

User's Manual



Program version: 749D

Revision list

Reversion	Date:	Change
7495	05/12/2007	First version
7496	29/12/2009	Updated
7497	30/08/2010	Updated
7498	20/06/2011	Updated
749D	30/12/2015	Update Pic

TEMPTRON 616

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Warning:

1. This manual may contain mistakes and or printing errors. We accept no liability for technical mistakes or printing errors, or their consequences.
2. This control unit is supplied with default settings. These setting are only general settings and should not be seen as final settings. We accept no liability for any consequences that may occur because of these settings.

Installation

Open the front panel

Connect the **Temptron 616** to the wall in a dry place approximately 1 meter away from the electrical cabinet.

Analog Input Connections

Temperature sensors

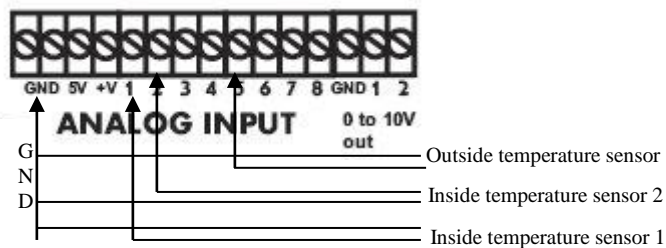
Input 1 is used for inside temperature sensor 1. Use a two wire cable. Connect one wire to analog input 1 and the second wire to the GND input. See diagram 1.

Input 2 is used for inside temperature sensor 2. Use a two wire cable. Connect one wire to analog input 2 and the second wire to the GND input. See diagram 1.

Input 5 is used for the outside temperature sensor. Use a two wire cable. Connect one wire to analog input 5 and the second wire to the GND input. See diagram 1.

The sensors can be placed up to 100 meter from the main unit with an ordinary two-wire cable. The sensor has no polarity.

Diagram 1- Temperature Sensors

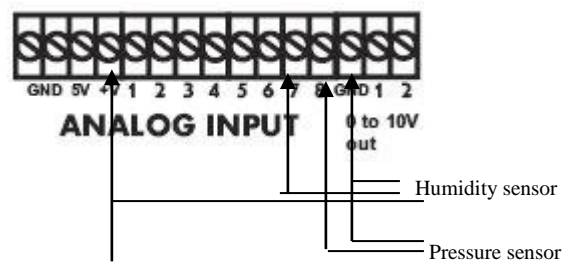


Humidity and Pressure sensors

Input 7 is used for the humidity sensor. Use a three wire cable. Brown to input +V; Blue to GND and Yellow to input 7. See diagram 2.

Input 8 is used for the static pressure sensor. Use a three wire cable: Brown to input +V; Blue to GND and Yellow to input 8. See diagram 2

Diagram 2- Humidity and Pressure Sensor



Digital Inputs

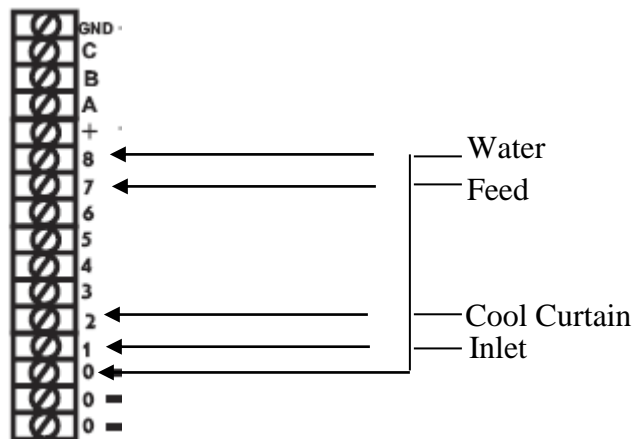
Input 1 is used for the dry contact signal coming from the inlet motor each times it moves. Use a two wire cable. Connect one wire to Digital Input 1 and the second wire to 0(zero). The signal from the inlet should be wired in such a way that when the inlet motor moves, the dry contact will be in a closed state (shorted). See diagram 3.

Input 2 is used for the Cool Curtain dry contact signal. Use a two wire cable. Connect one wire to Digital Input 2 and the second wire to 0(zero). The signal from the Cool Curtain should be wired in such a way that when the Cool Curtain moves, the dry contact will be in a closed state (shorted). See diagram 3.

Input 7 is used for the feed dry contact signal. Use a two wire cable. Connect one wire to Digital Input 7 and the second wire to 0(zero). The signal from the feed contactor should be wired in such a way that when the feed contactor is closed, the dry contact will be in a closed state (shorted). See diagram 3.

Input 8 is used for the water clock dry contact signal. Use a two wire cable. Connect one wire to Digital Input 8 and the second wire to 0(zero). The signal from the water clock should be wired in such a way that when the water clock sends a pulse, the dry contact will be in a closed state (shorted). See diagram 3.

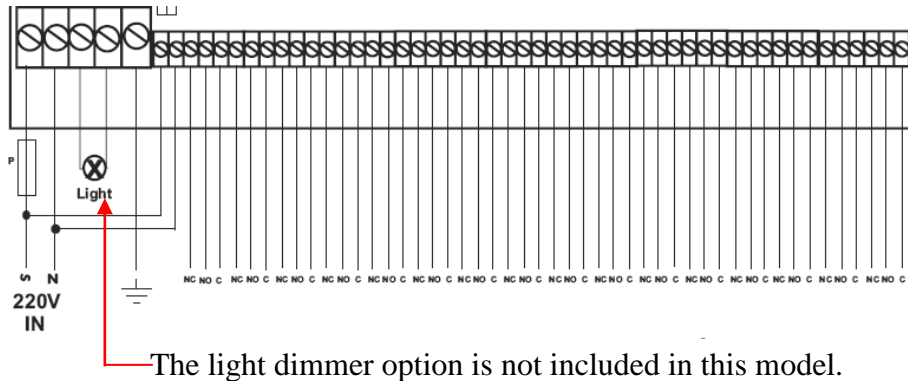
Diagram 3- Dry Contact Signals



Relay Connections

Connect the relay outputs to the various systems. Connect to the C (common) and NC or NO according to your needs.

All outputs are dry contacts, maximum 2 Amp/220V NO/NC. See diagram 4



- * Connect a 220V cable to the unit.
- * Close the panel with the two screws.

Operation

Turn on power.

1. Each time power is connected to the unit “Agro Lo” will appear on the display. The **Temptron 616** is calibrating its connected sensors.

The **Temptron 616** will display the average temperature of the connected temperature Sensors. It is possible to display each sensor separately.

Reading set point

It is possible to read all the information on the **Temptron 616** display.

The right display indicates the function number. The left display shows the programmed set point for each function.

Each set point has a function number (see menu on the front panel). It is possible to reach the function in two ways:

1. Each time the “DATA” button is pressed, the function number display on the right side of the panel will increase. The preset information will appear on the data display on the left side of the panel.
2. Pressing on the “0” button, two lines will appear on the function display and “FUNC” on the data display. Using the keypad enter the required function number.

Example:

To see function 8;

- a) Press the “0” button.
- b) Press “0” and than 8.

The function display will display 08 and the data display will show the set value.

If "DATA" is pressed the function display will go to function 09.

Temperature, humidity, pressure sensor and current air index

To view separately, press once on:

Number 1-5 = Displays the chosen temperature sensor reading.

Number 7 = Displays the humidity sensor reading.

Number 8 = Static pressure sensor reading.

Number 9 = Current air index (which minimum ventilation fans are running according to the minimum ventilation calculation).

Changing set point

It is possible to change each function set point.

1. Go into the desired function as explained above.
2. Push on "PROG" button. The function display will start to flash.
3. Use the keyboard to enter the desired data. The new data will appear on the data display.
4. Check the display to see if the information is correct. If the value is correct, press "Enter". The code display will stop flashing to indicate that the new information has been stored into the unit's memory.

Lock Code

It is possible to enter a 4-digit code, which will lock the **Temptron 616** to prevent unauthorized personnel from making changes in the unit.

It is possible to see all the information in the unit, but not possible to make any changes.

The unit is factory set in an unlocked manner, without a code. If a code is needed see the hidden function section for an explanation of how to program the code.

Once a code has been programmed, in order to unlock the unit to change values, enter the programmed 4 digit code while the display is showing the average temperature. There is no need to press PROG.

Once the unit has been unlocked, it will remain unlocked for a time period of ten minutes starting from the last time a function value has been changed.

If no code is desired enter 0000 for the lock code.

Default setting

It is possible to reset all entered values to a factory set default.

1. Go into time function (01).
2. Push on "PROG" button. The function display will start to flash.
3. Use the keyboard to enter the value 4343 and press on "Enter".

All the settings will be returned to the factory default settings.

Note: These are only default setting and Agrologic accepts no responsibility for these setting and the way they effect the operation of the house environment.

Glossary of terms

Minimum ventilation

Minimum ventilation mode is the ventilation mode that is used by the controller to supply the minimum amount of air needed per kilo per hour. The fans and the amount of air that they supply are set up in functions 8-13. Normally these are cross ventilation fans and they are running together with the inlets to create a required static pressure in the house. The fans are running in a cycle mode as calculated according to the current weight, current amount of birds in the house and the minimum air per kilo according to the outside temperature. Minimum ventilation generally does not reduce the temperature in the house.

Cross ventilation

Cross ventilation is the mode that is used by the controller once the house starts to heat up and minimum ventilation is no longer enough and the temperature needs to be reduced with ventilation. Cross ventilation is when the cross fans are running in a non stop ventilation mode together with the inlets to create the desire static pressure.

Static pressure

Static pressure refers to the pressure difference that exists between the inside of the house and the outside of the house. This pressure difference is the result of fans in the walls running. In minimum and cross ventilation the air that they exhaust enters the house through the air inlet openings. In the Tunnel Mode, the tunnel curtain at the end of the house is where the air enters. The pressure drop, due to the resistance to the air flowing through the openings, is the reason a static pressure difference exists. If the inlets are all the same size, the same amount of air will enter through each inlet. In the Minimum and Cross ventilation modes the incoming air is cooler than the inside air, it will tend to drop down onto the birds before it is warmed up. Adequate static pressure brings the air into the house high and fast so that it heats up before it can fall.

Tunnel Ventilation

The control converts to this mode of operation from the Cross ventilation mode when the temperature in the house gets too high. Normally large fans installed at the end of the house are used and they draw in air through a large opening at the opposite end of the house. This area normally has what we call a Cool curtain and the unit is controlling the static pressure in the house with this curtain.

Tunnel cold

Tunnel cold is the ventilation mode that can be used as a transition mode between Cross ventilation and full tunnel ventilation. In Cold tunnel mode the tunnel fans are running, but because of a low outside temperature, the cooling curtain remains closed and the tunnel fans are running with the inlets fully open.

Index

The minimum ventilation calculation uses the Minimum ventilation Air 1, 2, 3 and Minimum ventilation 1, 2 and 3 to help calculate the needed minimum air for the house. Each minimum ventilation air and minimum ventilation function is also called an "Index".

Minimum ventilation Air 1 and Minimum ventilation 1 is "Index 1".

Minimum ventilation Air 2 and Minimum ventilation 2 is "Index 2".

Minimum ventilation Air 3 and Minimum ventilation 3 is "Index 3".

SET POINTS

Functions

01. Time (not shown on front panel menu)

This is a reading of the current time setting. It is possible here to adjust the time reading.

02. Required Temperature

The required temperature is the requested temperature in the house. All set points (except the cool temperature set point) are set as a differential from the requested room temperature. The required temperature will be reduced daily according to the temperature reduction table (63-72).

Heating system

03. Heat 1

Heat 1 set point is the temperature differential **below** the required temperature that the heating system will turn on.

Example: **Heat 1** set point = 1.0

If the room temperature should drop 1.0° below the required temperature (02) setting then the heating system 1 will start to run.

04. Heat 2

Heat 2 set point is the temperature differential **below** the required temperature that the heating system will turn on.

Example: **Heat 2** set point = 1.0

If the room temperature should drop 1.0° below the required temperature (02) setting then the heating system 2 will start to run.

05. Fan Minimum Duty

Enter the minimum percent of running time out of the "Fan Cycle time" (06) that the minimum ventilation fans will run. This is set between 0 to 100.

If the fan minimum duty is **larger** than the "Fan Duty Cycle" calculation, then the fans will run according to the minimum duty.

06. Fan Cycle Time

Cycle Time is the total time cycle (minutes & seconds) for the minimum ventilation.

Example: If the total cycle time is to be 10 minutes, enter here 1000.

07. Fan Timer Display.

Shows in seconds a countdown of the minimum ventilation timer

08. Max Air Hr 1

Enter here the total amount of cubic air per hour that the fans set in "Minimum ventilation 1" (09) can supply. Take this total amount and divide it by 1000. Example: If the fan groups can supply 20,000 cubic meters of air per hour, then enter the value 20.

This value is used in calculating the minimum ventilation needed for the house as explained later.

09. Minimum Ventilation fans 1

Enter here the fan or fan groups that will run in the first stage of the minimum ventilation mode. This function is referred to also as "Index 1".

10. Max Air Hr 2

Enter here the total amount of cubic air per hour that the fans set in "Minimum ventilation 2" (11) can supply. Take the total amount and divide it by 1000. Example: If the fan group can supply 40,000 cubic meters of air per hour, then enter the value 40.

This value is used in calculating the minimum ventilation needed for the house as explained later.

11. Minimum Ventilation fans 2

Enter here the fan or fan groups that will run in the second stage of the minimum ventilation mode. This function is referred to also as "Index 2".

12. Max Air Hr 3

Enter here the total amount of cubic air per hour that the fans set in "Minimum ventilation 3" (13) can supply. Take the total amount and divide it by 1000. Example: If the fan group can supply 60,000 cubic meters of air per hour, then enter the value 60.

This value is used in calculating the minimum ventilation needed for the house as explained later.

13. Minimum Ventilation fans 3

Enter here the fan or fan groups that will run in third stage of the minimum ventilation mode. This function is referred to also as "Index 3".

14. Minimum air kg low

Enter here the minimum amount of air per kilo to be supplied per hour in minimum ventilation if the outside temperature is less than the temperature set in the "Minimum ventilation out temperature function" (16).

15. Minimum air kg high

Enter here the minimum amount of air per kilo to be supplied per hour in minimum ventilation if the outside temperature is more than the temperature set in the "Minimum ventilation out temperature function" (16).

16. Minimum ventilation out temperature

This is an outside temperature setting. This is used to help calculate the minimum amount of air per kilo per hour to be given during minimum ventilation. This value is used by the "Minimum air per kilo" high and low functions (14-15).

17. Number Of Birds

Enter here at the beginning of the flock the number of birds placed in the house. This value is used in calculating the minimum ventilation needed for the house. For more accurate minimum ventilation calculation, be sure to update this number from time to time though out the growing period.

18. Current Weight

This is the current weight of one bird according to the weight increase graph. See function 73-82.

This value is used in calculating the minimum ventilation needed for the house.

19. Fan Duty

This is the current calculated percent out of the "Fan Cycle time" (06) that the minimum ventilation groups are running.

Minimum Ventilation

The minimum ventilation is calculated using the following functions.

Function #	Function	Value
02	Required temperature	25°
05	Fan minimum duty	10
06	Fan cycle time	10:00
08	Maximum air hour 1 (Index 1)	20
09	Minimum ventilation fans 1 (Index 1)	1
10	Maximum air hour 2 (Index 2)	40
11	Minimum ventilation fans 2 (Index 2)	12
12	Maximum air hour 3 (Index 3)	60
13	Minimum ventilation fans 3 (Index 3)	123
14	Minimum air kilo low	1.0
15	Minimum air kilo high	2.50
16	Minimum ventilation out Temperature	50°
17	Number of birds housed	25000
18	Current weight	250 grams
19	Fan duty %	as calculated
20	Fan G1	1.0
21	Fan G2	2.0
22	Fan G3	3.0
28	Tunnel on group	4

In the above setup the minimum ventilation mode will run as follows:

Fan groups 1, 2 and 3 will be used for minimum ventilation.

Number of birds times current weight = 6250 kg.

Current weight times minimum air per kg = 6250 cubic meter per hour (cmh).

As long as the average inside temperature is less than 26° (required plus fan G1) and the outside temperature is less than 50° the unit will run a minimum ventilation cycle mode. The control unit will calculate which "Index" is needed to supply the 6250 cmh. Index one, which is set up to run fan G1 which can supply 20,000 cmh. In order to supply calculated amount of air Index 1 will be used. The calculated fan duty will be 31% which means the cycle time will be on 186 seconds and off 414 seconds. If the outside temperature should go over the 50° temperature setting (16) the cycle time will change to a duty cycle of 78% or 468 seconds on and 132 seconds off. As the weight increases the duty cycle will also change. Once the calculated duty cycle is 100%, fan G1 will run nonstop in order to supply the needed air. When the calculation is 101% the unit will recalculate using Index 2. Once Index 2 also reaches 101% the unit will recalculate using Index 3.

If the temperature set point for one of the 3 set fan groups is reached while in minimum ventilation mode that fan group will leave the cycle mode and run nonstop. This is now the Cross ventilation mode. If there are more than one fan groups running in the cycle mode, only the fan group that has reached its set point will go into cross ventilation while the others will continue to run in the cycle mode.

Before each cycle on time the inlet will open to 30%. The fans will come into operation and the inlet will now open or close in order to create the required static pressure in the house.

20. Fan G1

Fan G1 set point is a temperature differential set **above** the required temperature. When the house temperature reaches the required temperature plus Fan G1 set point, fan group G1 runs non-stop.

21-26. Fan G2, G3, G4, G5, G6, G7

Fan G2, G3, G4, G5, G6, G7 operate the same as Fan G1 and G2. See above explanation.

27. Fan humidity set point

This is a setting in percentage. If a humidity sensor is connected to your unit then it is possible to cause an increase in the ventilation if the humidity is too high in the house. Enter here the maximum humidity level for the house. If the humidity level reading is larger than this value then the unit will automatically add on extra ventilation.

Note: If the current ventilation mode in the house is "Minimum ventilation" and the fan humidity set point is reached the unit will go over to "Cross" ventilation. If the unit is already in cross ventilation than the next fan will come on. If the next fan should be the first tunnel ventilation fan, than the unit will go into tunnel ventilation.

28. Tunnel on group

This is the first fan group that will be used for tunnel ventilation. When the set point for this group is reached the unit will go into one of two modes; Tunnel cold ventilation or Full tunnel ventilation.

Example: Tunnel on group = 3

Fan group 1 and 2 will be used as cross ventilation fans. The next fan group that comes into operation will bring the unit into tunnel ventilation.

29. Tunnel Cold Temperature

Enter here a value that represents an outside temperature. If the units goes into the tunnel ventilation mode and the outside temperature is less than this temperature, the unit will go into Cold tunnel ventilation mode. In this mode the unit will not open the cooling curtain for tunnel ventilation but will continue to use the inlets. There are two factors that will cause the air inlets to close and the cool air curtain to open.

1. If the outside temperature raises above the entered temperature then the air inlet will close and the cool air curtain open.
2. If the “Max Cold Tunnel Group” (30) is reached then the air inlet will close and the cool air curtain will open.

30. Maximum Tunnel Cold Group.

Enter here the maximum fan group number that will be used in the “Cold tunnel mode”. Once the set point for the next group is reached the unit will leave the Cold tunnel mode and go into full tunnel ventilation. The cooling curtain will open to 30% and the inlet will close. The cooling curtain will now take control of the static pressure operation.

31. Pressure Delay (mm:ss)

Enter here a time period in minutes and seconds.. This will be the time period that the unit will wait between steps as entered in the “Pressure Step” function.

Start with a value of 00:10(seconds). In the “Press step” enter 10. The unit will try and adjust the inlet/curtain to create the proper static pressure. It will do so by using steps of 10% with a delay of 10 seconds between each step. Increase or decrease these two values until the inlet/curtain adjustment will be done as fast as possible.

32. Pressure Step (%)

Enter here a value in percentage. This is the size of each step of the curtain or inlet that is taken while trying to regulate the static pressure in the house.

33. Required Press High Out Temp

The requested static pressure for the house can be changed according to the outside temperature. Enter here the required static pressure if the outside temperature is above the set temperature as set in "Press Out Temperature" (35).

34. Required Press Low Out Temp

The requested static pressure for the house can be changed according to the outside temperature. Enter here the required static pressure if the outside temperature is below the set temperature in "Press Out Temperature" (35).

35. Out Temperature Pressure (ABS)

Enter here value that represents an outside temperature. This is the outside temperature marker. If the outside temperature is above the temperature set here the requested static pressure will be the value set in function 33. If the outside temperature is below the temperature set here, the requested static pressure will be the value set in function 34.

Example:

(33) Required Press High Out Temperature = 1.5

(34) Required Press Low Out Temperature = 2.5

(35) Out Temperature Pressure = 22.0°

If the outside temperature is less than 22° then the required static pressure in the house will be 2.5mm water. If the outside temperature is higher than 22°, then the required static pressure will be 1.5.

36. Press Gap

The value entered here will be the difference above and below the desired static pressure that the unit will not attempt to change the position of the inlet/curtain.

Example: Press Gap = 0.5

If the required static pressure in the house is 2.0 then any pressure reading from 1.5-2.5 will be acceptable.

37. High Press Alarm

Enter here the maximum static pressure reading for the house. Any reading above this will activate the alarm. The alarm will remain activated until the pressure reading in the house drops below the value entered here.

38. Low Press Alarm (tunnel ventilation)

Enter here the minimum static pressure reading for the house while in tunnel ventilation. Any reading below this will activate the alarm. The alarm will remain activated until the pressure reading in the house is above the value entered here. This alarm is triggered only when the fans are running and only after the Low pressure alarm delay (40).

39. Minimum ventilation low pressure alarm

Enter here the minimum static pressure reading for the house while in minimum and cross ventilation. Any reading below this will activate the alarm. The alarm will remain activated until the pressure reading in the house is above the value entered here. This alarm is triggered only when the fans are running and only after the Low pressure alarm delay (40).

40. Low Pressure Delay (mm:ss) (tunnel ventilation)

This is a value in minutes and seconds. Once a fan group comes into operation the unit will wait the entered time period before checking to see that the static pressure reading in the house has reached the Low pressure alarm settings (38/39).

If after this time period the pressure reading in the house has not reached the low pressure value, the alarm relay will be activated.

41. Inlet Min. Pos

Enter here, in percentage, the amount the inlet will remain open (if a larger opening is not needed). This opening is only while the fans are running.

Example: If 10% is entered here, then if the inlet closes, it will remain open 10%.

This may happen while the unit is trying to adjust the static pressure in the house.

42. Min Curtain Pos

Enter here, in percentage, the amount the curtain will remain open (if a larger opening is not needed). This opening is only while the fans are running.

Example: If 10% is entered here, then if the curtain closes, it will remain open 10%.

This may happen while the unit is trying to adjust the static pressure in the house.

43. Cool ON Temp

Enter here an inside average temperature that if reached will cause the cooling system to go on. The cooling system will run in a cycle mode as set in the Cool ON and Off functions (44/45)

44. Cool On (mm:ss)

Enter here the time period in minutes and seconds that the cooling system will run once the house temperature has reached the Cool on Temp temperature (43). The cooling system will run in a cycle mode going from on to off. If the humidity reading in the house reaches the level set in "Cool Humid Set" (46), the cooling system will shut off.

45. Cool Off TM (mm:ss)

Enter here the time period in minutes and seconds that the cooling system will be off during the cool system cycle.

46. Cool Hum Set %

A value set in percentage. If the humidity level in the house rises above the value set here the unit will automatically close the cooling system.

47. Cool Timer

A display of the timer for the cooling system. This is a countdown timer showing the cooling cycle.

48. Alarm Low

Enter the number of degrees **below** the required house temperature that if reached the unit will activate the alarm relay.

Example: Required temperature 25.0

Alarm Low: 5.0

If the house temperature drops to 20.0 then the alarm relay will be activated.

49. Alarm High

Enter the number of degrees **Above** the required house temperature that if reached The unit will activate the alarm relay.

Example: Required temperature 25.0

Alarm high: 5.0

If the house temperature reaches 30.0 then the alarm relay will be activated.

50. Alarm Type

Shown here is the current alarm in digital form

The unit has 9 alarms

1. Cold
2. Hot
3. Memory- represents a problem with the unit's memory.
4. Sensors- all temperature malfunctioning.
5. Sensor- one sensor is malfunctioning.
6. Inlet - the unit has detected a problem with one of the motors feedback
7. Curtain - the unit has detected a problem with one of the motors feedback
8. Low Pressure Alarm
9. High Pressure Alarm

51. Alarm Disable

It is possible to disable alarms 5-9.

To disable an alarm enter the corresponding number.

Example: In order to disable alarm number 5 (bad sensor) enter the value 5.

Note: An alarm that has been disabled will not active the alarm relay in the event of an alarm.

Light table**52. Table**

It is possible to program up to 8 on off programs for the lighting system over a 24-hour period. Enter here the number of the program (from 1-8) that is to be programmed. Always start with the number 1 program.

Enter 1 and then continue to program the on and off times in functions 53/54.

Be sure to clear all unused indexes by entering zero (0) as the values in the used Indexes.

53. Light On Time

Enter here the light on time for the chosen index program. Use a 24 hour clock format.

54. Light Off Time

Enter here the light off time for the chosen index program. Use a 24 hour clock format.

Example:

Table (52) = 1

Light On Time (53) = 0600

Light Off Time (54) = 2000

In this example the lights will go on at 06:00 and off at 20:00.

If more than one lighting program is needed, continue to program the table.

Table (52) = 2

Light On Time (function 53) = 2200

Light Off Time (function 54) = 0100

In this example the lights will go on at 06:00 and off at 20:00 (table 1)

At 22:00 the lights will come back on and then go off at 01:00.

In order to erase all table programs, enter in the table, (52), the value 0 (zero).

After the value 0 is entered the table number will return automatically to 1.

55. Min Temperature

A display of the minimum temperature recorded over the last 24 hours. This will be updated according to the reset time (84).

56. Maximum Temperature

A display of the maximum temperature recorded over the last 24 hours. This will be updated according to the reset time (84).

57. Minimum Humidity

A display of the minimum humidity recorded over the last 24 hours. This will be updated according to the reset time (84).

58. Maximum Humidity

A display of the maximum humidity recorded over the last 24 hours. This will be updated according to the reset time (84).

59. Water Meter

If a water measuring clock has been connected to the Temptron 616 then in this function will be displayed the amount of water consumed over a 24 hour period. This 24 hour time period is from Reset time to Reset time (84).

60. Feed Consump

If a dry contact has been connected to the Temptron 616 from the feed auger contactor, then in this function the amount of feed consumed over a 24 hour period will be displayed. The 24 hour time period is from Reset time to reset time.

61. Feed Mult

Feed multiply is the total amount for feed in kilograms that is duped from the feed auger over a one minute time period.

If a dry contact has been connected to the Temptron 616 from the feed auger contactor and a Feed multiply is entered then the Temptron 616 will convert the feed augers motor running time into kilograms and display the converted amount here.

Example:

Over a one minute time period 25 kilogram comes out of the feed auger.

The Temptron 616 will calculate feed consumption using this value.

If the feed auger runs for 10 minutes then the Temptron will assume that 250 kilogram of feed was consumed. Since different types of feed will cause a change in the amount of feed, this is only an approximant calculation of consumed feed.

62. Average 24- Hour Temperature

A display of the average temperature over the last 24 hours. This is updated at reset time.

Temperature Reduction Table

It is possible to enter an automatic temperature reduction table for the required house temperature.

63. Day 1 Temp

Day 1 temperature is the starting temperature for the first day grow day. It is the temperature that will appear as required temperature (02) when 1 is entered in the Grow day function (83). The required room temperature will be reduced according to the following table.

Important: When Day is equal to 1 it is not possible to change Required Temperature (02).

64-72 Temperature Graph 1

It is possible to set a temperature graph to reduce automatically the room temperature each day during the raising period. It is possible to set up to 9 Groups. Length of each Group can be up to 9 days. Each Group can be reduced up to 9.9° C.

Example:

Day 1 temperature = 31°C (63).

Growth day 1 = (83)

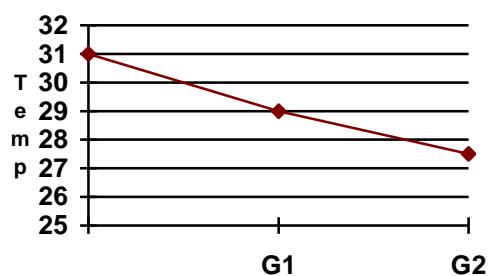
Room temperature will be 31°C.

Group 1 - 7 days reducing of 2.1°C.

Each day the room temperature will be reduced by 0.3°C. At day 7 - the room temperature will be 29°C.

Group 2-3 days reducing of 1.5°C. Each day the room temperature will be reduced by 0.5°C. At day 10 the room temperature will be 27.5°C. and so on.

Example:



To Enter temperature reduction of 2°C in 7 days, press on 7 and than on 2 than on 0 and than on enter. On the display will appear : 7 2.0 G1

Press on data key, next group will appear.

To enter temperature reduction of 1.5°C in 3 days, press on 3 than on 1 than on 5 then on enter. On the display will appear: 3 1.5 G2.

It is **important** to enter data in all 9 groups. If a group is not in use than put one day and 0°C. as a reduction temperature

Weight Increase Table

73. Day 1 Weight

It is possible to enter an automatic weight increase table to be used by the minimum ventilation system.

Enter here the weight of one bird at one day old. The current weight (18) will be updated to this weight

Important: When Day is equal to 1 it is not possible to change current weight (18).

74-82. Weight Graph

It is possible to set up to 9 groups. Max. 9 days per group. Each group can be set with 100 gr. step.

Example:

To enter a weight increase of 200 grams over 7 days, press on 7 and than on 0 than on 2 and than on enter. On the display will appear: 7 0.2 G1

Press on data key, next group will appear.

To enter weight increase of 300 grams over the next 7 days, press on 7 than on 0 than on 3 then on enter. On the display will appear: 7 0.7 G2.

It is **important** to enter data in all 9 groups. If a group is not in use, than put one day and 0 as weight increase.

83. Grow Day

This is the current grow day of the flock.

Enter 1 here on the first day of the flock. The room temperature (02) will automatically receive the value as entered in Grow day1 temp (63).

The Current weight (18) will automatically receive the value as entered in Day 1 Weight (73).

84. Reset Time

The **Temptron 616** collects all its information on a 24 hours basis. It is possible to set the reset time. The grow day also changes after this time is passed. All information, temperature, humidity, water count and feed consumption will reset at this time.

85. Inlet Position%

A display of the current position of the inlet in percentage.

86. Curtain Position%

A display of the current position of the curtain in percentage.

87. Inlet state

For agrologic technicians.

88. Inlet state

For agrologic technicians.

Hidden functions.

Hidden functions are functions that are normally set up once and are not used on a daily basis.

In order to reach the hidden function (89-99) you must first unlock them.

To unlock the hidden functions follow these steps.

A. Enter the time function (01).

B. Push on "PROG"

C. Enter **3331** and press enter.

The hidden functions are now unlocked

To relock the hidden functions manually enter function 01 and enter 3330 and enter.

If no information is entered for a period of 10 minutes the unit will automatically lock the hidden functions.

Hidden functions:**89. Lock code.**

Enter here the 4-digit code for locking/unlocking the unit. If the value 0000 is entered then the lock code is disabled.

90. NAVR

Number of sensors for average. Enter here up to 4 sensors that are to be used for calculating the average temperature.

91. Net Name

It is possible to connect the **Temptron 616** to a PC computer with the help of the "ChickPro" software package. Each unit needs a net name.

92. Digital Input reading:

This is a display of the current digital input in use. This readout is a binary number.

Digital input 1 =1 (inlet input)

2=2 (curtain input)

7=64 (water counter input)

8=128 (feed input)

93. Op Mode:

It is possible to set up the Temptron to operate the heaters using separate temperature sensors or using the average of two sensors.

Enter 0	No heater separation
Enter 1	Heater 1 using sensor 1 Heater 2 using sensor 2

94. Version Number

This is the version number of the unit.

95. N sync set

It is important for the inlets and cooling curtain to reach their maximum and or minimum openings from time to time. If not it may be necessary to do an automatic inlet or cool curtain calibration at some point throughout the flock. Enter here the number or movements that the curtain or inlet will move before doing a calibration.

If the curtains or inlet move the entered amount of times between 0 and 100%, then they will do a calibration. Each time the curtain or inlet reaches 0 or 100%, the Temptron restarts the count.

96. Press amp

Enter here the required number for pressure calculation.

Advised setting: 7.80 for mm/water.

97. Tunnel Delay time

Minimum time setting set in seconds that the **unit** would remain in the current ventilation mode. Suggested time setting: 180 seconds.

98. Curtain Mode.

If no cool air curtain is installed in the house enter here **1**.

If a cool air curtain is installed in the house enter here **0**.

Default setting is 1.

99. Initial opening\ damper & cool curtain

Enter here in percentage the initial opening for both the damper and cool curtain.

The damper\ cool curtain will open to this setting before the ventilation system turns on. Once the ventilation system is running the damper \ cool curtain will adjust itself according to the required static pressure.

It is advisable to set this opening large enough so that when the ventilation system starts the static pressure in the house will not be too high.

99. System state

This is for Agro Logic technical staff

Inlet/Curtain Calibration

It will be necessary to calibrate the inlet and cooling curtain before the start of each flock.

- A.** Go to the time function (code 01)
- B.** Push on "PROG"
- C.** Enter "4441" and press "Enter" to calibrate the inlet.
- D.** Enter "4442" and press "Enter" to calibrate the cooling curtain.

This will start the calibration process. The inlet / curtain will first close to 0 percent and then open to 100 percent. The inlet / curtain will then go to its required position.

TROUBLE-SHOOTING

- If a temperature sensor or its cable is disconnected, the sensor reading will show **Open**.
- If a temperature sensor or its cable is shorted, the sensor reading will show **Short**.
- If all sensors are disconnected, the unit will show open as average and activate the alarm.
- If one sensor is disconnected, the system will automatically work on the remaining sensor.
- A reading of 999 in function 85. The inlet is out of calibration. Recalibrate the inlet. Follow the calibration procedure as explained previously.
- A reading of 999 in function 86. The cool curtain is out of calibration. Recalibrate the cool curtain. Follow the calibration procedure as explained previously.

Function list

02. Required temp	38. Low pressure alarm
03. Heat 1	39. Minimum ventilation low pressure alarm
04. Heat 2	40. Low pressure alarm delay
05. Fan minimum duty	41. Inlet minimum position
06. Fan cycle time	42. Cool curtain minimum position
07. Fan timer display	43. Cool on temperature
08. Max air hour 1	44. Cool on time
09. Minimum ventilation fans 1	45. Cool off time
10. Max air hour 2	46. Cool humidity set
11. Minimum ventilation fans 2	47. Cool timer display
12. Max air hour 3	48. Low alarm
13. Minimum ventilation fans 3	49. High alarm
14. Minimum air kilo low	50. Alarm type
15. Minimum air kilo high	51. Alarm disable
16. Minimum ventilation out temperature	52. Light table
17. Number of birds housed	53. Light on time
18. Current weight	54. Light off time
19. Fan duty %	55. Minimum temperature
20. Fan group 1	56. Maximum temperature
21. Fan group 2	57. Minimum humidity
22. Fan group 3	58. Maximum humidity
23. Fan group 4	59. Water consumption
24. Fan group 5	60. Feed consumption
25. Fan group 6	61. Feed multiply
26. Fan group 7	62. Average temperature 24/hr
27. Fan humidity set	63. Temperature day 1
28. Tunnel on group	64. Temperature graph 1
29. Tunnel cold temperature	73. Weight day 1
30. Maximum tunnel cold group	74. Weight graph 1
31. Pressure delay	83. Grow day
32. Pressure step	84. Reset time
33. Required pressure high out temp	85. Inlet position %
34. Required pressure low out temp	86. Curtain position %
35. Pressure out temperature	87. Inlet state
36. Pressure gap	88. Curtain state
37. High pressure alarm	
Alarm types: 1= Cold; 2= Hot: 3= Memory: 4= All sensors 5= One sensor: 6= Inlet: 7= Curtain: 8= Low pressure: 9= High pressure	