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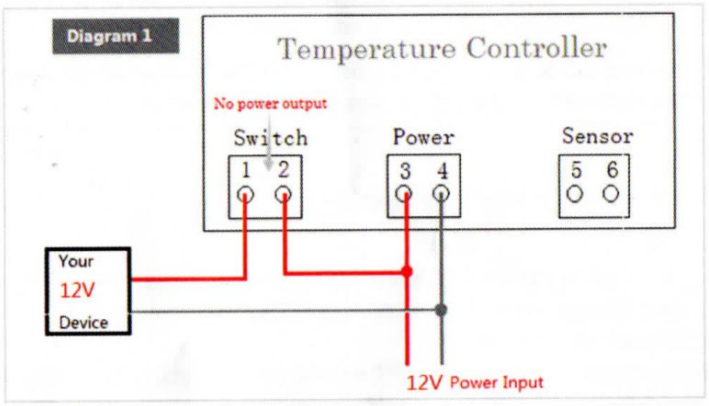
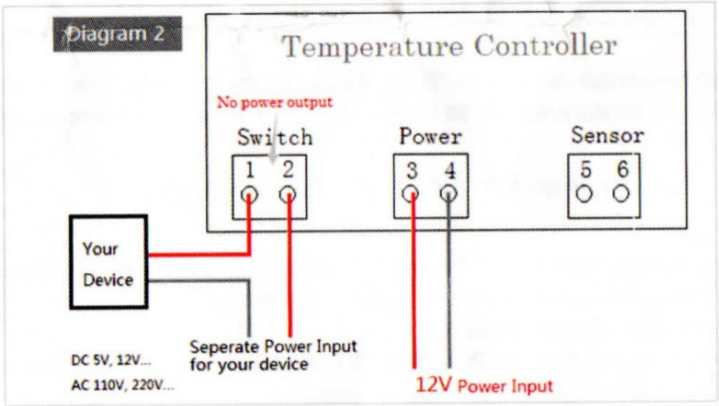
DC 12VDigital Temperature Controller Manual

Model: BAYITE-TCF-3A035

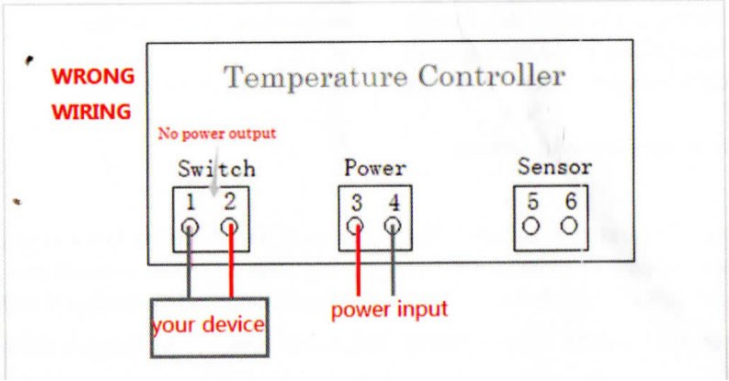
This is the most common wiring method:



This wiring method is for load which is not 12V:



The following diagram is a typical wrong circuit wiring:

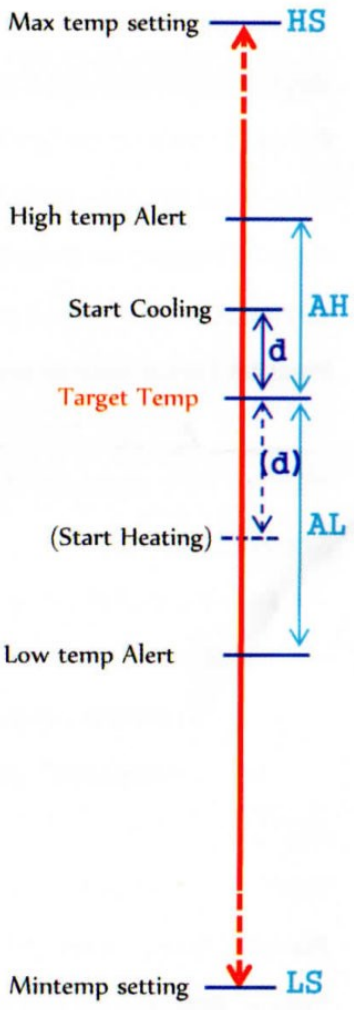


Basic Setting Instruction

The first step is to set a [Target Temperature]. It's your desired turn-off-temp.
Initially, the degree on screen is the current temp that probe detects. **Press SETonce**(SET indicator lights up. The degree on screen is target temp.)**PressUP/DOWN**to adjust target temperature. **Press SETonce again** to save and quit setting(Now the degree on screen is current temp that probe detects)
*The device to be controlled will be**turned off**once target temperature is reached.

Next Step is to set parameters in main menu:

1, Press SET for 3 seconds to enter main menu.
2, Press UP or DOWN button to choose parameter.
3, Press SET to enter selected parameter and specify a value
4,Press SET again to back to main menu and set another parameter.
5, Press**Rst**(or wait 5 seconds) to save and quit setting.



[HC]:H for Heating mode, C for Cooling mode

[d]: Temperature difference.Range from 1 to 25. Default: 1.
In Hmode, the controller **turnson**your device oncedetected temp is below (**target temp - d**) degree.
In Cmode, the controller**turnson**your device oncedetected temp is above (**target temp + d**) degree.
* You can also consider d as temp span between power ON and power OFF.

[AH]: High temp alert(No sound). Range from 0 to 25. Default: 0(No alert)
The screen alternately displays H and measured temperature oncemeasured temp is above (**target temp + AH**)
[AL]: Low temp alert(No sound). Range from 0 to 25. Default: 0(No alert)
The screen alternately displays L and measured temperature once measured temp is above (**target temp - AL**)
*Optional. Use AH/ALonly when necessary.

[HS]: Max target temp limit. Range from LS~230°F. Default: 230°F
[LS]: Min target temp limit. Range from -58°F ~HS. Default: -58°F
*Optional. Use HS/LSonly when necessary.

[CA]: Calibrate temperature reading. Range from -9 to 9. Default: 0
For example, when reading on the controller is 3 degree below real temperature, please set CA=3. When reading on the controller is 3 degree above real temperature, please set CA=-3.
*Optional. Use it only when necessary.

[PT]:compressor timedelay. Range from 00 to 30 minutes. Default: 00 (no delay)
*Optional. Use it only when necessary. It's used for anti-short cycling on compressor. PT guarantees a time interval of a compressor cycle(On-Off). For example, PT=5. Your fridge stopped 3 minutes ago. Although it's now turn-on-temp, you have to wait 2 more minutes before your fridge starts again.

Examples and Practice

To make it work, you only need to set 3 parameters: [Target temp], [HC], [d]. Others are optional.

The first thing is to specify target temp (the point that you want to *turn off* your device).	
HC=H Heating Mode	The load will be turned on once detected temp is below **(target temp - d)** degree. The load will be turned off once target temp is reached.
HC=C Cooling Mode	The load will be turned on once detected temp is above **(target temp + d)** degree. The load will be turned off once target temp is reached.

C(Cooling) mode:[Target temp=80.5 °F] [HC = C] [d = 2.5]

1, Power on the controller
2, Press SET once, set**target temp**=80.5 °F, press SET once again to quit and saving setting
3, Press SET for 3 secs, HC appears on screen, release SET button
4, Press SET once to enter **HC** parameter
5, Press UP/DOWN button to select **C**, Press SET once again and back to HC(main menu)
6, Press UP to select **d**, Press SET once to enter **d** parameter
7, Press UP/DOWN button to specify a d value. In this example,**d=2.5**
8, Press**Rst**once to save and quit setting.

How it works:

- Oncedetected temperatureis above 83 °F(target temp+d), the controller turns on your device
- Once detected temperature reaches 80.5°F(target temp), the controller turns off your device

H(heating) mode:[Target temp=75 °F] [HC = H] [d = 4] [AH = 10][AL = 5]

1, Power on the controller
2, Press SET once, set**target temp**=75 °F, press SET once again to quit and saving setting
3, Press SET for 3 secs, HC appears on screen, release SET button
4, PressSET once to enter **HC** parameter
5, PressUP/DOWN button to select **H**, PressSET once again and back to HC(main menu)
6, PressUP to select **d**, PressSET once to enter **d** parameter
7, PressUP/DOWN button to specifya value. In this example, **d=4.** Press SET once again and back to main menu
8, PressUP/DOWN button to select AH, PressSET once to enter AH parameter
9, Set **AH=10**, PressSET once and back to main menu
10, PressUP/DOWN button to select AL, PressSET once to enter AL parameter
11, Set **AL=5**
12, Press**Rst**once to save and quit setting.

How it works:

- Once detected temperature is below71°F(target temp-d), the controller turns on your device
- Once detected temperature reaches 75°F (target temp), the controller turns off your device
- Ifthe heater heats it up to 85 °F (target temp + AH), screen alternately displays H and measured temp.
- If detected temp is below 70 °F (target temp - AL), screen alternately displays L and measured temp.

Specification:

- Setting data can be stored after power off
- Power supply: DC 12V
- Control range: -4°F~220°F
- Temperature difference between ON and OFF:
- Control resolution: 1°F (turn on/off at integer degree such as 35°F, 90°F...)
- Measuring(reading) resolution: 0.5°F
- **Max load: 10A**

Keys Operation Instructions:

Press**SET** button once: Set Target Temperature(device turn-off-temp), after you specify a target temp, you must **press SET once again to quit** before other operations.

Press **SET** button for 3 seconds: Enter main menu.When the parameter you want to set appears on the screen, press SET once to enter and specify a value. After that, press SET again to back to main menu.

Press**Rst** button once to save and quit setting

Press **Rst** button for 3 seconds: Turn off the controller. Press **Rst** again to turn it on.

Please flip the paper and check the more instructions about how to program the controller.

Safety Warnings:

- Please cut off power when you're wiring the controller
- **Rated Current of this controller is 10A.** It's important to check out Amps and Watts of your device in order to prevent danger of fire caused by overloading.
- **Rush current of refrigeration equipment should be less than 10A.**

LED Status:

The "work" light at the left side of the screen indicates working status.

Flashing "work" light indicates you set a delay time and your device will be turned on after the delay time.

"Work" light on indicates your device is working.

Trouble Shooting:

- **Display EEE** : The sensor is disconnected or defective.
- **Display LLL**: The temperature is below the minimum value that this controller can measure
- **Display HHH**: The temperature is over the max value that this controller can measure
- **Can't change target temperature**: Please enter main menu, check the value of HS and LS. The 2 codes define the range that target temperature can be set. Please just set it to default if you don't need it. This is usually used to avoid wrong setting in very important project.