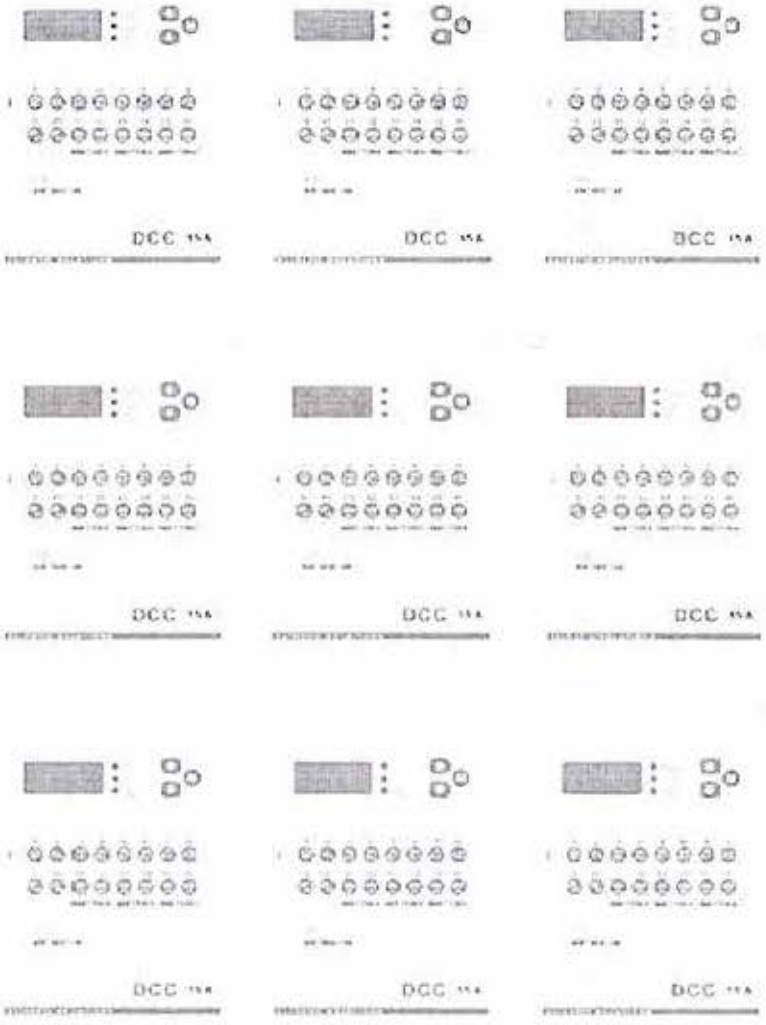
Controlador de clima DCC6/DCC15 / DCC25

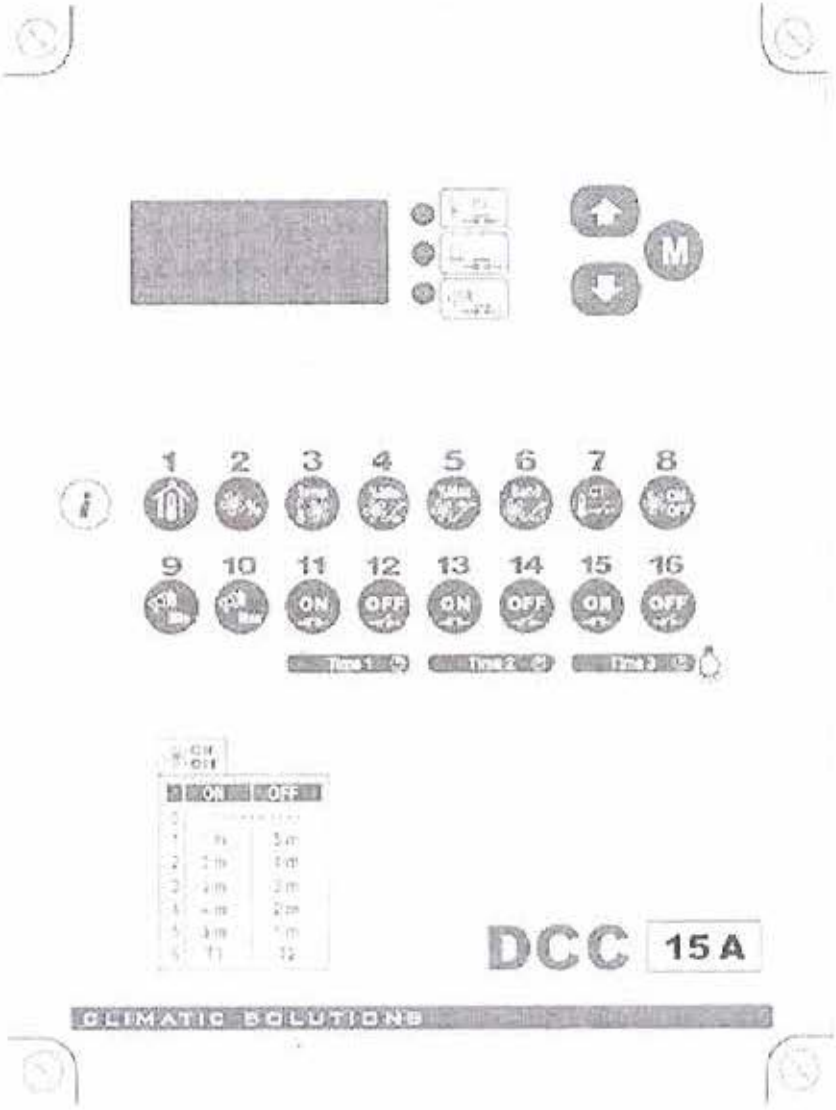
Climate controller DCC6/DCC15 / DCC25



DCC15 / DCC25

1. Introduction

DCC15 is a fully digital climate controller, easy-to-use and very versatile. Below you can see a picture of the controller.



2. Controller highlighting

- Variable output power producing 6 A (1400W) / 15 A (3400w)/ 25A (5500w) depending on the model.
- Thermal contact, configurable for heating or cooling.
- Lighting Relay, with 3 ON/OFF intervals.
- Alarm relay, with minimum alarma and maximún alarma

3. Introduction to the ventilation

The controller can function in ventilation mode or in heating mode. The following pictures show how voltage output behaves depending on the working mode.

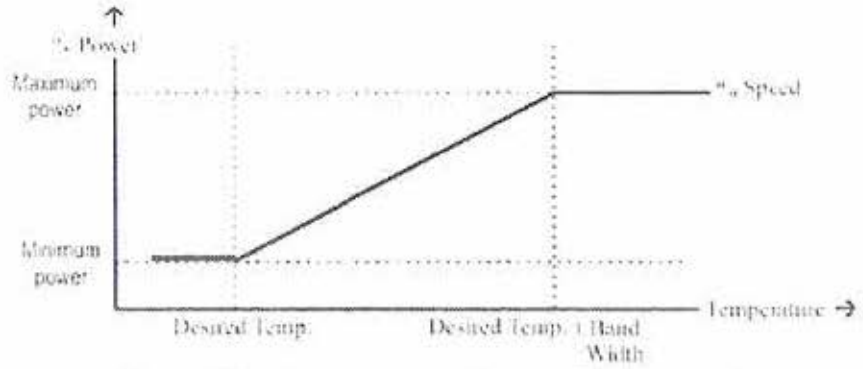


Figure 3.1. Output curve in ventilation mode

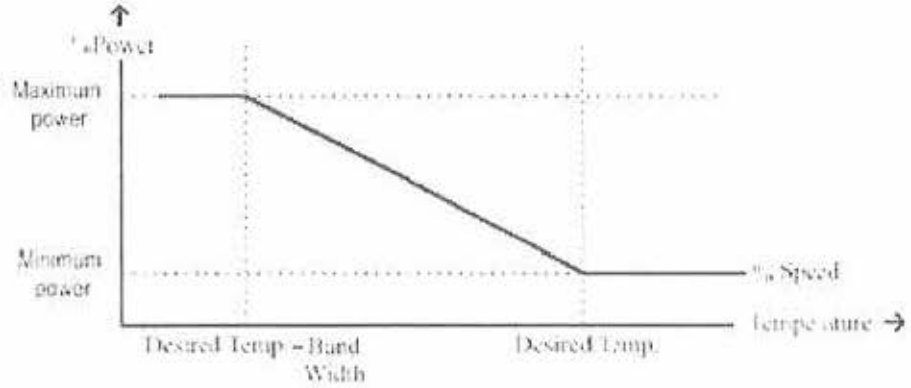
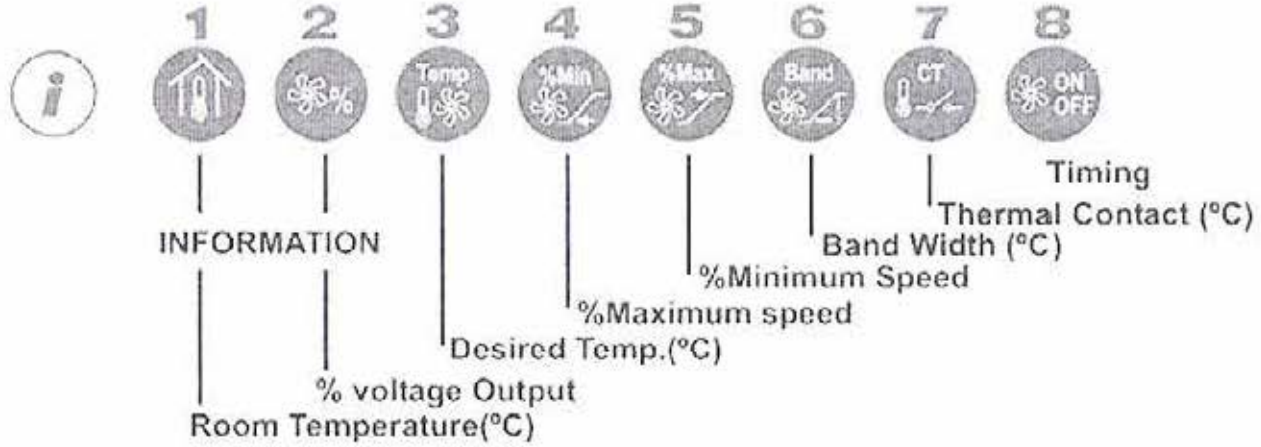
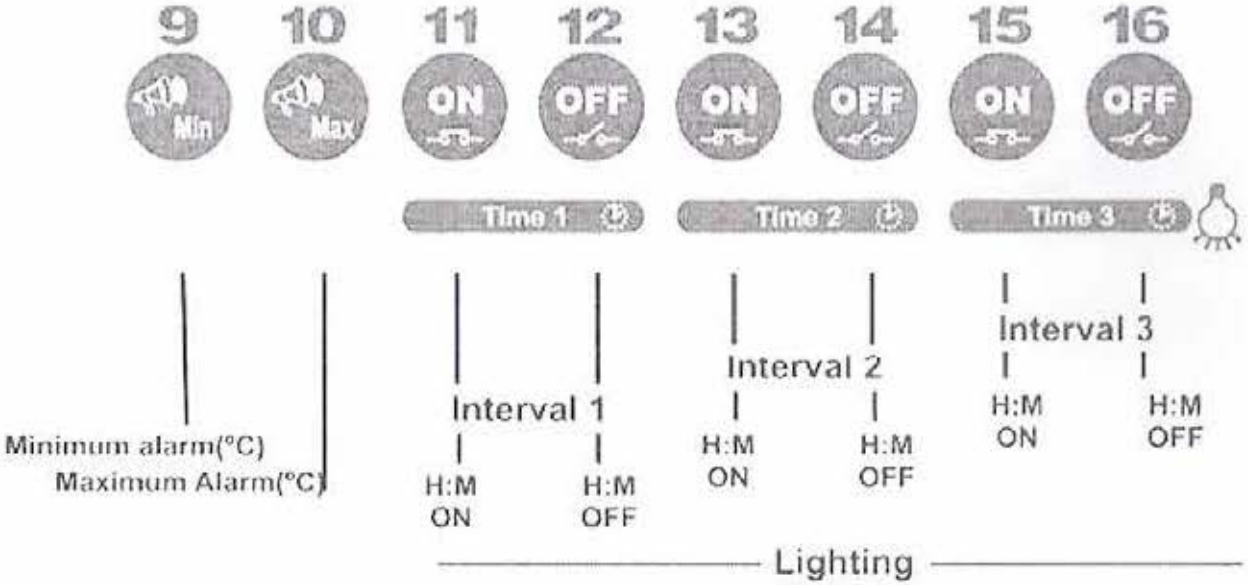


Figure 3.2. Output curve in heating mode

4. Main options





1	Room Temperature (Information)	Room temperature read by the temperature probe
2	% of ventilation (Information)	Speed (expressed in percentages) that the element connected to the output power is running
3	Desired Temperature	Temperature at which you want to set the room temperature
4	Minimum speed	Speed that the element connected to the output power will run when the temperature read by the probe was below the temperature set in the option 'Desired Temperature'. Is expressed in percentages.
5	Maximum speed	Maximum speed that the fan or element connected to the output power will run. Is expressed in percentages.
6	Band width	The band width is the number of degrees in which the speed goes from minimum speed up to maximum speed. . Is expressed in percentages.
7	Thermal contact	Temperature that the thermal contact relay (relay 2) will connect.
8	Motor timing	When the temperature read by the probe is below the set in the option 'Desired Temperature', the output power is running at minimum speed. In this option you can choose between 6 different programs shown in the table. The output power will execute on /off intervals depending on the chosen program.
9	Minimum alarm	Below the temperature set in this option the relay 3 will connect
10	Maximum alarm	Above the temperature set in this option the relay 3 will connect
11	Time 1.ON	Interval 1: Lighting switch ON time. The format is en HH.MM (hour/minutes).
12	Time 1.OFF	Interval 1. Lighting switch OFF time. The format is en HH.MM (hour/minutes).
13	Time 2.ON	Interval 2: Lighting switch ON time. The format is en HH.MM (hour/minutes).
14	Time 2.OFF	Interval 2. Lighting switch OFF time. The format is en HH.MM (hour/minutes).
15	Time 3.ON	Interval 3: Lighting switch ON time. The format is en HH.MM (hour/minutes).
16	Time 3.OFF	Interval 3. Lighting switch OFF time. The format is en HH.MM (hour/minutes).

5. Configuration Options

These parameters modify and adjust the DCC behaviour. Please read carefully this manual before changing the configuration options.

To enter to these options press simultaneously the keys '⬆' y '⬇' during 1 second. To exit to the normal mode, please press again simultaneously the keys '⬆' y '⬇' during 1 second

Configuration mode options	
1	Probe adjustment
2	Output power threshold
3	Output power for Ventilation or Heating
4	Thermal contact relay configuration
5	Thermal contact relay hysteresis
6	(Reserved)
7	(Reserved)
8	Thermal contact timing activation
9	Alarm control
10	Time adjustment
11	Output power running time
12	Output power stop time
13	Thermal contact running time
14	Thermal contact stop time
15	(Reserved)
16	Reset

1. Probe adjustment

In this option you can correct the temperature read by the temperature probe

2. Output power threshold

Below the temperature set in the option the controller (motor output) is running at minimum speed (usually at 1%). If the controller is connected to an electricity supply of 230Vac, the 1% corresponds to an output of about 70Vac. If you want that when running at 1% the output voltage was greater than 70Vac, increase the value of this option.

3. Output power for Ventilation or Heating

You can choose that the output power runs in ventilation mode or heating mode

The values accepted by this option are:

0	Ventilation mode: In this mode according the rising of temperature the power output rises from minimum temperature up to maximum temperature.
1	Heating mode: In this mode according the rising of the temperature the power output became lower for maximum speed up to minimum speed.

4. Thermal contact relay configuration

The values accepted by this option are:

0	Cooling mode The relay switch ON when the room temperature is above the fixed in the thermal contact option, otherwise the relay is switches OFF.
1	Heating mode The relay switch ON when the room temperature is below the fixed in the thermal contact option, otherwise the relay is switches OFF.

5. Thermal contact hysteresis

In this option you set the number of degrees between the connection and disconnection of the thermal contact relay. The below picture shows how the hysteresis works.

6. (Reserved)

7. (Reserved)

8. Thermal contact timing activation

The values accepted by this option are:

0	Disconnected
1	Connect the thermal contact timing

The timing takes place when the thermal contact relay is active. The relay will execute on/off intervals. The time that the relay will be on is fixed in the option 'Thermal contact relay running time' (option 13), and the stop time is fixed in the option 'Thermal contact relay stop time' (option 14).

9. Alarms control

The values accepted by this option are:

0	The alarms could be activated
1	All the alarms are deactivated

If you set a 1 in this option the minimum alarm and maximum alarm are not activated.

10. Time adjustment

In this option you can adjust the system time. The format is Hour: Minutes (HH.MM).

11. (T1) Output power running time (Triac)

If the option 8 of the main options (motor timing) is set to 6, the running time is the time established in this option. The format of the data entered is expressed in minutes.seconds (MM.SS). If this option is set to 0 the timing will not take place.

12. (T2) Output power stop time (Triac)

If the option 8 of the main options (motor timing) is set to 6, the stop time is the time established in this option. The format of the data entered is expressed in minutes.seconds (MM.SS). If this option is set to 0 the timing will not take place.

13. Thermal contact relay running time

If you want to timing the thermal contact relay, in this option you established the running time. The format of the data entered is expressed in minutes.seconds (MM.SS). If this option is set to 0 the timing will not take place.

14. Thermal contact relay stop time

If you want to timing the thermal contact relay, in this option you established the stop time. The format of the data entered is expressed in minutes.seconds (MM.SS). If this option is set to 0 the timing will not take place.

15. (Reservada)

16. Reset

Setting a 5 in this option the controller is reset, loading the default values.

6 Special function

6.1 See the actual time

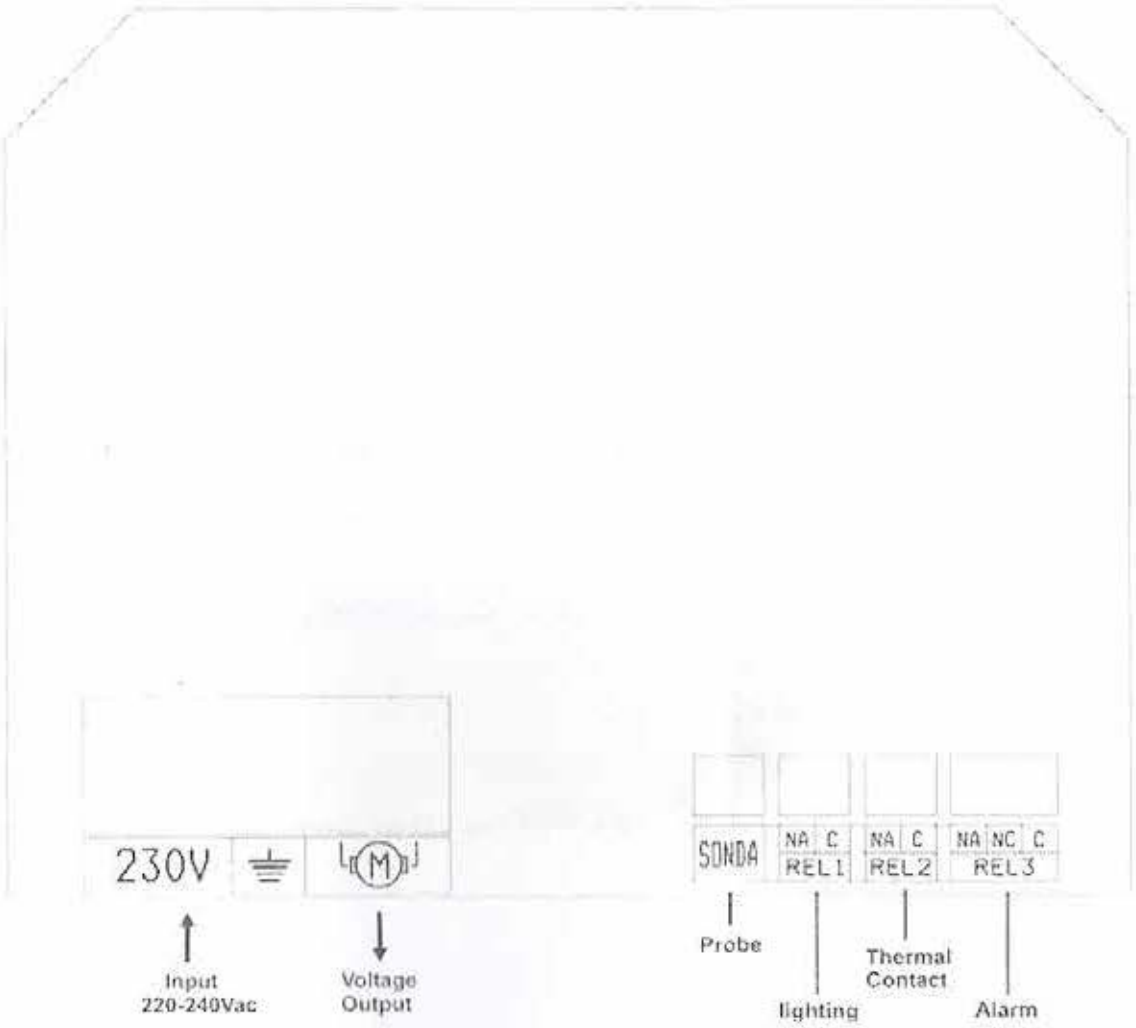
To see the actual time select the option 1 (main options). Once in this option hold the key M pressed. While you are pressing the display will shows the actual time. The internal clock will run even if the controller is disconnected of the electricity.

7. Default values

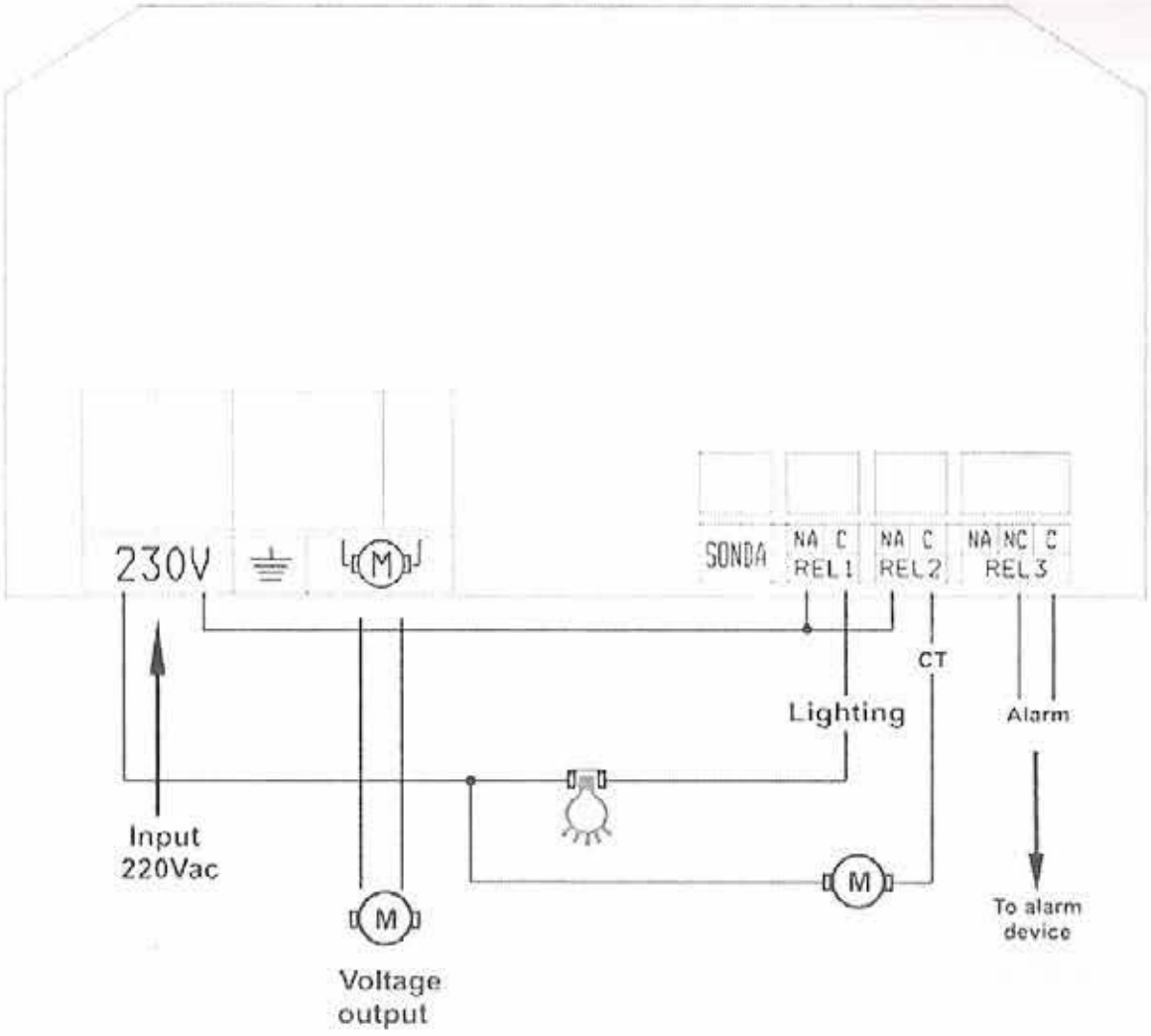
Main options			
	Parameter	**Value**	**Units**
1	Temperature read by the probe		°C
2	Percentage that the motor (output power)is running		%
3	Desired temperature	25.0	°C
4	Minimum speed	1	%
5	Maximum speed	100	%
6	Band width	3.0	°C
7	Thermal contact temperature	30.0	°C
8	Timing program	0	See table
9	Minimum alarm	1.0	°C
10	Maximum alarm	38.0	°C
11	Time 1.ON – Switch ON time interval 1	00.00	HH.MM
12	Time 1.OFF – Switch OFF time interval 1	00.00	HH.MM
13	Time 2.ON – Switch ON time interval 2	00.00	HH.MM
14	Time 2.OFF – Switch OFF time interval 2	00.00	HH.MM
15	Time 3.ON – Switch ON time interval 3	00.00	HH.MM
16	Time 3.OFF – Switch OFF time interval 3	00.00	HH.MM
Configuration option mode			
	Parámetro	**Valor**	**Unidades**
1	Probe adjustment		°C
2	Triac threshold	0	%
3	Triac for Ventilation / Heating	0	See table
4	Thermal contact relay configuration	0	See table
5	Thermal contact Hysteresis	0.5	°C
6	Reserved	------	------
7	Reserved	------	------
8	Thermal contact timing activation	0	See table
9	Alarms control	0	See table
10	Time adjustment		HH.MM
11	Output power running time	00.00	MM.SS
12	Output power stop time	00.00	MM.SS
13	Thermal contact running time	00.00	MM.SS
14	Thermal contact stop time	00.00	MM.SS
15	Reserved	00.00	MM.SS
16	Reset	0	See table

8 Connection diagram

The following diagrams show how to connect the different elements to the DCC.



Connection diagram DCC



How to connect the DCC to other devices