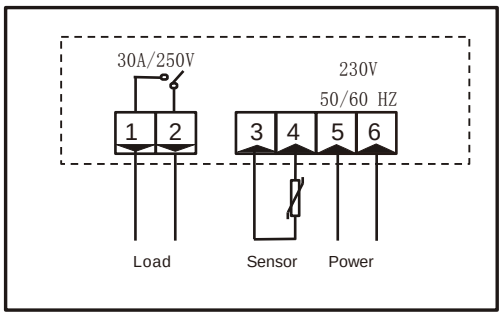
Digital temperature control Cool Heat 230V

Product information

The product uses the latest technology with a LED display. An afforable product that is easy to operate, solid performance, small size and intelligent control, cooling and heating functions that suits different types of needs.

Features:



- LED display
- Button sound
- Silicone-clad buttons
- Temperature is displayed in ℃
- Cooling / heating control

Parameters:

- Temperature measurement and control range: -40 ~ 99 ° C
- Relay capacity 30 A / 250 V
- Power Options: 23 0 VAC
- Input: 1 NTC sensor
- Sensor wire: 2 m (default)
- Accuracy: ± 1 ° C
- Consumption: ≤3W
- Sensor: NTC sensor (1 pc)
- Recess size: 71 × 29 (mm), product size: 77 × 34.5 × 62 (mm)
- Ambient temperature : -10 ~ 60 ° C; moisture: 20 ~ 85%

Installation instructions

- Before use, read these instructions carefully, understand the differences between the various functions nas positions. The load power must not exceed the capacity of the terminal . A nternet have to be made carefully and properly to the terminals.
- V is careful to install the unit in a protected place. It shall not be placed under the dripping water and must be kept away from electronically non Kingdom Apparate r to avoid electromagnetic interference .
- If the device is interfering, turn off the power and restart it.
- Do not open or disassemble the device under any circumstances. If any errors occur or there are questions about the use please contact your supplier.

Code	Function	Setting range	Standard	Unit
HC	Temperature mode, options	C: cooling H: heating	H	/
D	Temperature differential	1~15	2	°C
LS	Lowest temperature setting	-40~	10	°C
HS	Highest temperature setting	~99	40	°C
CA	Temperature calibration	-5~5	0	°C
PT	Compressor Delay	0~15	0	Min.

Turn on and off:

If the device is turned off, press the POWER button to turn on. To turn off, press and hold the POWER button for 5 seconds .

User guide:

Buttons: SET UP ⩓ DOWN ⩔ POWER ⏻

Setting the temperature:

In normal mode, press the **SET** button, which then displays the current temperature one, use the **UP** or **DOWN** button to adjust the temperature. Tip : Press and hold down the button **UP** or **DOWN** for rapid adjustment. After adjustment, press **SET** for 3 seconds to save the new value. The controller then reverts to normal mode, or leave it for 15 seconds, then it returns to normal mode and saves the adjustments.

Setting the parameters:

In normal mode, press **SET** for 3 seconds, the indicator lights turn on and the controller enters maintenance mode. When the code **HC** appears on screen, use the **UP** or **DOWN** button to set the desired mode. H should be selected when the controller is to be used for heating and C for cooling. After adjustment, press **SET** to advance to the next parameter, use the same procedure to set the rest of parameters . **Tip!** hold down **UP** or **DOWN** for rapid adjustment. When done, press SET for 3 seconds. The controller then returns to normal mode. Or leave it for 15 seconds, then it returns to normal mode and saves the adjustments.

Setting the temperature differential (**D**):

This selection determines the temperature at which the thermostat should turn on again after stopping. **Example**: If the set stop temperature set via **SET** is 37 ° C and **D** is selected to 02 then the starting temperature is the difference between these two values or 37 - 2 = 35 ° C.

Lower and upper temperature limit (LS and HS)

LS and HS are used to set the values for the upper and lower limits of the temperature range. **Example**: if LS is +10, HS is +40, then the temperature can only be set between +10 and +40 ° C. If you want to set a value outside these intervals, it must be changed in **LS** and **HS** first.

Temperature calibration (CA)

If it appears that the ambient temperature and the measured value do not match, the temperature control can be calibrated. **Example**: if the measured temperature shows 37 ° C but the actual is 35 ° C then **CA** (calibration) is set to 2 and if the actual is 37 ° C and measured 35 ° C then **CA** is set to -2.

Compressor delay (PE) (Only for use with cooling / heating units)

The controller has a delay function (**PE**) to protect the compressor from repeated and frequent starts and stops. **PE** can be set between 0-15 minutes and if **PE** is selected to 2, the compressor starts up only 2 minutes after the start signal from the controller. Conditions for startup at cooling mode are tremperature selected via **SET** + selected **d** (difference).

Conditions for start-up in cooling mode (C):
Measurement temperature ≥ set temperature (**SET**) + temperature difference (d)

Conditions for stop for cooling function:
Measurement temperature ≤ set temperature (**SET**)

Conditions for stop for heating function (H):
Measurement temperature = set temperature (**SET**)

Conditions for start for heating function:
Measurement Temperature = Set Temperature Temperature Difference (**d**)

Alarm and error modes

If an alarm occurs, icons appear on the display and a beep sounds. If there is no fault on the sensor the error code alternates between displaying the temperature and the error code. If the sensor is malfunctioning, only the error code is displayed.

Alarm on sensor error

When the device is turned on, if the sensor circuit is open, the LED display will blink "_ _", if there is sensor short circuit, "HH" will appear in the display. When the sensor reports the error status, the device will work according to the following cycle: Stop 15 minutes, 15 minutes in progress.

Alarm at maximum temperature or minimum temperature

When the sensor measures a temperature above 99 ° C, the display shows "HH";
When the sensor measures a temperature below -40 ° C, LL is displayed.

Code	Cause	Troubleshooting
HH	Short circuit in sensor or the maximum temperature has been exceeded	Check the temperature where the sensor is located and if the fault is due to short circuit, replace the sensor.
LL	The sensor circuit is open or the lowest temperature has been dropped	Check the temperature where the sensor is located and if the fault is due to short circuit, replace the sensor.
--	The sensor is not plugged in	Connect the sensor wires to the terminals.

Installation procedure for TopSpa XS:

1. Connect the sensor from the digital thermostat to the sensor sleeve before the filtration-/heating unit is put in place.

2. If the heater has its own thermostat, adjust it to the maximum temperature.