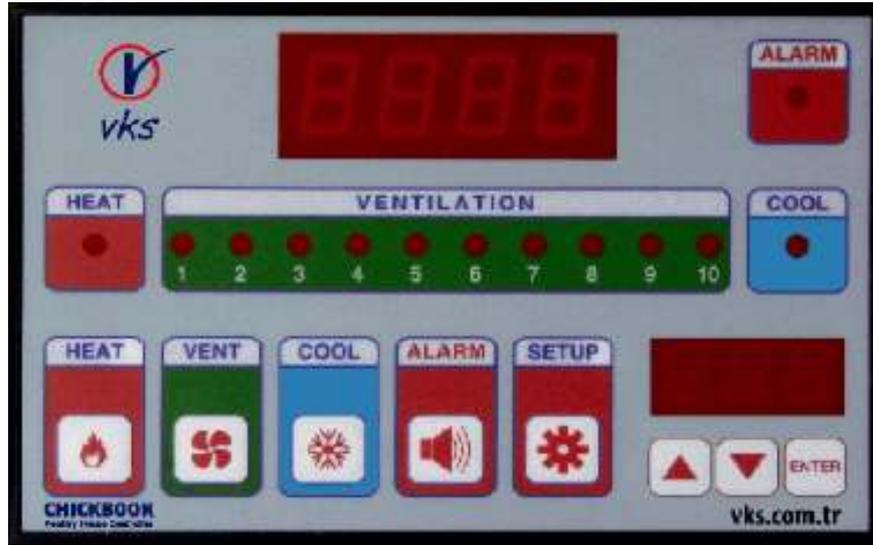




# VKS CHICKBOOK POULTRY HOUSE CLIMATE CONTROLLER OPERATION MANUEL



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## **SAFETY PRECAUTIONS AND WARNINGS**

### **WARNING**

Before installation and energizing of climate controller, please read safety precautions and warnings carefully!

- Imbalances in your electricity network (low and high voltages) might destroy the controller and stop it to work properly.
- There is high voltage electricity energy which can be dangerous for human health and the equipments. Interference to the panel or equipments connected to the controller without cutting out the energy might result serious damages for human health or equipments.
- Usage of the controller for long years depends on installing properly, operating and having periodic maintenance by authorised personnel.

### **ATTENTION**

- Please inhibit unauthorised people especially children to reach and interference the controller.
- Please do not forget that all electrical equipments can cause fire. Because of this place the controller away from high temperature, fire and liquids. Do not put easy to fire materials near the controller like nylon, wood or chemicals.
- This controller can be used only with the equipments that are specified by VKS. Changes made without prior notice and approval of VKS might cause serious damages.
- Please place this user's guide at an easy to reach place for all operators who might be have to operate the controller.

## **1. GENERAL INFORMATIONS**

This fan control panel that you have bought has been developed by long years of experience of VKS in the sector and by using all technologic improvements.

Poultry fan control panel is a control panel which is designed to provide the fresh air needed inside the house. It is possible to feed more bird in the

equipped houses than natural ventilated houses per square meter area. In summer, when the temperature inside the house increases, the fans start to work and make fresh air fill inside house by passing through ped panels and cool the house. The temperature is reduced to the desired value by this method. In winter the fans make fresh air come inside the house just to breathe fort he animals not to reduce the temperature. When the fans stops the shutters close and heating energy loss is minimised.

The microcomputer on the front cover of the panel is called VKS CHICKBOOK. VKS CHICKBOOK microcomputer makes the fans work according the house needs automatically.

In automatic mode number of working fans is determined by the microcomputer according the house needs and the parameters which will be adjusted by the operator.

When the panel is made to work in hand mode; the speed and number of working fans is controlled by the operator. In this mode the fans will work or will not work according to the comands of operator.

### 1.1 Technical Specifications

Circuit system Electricity pressure	220 (+/-10%)	VAC
Frequency	50-60	Hz
Electric power	9	VA
Fireproofing rate for relay	250VAC, 3A	
Temperature for using	-20 - 60	°C
Measurement range temperature	-10.0 – 70.0	°C
Accurate value	0.1	°C
Deviation value	+/-1	%
Measurement range Humidity	0.0 – 99.9	%RH
Accurate value	0.1	%
Deviation value	+/-5	%

## 2. INSTALLATION

1. Connect the VKS CHICKBOOK to the wall in a dry place approximately 1 meter away from the electrical cabinet.
2. Connect a 220VAC cable to the L,N connector. This is the unit power input.
3. The VKS CHICKBOOK has not breaker (fuse) inside for this relay output, power input, and it must be installed externally.
4. Connect a protective conductor (P.E.) to the G connector. If the earth electrode resistance to more than 5 ohms. To add a new earth electrode to connect to VKS CHICKBOOK.

### 2.1 Analog Input Connections

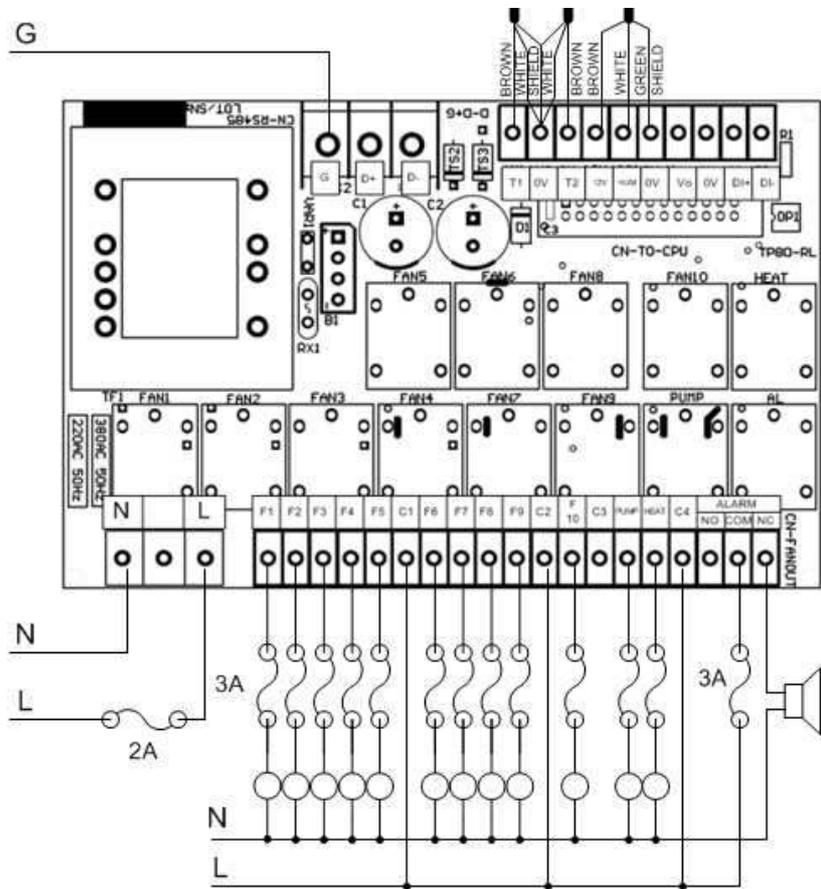
1. Temperature sensors

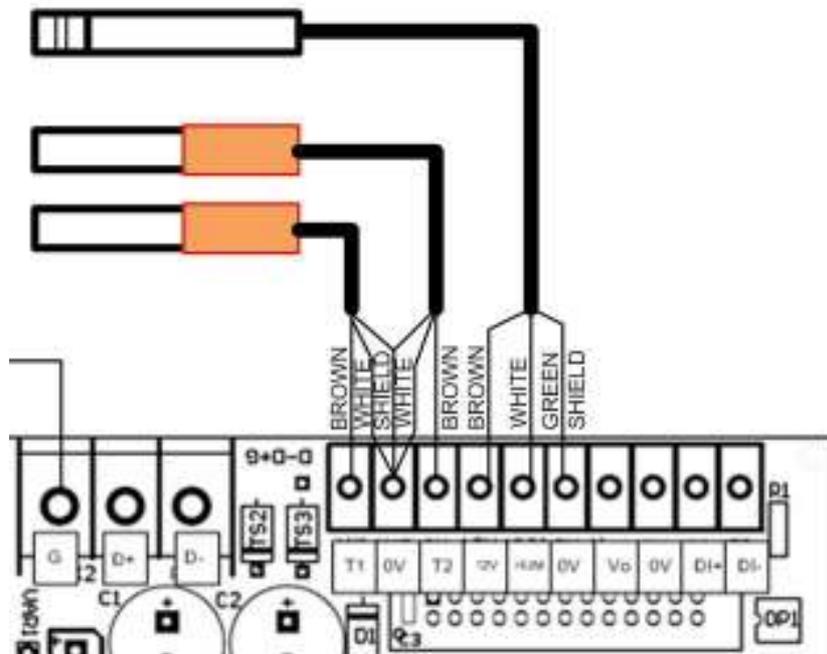
**T1** is used for indoor temperature sensor. Use a two wire cable. Connect one wire to analog input T1 and second wire to the 0V input.

**T2** is used for outdoor temperature sensor. Use a two wire cable. Connect one wire to analog input T2 and second wire to the 0V input.

2. Humidity sensor

**HUM** is used for indoor humidity sensor. Use a three wire cable. Brown to input 12V, Green to 0V and White to HUM.





## 2.2 Relay Connections

Connect the relay outputs to the various systems. All outputs are dry contact, maximum 3A/250VAC

Relay list

SYMBOL Output

F1 Fan group 1

F2 Fan group 2

F3 Fan group 3

F4 Fan group 4

F5 Fan group 5

F6 Fan group 6

F7 Fan group 7

F8 Fan group 8

F9 Fan group 9

F10 Fan group 10

PUMP Cooling pump

HEAT Heater

ALARM Alarm

## 2.3 Analog Output Connection

Vo is used for the variable speed fan (inverter).

## 2.4 Digital Input Alarm

DI is used for the external alarm signal. Connect 24VDC to DI+ and the second 0VDC to DI-. When the signal from the external alarm, the dry contact alarm will be in normally close state.

## 3. OPERATION

The VKS CHICKBOOK will display the temperature and humidity inside the house. The representation will be alternately displayed. If that is not the humidity sensor. System will not show the humidity. Displays the temperature inside the house alone.

The VKS CHICKBOOK will display the operation of the relay and the fan speed.

### Turn on power

Each time power is connected to the unit "1.0U" will appear on the display. This number is version number, and is unique for this program version.

### 3.1 Change of Display

Push on button. For select the display.

1. T\_1 This is a reading of the current indoor temperature.
2. T\_2 This is a reading of the current outdoor temperature.
3. HvM This is a reading of the current indoor temperature.
4. ALM Notification error (If no errors. Do not show this message.)
  - HAL Error greater than or equal to the temperature specified.
  - LAL Error less than or equal to the temperature specified.
  - HHV Error greater than or equal to the humidity specified.
  - DiN Error from digital input alarm.

### 3.2 Change of Set Point

It is possible to change each set point.

1. Push on button. For select the function.
2. Push on button. For increase the data. Or push on button. For reduce the data.

When editing data values. Will be flashing.

3. Check the display to see if the information is correct. If yes, Push on button.
4. Push on function button to change function. Or exit from the set point function

### **3.3 Set Points Functions**

#### **Heater (HEAT)**

##### **3.3.1.1 heat**

Enter here the temperature at heater turned off. The temperature at the turn on heater is calculated form the value of heat minus the value of dhEt. As set heat at 25.0°C and dhEt were 1.0 heater to turn off at 25.0°C and will turn on again. Temperature is less then or equal to 24.0°C. (Factory-set value dhEt were 1.0°C, Users can edit it.)

#### **Ventilation (VENT)**

##### **3.3.2.1 F01**

Enter here the temperature at fan1 will be turned on. The temperature at the turn off fan1 is calculated form the value of F01 minus the value of dFAN. As set F01 at 21.0°C and dfan were 1.0 fan1 to turn on at 21.0°C and turn off. Temperature is less then or equal to 20.0°C. (Factory-set value dfan were 1.0°C, Users can edit it.)

##### **3.3.2.2 F02**

Enter here the temperature at fan2 will be turned on.

##### **3.3.2.3 F03**

Enter here the temperature at fan3 will be turned on.

##### **3.3.2.4 F04**

Enter here the temperature at fan4 will be turned on.

##### **3.3.2.5 F05**

Enter here the temperature at fan5 will be turned on.

##### **3.3.2.6 F06**

Enter here the temperature at fan6 will be turned on.

##### **3.3.2.7 F07**

Enter here the temperature at fan7 will be turned on.

##### **3.3.2.8 F08**

Enter here the temperature at fan8 will be turned on.

##### **3.3.2.9 F09**

Enter here the temperature at fan9 will be turned on.

**3.3.2.10 F10**

Enter here the temperature at fan10 will be turned on.

**3.3.2.11 Fon**

Enter here the time period in minutes and seconds (x10) that the fan1 will run once the house temperature has below the fan1 temperature (Function "F01"). The fan1 will run in an on-off cycle.

**3.3.2.12 Fof**

Enter here the time period in minutes and seconds (x10) that the fan1 will be off during the fan1 cycle.

**Note:** Enter "0.0" to disable this function.

**3.3.2.13 SPFL**

Enter here the minimum speed set in percentage that the variable speed fan will run.

**3.3.2.14 SPFH**

Enter here the maximum speed set in percentage that the variable speed fan will run.

**3.3.2.15 T\_Lo**

Enter here the minimum temperature setting to control the fan speed minimum.

**3.3.2.16 T\_Hi**

Enter here the maximum temperature setting to control the fan speed maximum.

**Example:**

SPFL = 30 %

SPFH = 100 %

T\_LO = 23.0°C

T\_Hi = 30.0°C

As long as the indoor temperature is below 23.0°C the variable speed fan will be running at 30%. When the temperature reaches 23.0°C the variable speed fan will start to increase in speed. By the time the house temperature has reached 30.0°C variable speed fan will be running at 100%.

## **Cooling Pump (COOL)**

### **3.3.3.1 CP**

Enter here the temperature at pump will be turned on. The temperature at the turn off pump is calculated from the value of CP minus the value of dCP. As set CP at 27.0°C and dCP were 1.0 pump to turn on at 27.0°C and turn off. Temperature is less than or equal to 26.0°C. (Factory-set value dCP were 1.0°C, Users can edit it.)

### **3.3.3.2 HvCP**

Enter here the humidity at pump turned off. The humidity at the turn on pump is calculated from the value of HvCP minus the value of dhVM. As set HvCP at 80.0% and dhVM were 2.0 pump to turn off at 80.0% and will turn on again. Humidity is less than or equal to 78.0%. (Factory-set value dhVM were 2.0%, Users can edit it.)

### **3.3.3.3 CPon**

Enter here the time period in minutes and seconds (x10). The pump will run in an on-off cycle.

### **3.3.3.4 CPof**

Enter here the time period in minutes and seconds (x10) that the pump will be off during the pump cycle.

**Note:** Enter "0.0" to disable this function

### **3.3.3.5 TE-2**

Enter here the outdoor temperature for the reduction of timer off pump by dividing the value Cpof divide two such set at 32.0°C and Cpof was 60.0 when the outdoor temperature is higher than or equal to 32.0°C.

Time to off the pump will be changed from 60 minutes to 30 minutes. (If you want to disable the set 99.9°C)

### **3.3.3.6 TE-4**

Enter here the outdoor temperature for the reduction of timer off pump by dividing the value Cpof divide four such set at 37.0°C and Cpof was 60.0 when the outdoor temperature is higher than or equal to 37.0°C.

Time to off the pump will be changed from 60 minutes to 15 minutes. (If you want to disable the set 99.9°C)

**Note:**

- If there is no humidity sensor. System will not be used in the humidity control function HvCP will disable.
- If there is no outdoor temperature sensor. System will not be used in temperature control function

TE-2 and TE-4 will disable.

- Pump will turn on. When the indoor temperature greater than or equal to the value set in the CP and then to check the humidity from the value set in HuCP if conditions right It will turn on pump at the set value from function 3.3 to 3.6.

### **3.4 Alarm (ALARM)**

#### **3.4.1 HAL**

Enter here the maximum temperature required notification. In case of the controller will activate the alarm relay and high temperature alarm status will activate.

#### **3.4.2 LAL**

Enter here the minimum temperature required notification. In case of the controller will activate the alarm relay and low temperature alarm status will activate.

#### **3.4.3 HvAL**

Enter here the maximum humidity required notification. In case of the controller will activate the alarm relay and high humidity alarm status will activate.

#### **3.4.4 ALon**

Enter here the time period in seconds. The alarm relay will run in an on-off cycle.

#### **3.4.5 ALof**

Enter here the time period in seconds that the alarm relay will be off during the alarm cycle.

#### **Note:**

- Enter “0.0” to disable this function
- When the controller will activate the alarm relay. If any button is pressed. Alarm relay will delay for 15 minutes.

### **3.5 Setup Controller (SETUP)**

#### **Mode users**

#### **3.5.1 bFC**

Increase the speed fan mode, the variable fan speed (inverter) for ventilation.

- \_\_\_ Will run by the time of bFon and bFof.
- THH Will run when the temperature is higher than or equal to T\_BF, or humidity higher than or equal to HvCP.
- TLH Will run when the temperature is less than or equal to T\_BF minus 0.5°C, or humidity higher than or equal to HvCP.
- H Will run when the humidity is higher than or equal to HvCP.

- TH Will run when the temperature is higher than or equal to T<sub>BF</sub>.
- TL Will run when the temperature is less than or equal to T<sub>BF</sub> minus 0.5°C.

### 3.5.2 t<sub>bf</sub>

Enter the temperature increase the fan speed mode. If a set bFC THH, TLH, TH, TL

### 3.5.3 bf

Enter the fan speed to increase as the mean of 20% controller speed up to 20% of normal when conditions.

### 3.5.4 bFon

Enter here the time period in minutes and seconds (x10). The increase the speed fan mode will run in an on-off cycle.

### 3.5.5 bfof

Enter here the time period in minutes and seconds (x10) that the increase the speed fan mode will be off during the cycle.

**Note:** Enter “0.0” to disable this function

### 3.5.6 HHon

Enter here the time period in minutes and seconds (x10) that the cooling pump system will run once the indoor temperature has reached the required temperature for cooling pump and indoor humidity rises above required humidity. The cooling pump will run in an on-off cycle.

### 3.5.7 HHof

Enter here the time period in minute and seconds (x10) that the cooling pump will be off during the cooling pump high humidity cycle.

**Note:** Enter “0.0” to disable this function

### 3.5.8 dPM

Open or hidden mode technicians. (Specific technical information of the only)

0 = Open mode technicians

1 = Hidden mode technicians

### mode technicians

### 3.5.9 Hn

It is possible to connect the unit to a PC computer with the help of the “TEMPVIEW” software package. It is possible to manage up 99 units. Each controller needs a house number.

### 3.5.10 DLY

Delay the operation of the controller set start time from 3 to 180 seconds.

### 3.5.11 F10

Select the relay function of Fan10

0 = normally open (NO)

1 = normally close (NC)

**3.5.12 dhet**

Enter here the number of degrees below the heater temperature that heater will be turn on.

**3.5.13 dFan**

Enter here the number of degrees below the fan temperature that fan will be turn off.

**3.5.14 dCP**

Enter here the number of degrees below the cooling pump temperature that cooling pump will be turn off.

**3.5.15 dHvm**

Enter here the number of percentage below the humidity for cooling pump that cooling pump will be turn on.

**3.5.16 t\_1**

This is reading of the current indoor temperature. It is possible here to adjust the temperature reading.

**3.5.17 t\_2**

This is reading of the current outdoor temperature. It is possible here to adjust the temperature reading.

**3.5.18 HvM**

This is reading of the current indoor humidity. It is possible here to adjust the humidity reading.

**3.5.19 rset**

This is function for reset controller. To be used by technicians.

- 1 = Load User Parameter
- 2 = Clear Adjust Sensor
- 5 = Load Factory Parameter
- 8 = Save User Parameter

**3.5.20 trL**

This is function for test relay. To be used by technicians.

**3.5.21 tspf**

This is function for test variable speed fan. To be used by technicians.

**3.5.22 t7dp**

This is function for test 7 segments. To be used by technicians..