALARM SP for more than the HI ALARM DELAY.
Static Press low	- Static pressure probe is below LO ALARM SP for more than the LO ALARM DELAY.
Humidity high	- Humidity is above the ALARM HUMIDITY HI.
Humidity low	- Humidity is below the ALARM HUMIDITY LO.
Humidity PRB Not Resp	- Humidity probe is defective (open / short circuit). - Humidity probe is missing/unplugged and the HUMIDITY OPTION in **SYSTEM CONFIGURATION (12.5)** screen is set to "Y". - Communication board is defective (open / short circuit or unplugged).
Water Defect	- The number of gallons counted in 1 minute is above ALARM WATER.
Feeder Defect	- Feeder is activated for more than ALARM FEED TIME without interruption.
Power Failure	- A power failure or a control reset has occurred.
PRB not alarmed	- Configuration uses a probe that is not included in PROBE ALARM in **PROBE CONFIGURATION (12.2)** screen.
Relay Board Not Resp	- Relay Board module is not powered. - Relay Board module is defective (open / short circuit). - Communication board is defective (open / short circuit or unplugged).
Light Module Not Resp	- Light module is not powered. - Light module is defective (open / short circuit). - Light module is missing/unplugged and the LIGHT DIMMER OPTION in **SYSTEM CONFIGURATION (12.5)** screen is set to "Y". - Communication board is defective (open / short circuit or unplugged).
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.

Configuration Versions		
Version	**Date**	**Modification**
AVS3_030815M	08/04/2003	- New. Based on AVS030804M. - Add adjustable ID number to support AVS-Link.
AVS3_040227M	02/03/2004	- Add eight clock type outputs. - Add option to have evap cools, inside fogs and pump work outside tunnel mode. - Modify clock output screen management. - When this configuration is **merged** with another one, **evap cool settings must be readjusted**.
AVS3_040630M1	07/12/2004	- Corrections on evap cool/fog/pump fill times. - Change clock output names and number of activation periods. - Add individual probe alarm settings. - **This version may not be merged with any of the preceding ones.**
AVS3_041008M1	10/22/2004	- Add Load Management according to output activation and shut off all tunnel fan outputs on relay board power failure. - Correction Vent Open Before Fan On vs. High Temp Override. - Make curtain temperature set points relative to the MSP. - Add bird count multiplier to obtain very high bird values.
AVS3_050215M2	02/02/2005	- Major changes on alarm listing and management. - Add a security counter. - Relays will deactivate when relay board communication is lost. - Load Management now applied when relay board communication is lost (must have D version). - Correction on Save/Load Mode feature. - **This version may not be merged with any of the preceding ones.**
AVS3_050509M2	05/09/2005	- Correction on relay board when tunnel fans are deactivated. - Reaction of inlets with static pressure is improved.
AVS3_050520M2	05/20/2005	- Correction on light module alarm when it is not used. - Delay open/close is now reset in dead band.
AVS3_050722M3	07/22/2005	- 4 inside probes added (up to 12). -. Removed outside static ramping - “Skip day” feature added to Clock 7 and Clock 8 outputs. - **This version may not be merged with any of the preceding ones.**
AVS3_050931M4	09/14/2005	- Minor changes on evaporative cools, fogs and pump logic. - Each evap cool, fog and pump output have now their own timer settings and a new option to set the timer on or off. - **This version may not be merged with any of the preceding ones.**
AVS3_051223M5	11/24/2005	- Correction on static pressure display in history screen. - Temperature sensor calibration values will be reset upon a download. - Temperature sensor calibration values will not be saved by modes. - **This version may not be merged with any of the preceding ones.**
AVS3_060331M5	03/24/2006	- Correction when power failure occurs during `VENT OPEN TIME BEFORE FAN ON` or the Inlet Press Wait.
AVS3_060505M5	05/16/2006	- Correction on temperature increase during the Inlet Press Wait time.
AVS3_060831M5	08/15/2006	- Correction on Stir Fan 4 OFF temperature. - Correction on Stir Fan names in the Output History screen. - Added two more ramping points for the MSP growth curve.


TO GROUND EARTH
W1
1187 A REV.1
POWER
CONFIG
TO INPUT /OUTPUT BOARD
TO DISPLAY BOARD
RESET & D/L
U/L CONFIG
U/L HISTORY
JP3
JP1
JP2
RX
TX
JP1 & JP3
PC INTERFACE ON BUS
NO PC INTERFACE (ONCE ONLY)
JP2
BUS TERMINATING CONTROL
NO BUS TERMINATING CONTROL
1189 A REV.1
JP4
JP5
(PRB14)
(PRB15)
STANDARD
4-20mA
K1
NC C NO
ALARM
0-10V OUTPUT
AWG 14 WIRE


WIRING DIAGRAM CONFIGURATION AVS3_060831M5
Agri Ventilation Systems, INC.
WIRING DIAGRAM
DRAW Yanick Alain
FILE /DIAGAV/SAVS3 060831M5
CONFIGURATION AVS3_060831M5
WIR
REV 0
13/11/06
LIGHT
WHITE
GREEN
RED
BLACK
RELATIVE HUMIDITY
RH-1
WATER COUNTER
NORMALLY OPEN
FEED
NORMALLY OPEN
SETRA
PROBE 12
PROBE 11
PROBE 10
PROBE 9
PROBE 8
PROBE 7
PROBE 6
PROBE 5
PROBE 4
PROBE 3
PROBE 2
PROBE 1
2004-10K
BLACK
ALARM
NC C NO
0-10V
OUTPUT
MGCB
P6
W2
SHIELD
12VDC HUM.3W
PRB15 4-20mA
PRB14 4-20mA
STATIC
PRB12
PRB11
PRB10
PRB9
PRB8
PRB7
PRB6
PRB5
PRB4
PRB3
PRB2
PRB1
W1
SHIELD
P0
C B A
JP4 (PRB14) JP5 (PRB15)
STANDARD
4-20mA
JP4 JP5
1189 A REV.1
JP1 & JP3
PC INTERFACE ON BUS
NO PC INTERFACE (ONCE ONLY)
JP2
BUS TERMINATING CONTROL
NO BUS TERMINATING CONTROL
JP1 JP2
JP3
SEE NOTES ON PAGE 67


WIRING DIAGRAM CONFIGURATION AVS3_060831M5
Agri Ventilation Systems, INC.
1187 A REV.1
TO INPUT /OUTPUT BOARD
CONFIG.
TO DISPLAY BOARD
POWER
RESET & D/L
U/L CONFIG
U/L HISTORY
W1
POWER 12 VDC
REL1
REL2
REL3
REL4
REL5
REL6
NO C NC
TO GROUND EARTH
12VDC 2AMP
L1
L2/N
OUTPUT 1
OUTPUT 2
OUTPUT 3
OUTPUT 4
OUTPUT 5
OUTPUT 6
OUTPUT 7
OUTPUT 8
OUTPUT 9
OUTPUT 10
OUTPUT 11
OUTPUT 12
OUTPUT 13
OUTPUT 14
OUTPUT 15
OUTPUT 16
OUTPUT 17
OUTPUT 18
OUTPUT 19
OUTPUT 20
OUTPUT 21
OUTPUT 22
OUTPUT 23
OUTPUT 24
OUTPUT 25
OUTPUT 26
OUTPUT 27
OUTPUT 28
OUTPUT 29
OUTPUT 30
OUTPUT 31
OUTPUT 32
OUTPUT 33
OUTPUT 34
OUTPUT 35
OUTPUT 36
OUTPUT 37
OUTPUT 38
OUTPUT 39
OUTPUT 40
COM7/10
COM11/16
COM17/22
COM23/28
COM29/34
COM35/40
CANE SW
SEE NOTES ON PAGE 67

Electrician's notes
wiring tips and hints (see guide for details)

1 ---------- (INPUT WIRING) SHIELDED WIRE, AWG #18 FOR TEMP. PROBE (2004-10k), 500FT/150M MAX LENGTH WITH AWG#18 WIRE (SUPPLIED BY ELECTRICIAN). For other probes, refer to specific probe manual for appropriate maximum length and wire size or use AWG #18, 500FT/150M MAX (whichever is shorter).

2 ———— (COMMUNICATION WIRING) SHIELDED LOW CAPACITANCE WIRE, AWG #18 TO 22, 750 FT/250 M MAX LENGTH.

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.

△**5** THE CURRENT SHALL NOT EXCEED 10A AT EACH OUTPUT REL 1-6 AND 4A AT EACH OUTPUT REL 7-40.

△**6** MAXIMUM 2 WIRES OF SAME SIZE PER BLACK TERMINAL, NO BIGGER THAN AWG #18, NO SMALLER THAN AWG #22 OR 1 WIRE ONLY PER GREEN TERMINAL, NO BIGGER THAN AWG #12, NO SMALLER THAN AWG #17.

△**7** 1 WIRE ONLY PER GREEN TERMINAL. USE WIRE CONNECTOR IF YOU WANT TO CONNECT MORE THAN 1 WIRE.

△**8** CHECK INSTALLATION GUIDE FOR ALARM WIRING.

△**9** USE SHIELD FOR SHIELDING PURPOSE ONLY. CONNECT THE SHIELD THE INPUT/OUTPUT BOARD (PROBE SHIELD OR COM SHIELD). NEVER LEAVE THE SHIELD UNCONNECTED AT BOTH ENDS. NEVER CONNECT BOTH ENDS OF THE SHIELD TO SHIELD CONNECTOR.