



Cannex Technology

# Elf Series Precision Thermostat Controller

CH-601

Simultaneous Control of Heating and Cooling



## Precision Thermostat



### Applications :

Breeding fishery, hatching incubator, orchid room fermentation tank, constant temperature incubator, Laboratory, aquarium, agricultural greenhouse (heating = hot water valve and cooling = exhaust fan) Biochemical technology, medical experiment, industrial (industrial) constant temperature control, cooling machine, Computer host room, other industrial control applications...etc.



### Specification :

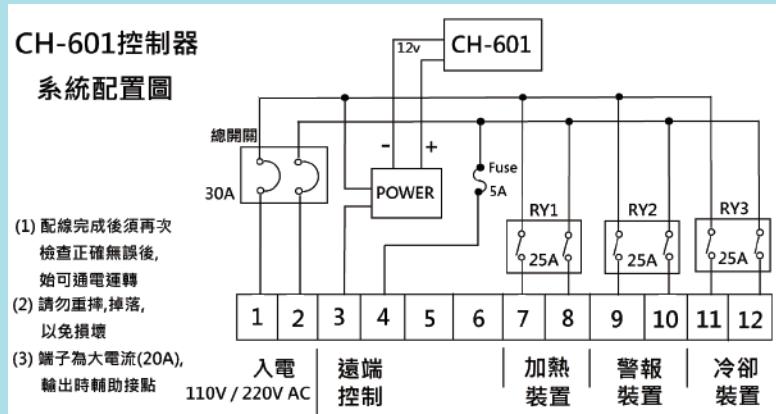
- Input full voltage : 85V~240VAC
- Controller size : 200 x 300 x 170 mm (W x D x H)
- Weight : 3Kg

### Product Usage :

- The control box is free of wiring, directly installed and used immediately, the favorite of engineers.
- Temperature controller - hot and cold dual output : Can control light bulbs, ventilation fans, electric heaters, refrigerators, sprayers, electric valves.

	Parameter	Code name	Factory default	Parameter setting range
1	Temperature difference setting	SEt	30°C	0~80°C
2	Alarm temperature difference setting	Atd	2°C	1~5°C
3	Cooling temperature difference setting	tC	0.5°C	0.5~3°C
4	Heating temperature difference setting	tH	0.5°C	0.5~3°C
5	Temperature correction	tA	0°C	-9~9°C
6	Alarm delay time	Sd	0Min	0~30Min

## Wiring diagram :



## Function operation instructions :

### 1. Specification Setting

CH-601 Thermostat (resolution 0.5 °C) NTC Detectable temperature -9.0~90.0 °C

Parameter Code :

SEt (temperature setting 0~80 °C)  
Atd (Alarm temperature difference setting 1~5 °C)  
tC (Cooling temperature difference setting 0.5 ~3 °C)  
tH (Heating temperature difference setting 0.5~3 °C)  
tA (temperature correction-9~9 °C)  
Sd (Alarm delay time 0~30 Min)

### 2. Instructions

(1) After the installation is complete, plug in the power supply, and the seven-segment display and LED indicators are all on, indicating that the controller is normal.

(2) Parameter setting :

Press and hold the up key for three seconds, the display will display the first parameter setting code SEt, press the up or down key to display the set value, At this time, you can press the up or down key again to set the parameters, and the new set value will be permanently memorized.

Each parameter will automatically switch and appear after three seconds, until it jumps out of the parameter setting.

### 3. Fault Display

- (1) OP : The temperature sensing rod is broken or lower than -9 °C
- (2) SH : The temperature sensing rod is short-circuited or higher than 90 °C
- (3) EE : Abnormal memory

### 4. Parameter Description

- (1) Temperature setting : set the desired but constant temperature.
- (2) Alarm temperature difference setting :  
20 minutes + Sd after controller startup or 20 minutes + Sd after parameter reset,  
Actual temperature  $\geq$  (set temperature + cooling temperature difference + alarm temperature difference)  
Actual temperature  $\leq$  (set temperature - heating temperature difference - alarm temperature difference)  
then the alarm relay is ON.
- (3) Cooling temperature difference setting : when the actual temperature  $\geq$  (set temperature + cooling temperature difference), the cooling relay (compressor) is ON. (Note : cooling (compressor) has 3 minutes delay start protection)
- (4) Heating temperature difference setting : when the actual temperature  $\leq$  (set temperature - heating temperature difference), the heating relay (electric heater) is ON. (Note : The heater has a 30 second delay to start)  
Example : Temperature setting = 30 Alarm temperature difference setting  
= 2 Cooling and heating temperature difference setting  
= 1.5 °C  
then the constant temperature will be maintained between 30 °C +/- 1.5 °C

When the actual temperature  $\geq$  33.5 °C or the actual temperature  $\leq$  26.5 °C, the alarm relay is ON.