User Manual
Program version R211

TempTron 304 D

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 This manual may contain mistakes and or printing errors. We accept no liability for technical mistakes, printing errors or their consequences.

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.

Introduction

The TEMPTRON 304D is a stand alone 4 stage, temperature/humidity controller. One remote temperature sensor and one remote humidity sensor may be connected to the TEMPTRON 304D.
The TEMPTRON 304D will display the measured temperature and humidity on its display. It is possible to preset a set point for each relay output and 0-10V output.

Program

Your unit has been designed to run 3 groups of fans, the first fan group working on a minimum ventilation mode. One cooling system may be connected to the unit that will run on an on off mode as programmed by the user.

Theory of operation

The unit is measuring the temperature/humidity from its connected sensor, and will operate its relay according to the preset value of each set point. The hysteresis for the temperature is 0.2 degrees and 1% for the humidity. Each relay has a LED light that will indicate active relay.

Installation

Carefully unscrew the four screws on the front panel and carefully remove the cover. Disconnect the flat cable, which connects the base and the front panel. Pay attention to the connection polarity before reconnecting it.

Connect 220V supply and ground to the unit's power input.

Connect the enclosed temperature sensor to the unit's temperature sensor input. The sensor may be connected up to 100 meters away from the main unit with an ordinary two wire cable. The sensor polarity is not important.

Connect the fan group that is to be used for minimum ventilation to relay out 1.
Connect the other two fan groups to relay out 2 & 3.
Connect the cooling system to relay out 4.

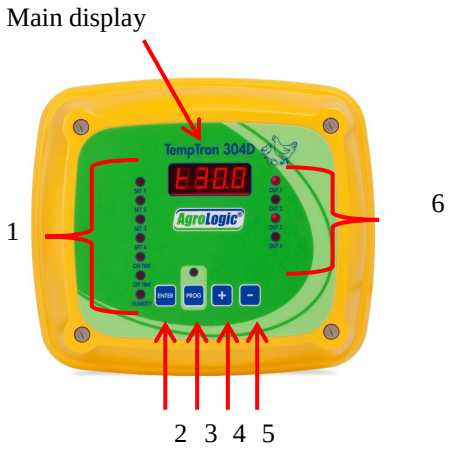
A 0-10V-humidity sensor may be connected to the system. A 13 Volt 50 mA supply is given to the humidity sensor. All relay outputs have a dry change over contacts 220V/2 AMP. (See diagram for connection).

Close the front panel with the four screws.

OPERATION

Connect the **TEMPTRON 304** to the main power. The unit will calibrate the connected temperature/humidity sensors. It will show ”---”, after approx. 20 seconds it will display the measured temperature or humidity on its display. If both, temperature and humidity sensor are connected and programmed to the TEMPTRON 304, the unit will display the measured temperature for a few seconds and than the measured humidity in intervals.
The **TEMPTRON 304** will activate its relay according to its 4 preset temperature set points. It is possible to display each set point.

Front Panel



Main Display= Displays the current temperature/humidity reading. All programed values can be recalled and displayed here.

1= LED indicators for each relay plus 3 additional LEDs for the 0-10V output. The LED is on when the function is being programed or when viewing its settings.

2= *ENTER* key. Use this key to store settings into the unit’s memory.

3= *PROG* key. Use this key to enter the programing mode.

4= + key. This key has two functions. The first is to scroll through the seven functions. The second usage is to increase the value used for the chosen function.

5= – key. This key has two functions. The first is to scroll through the seven functions. The second usage is to reduce the value used for the chosen function.

6= Four LED indicators, one for each relay. The indicator will light up when the relay is in use.

Set Points

Set 1 / Fan 1
Press on the "+" button once. The set 1 / LED will light up and display its value.
This is the temperature set point for fan group one. This fan group will be used for minimum ventilation.
As long as the house temperature is **below** this setting the unit will run the first fan group in the minimum ventilation mode (see on time/off time for fan 1).
Once the house temperature rises to the temperature set point for fan 1, the fan group will run non-stop.

Set 2 / Fan 2
Press on the "+" button twice. The set 2 / LED will light up and display its value.
This is the temperature set point for the second fan group.
Once the house temperature rises to the set point for fan 2, the fan group will run non-stop.

Set 3 / Fan 3
Press on the "+" button three times. The set 3 / LED will light up and display its value.
This is the temperature set point for the third fan group.
Once the house temperature rises to the set point for fan 3, the fan group will run non-stop.

Set 4 / Cooling System
Press on the "+" button four times. The set 4 / LED will light up and display its value.
This is the temperature set point for the cooling system.
Once the house temperature rises to the set point for the cooling system will start to run. The system will run an on/off mode (see on time/off time cooling system).

On Time / Set 1 /Fan 1
Press on the "+" button five times. The set 1 and On Time LEDS will light up.
The display will show the On Time for the minimum ventilation mode.
This time is set in minutes.

Off Time / Set 1 /Fan 1
Press on the "+" button six times. The set 1 and Off Time LEDS will light up.
The display will show the Off Time for the minimum ventilation mode.
This time is set in minutes.

On Time / Set 4 / Cooling system
Press on the "+" button seven times. The set 4 and On Time LEDS will light up.
The display will show the On Time for the cooling system.
This time is set in minutes.

Off Time / Set 4 / Cooling system
Press on the "+" button eight times. The set 4 and Off Time LEDS will light up.
The display will show the Off Time for the cooling system.
This time is set in minutes.

Humidity
Press on the "+" button nine times. The Humidity LED will light up.
The display will show the humidity setting.
If the humidity reading in the house reaches this setting, the unit will automatically shut off the cooling system.

Minimum ventilation timer
In order to see the minimum ventilation timer countdown, follow these steps.
A. Press on the "+" button once. The set 1 / Fan 1 LED will light up.
B. Press on the Enter button once. The display will now show the minimum ventilation countdown in seconds.

Cooling system timer
In order to see the cooling system timer count down, follow these steps.
A. Press on the "+" button four times. The set 4 / cooing system LED will light up.
B. Press on the Enter button once. The display will now show the cooling system countdown in seconds.

If the "+" or "-" buttons are not pressed over a 20 second period, the display will return to show the measured temperature/humidity.

Changing set points

It is possible to change the set point for each relay.
It is possible to change the On times and Off times for the minimum ventilation and the cooling system timers.

A. Press on the "+" button until the desired LED lights on.

B. Push on **PROG.** The PROG and SET lights will flash

C. Press on the "+" or "-" button until you reach the desired value. (Pressing on "+" or "-" for more than a second increases the speed that the value changes on the display.)
Note that the LED light, of the set point that is being changed, is flashing

D. When you have reached the desired value, press the "Enter" button. The LED light will stop flashing to indicate that the new set point has been stored into the **TEMPTRON 304** memory.

Trouble shooting

SYMPTOM	CAUSE	SOLUTION
Display Shows: OPEN	Temp. Sensor or cable disconnected	Check wiring or replace Temp. sensor
Display shows: SHRT	Temp. Sensor or Cable shorted	Check wiring or replace Temp. Sensor
Display Black	Fuse burn out	Replace fuse 100 mA

Connection diagram