Description

The controller is suitable for automatic control of DC fan speed with temperature when the 12V current is not greater than 0.8A.

Parameters

Parameter	Value
Operating voltage	DC12V can work in 9-14V range
Fan interface	2510-3P bend (pin spacing 2.54mm)
Fan current	Less than 0.8A
Protection	Input reverse connection protection. No output overload protection!!! Please note that the output should not be short circuited or overloaded
Drive output range	5% -100 part fan low output may not turn, please adjust the fan can start the use of position
Operating temperature	-20 Celsius to 60 Celsius
Temperature probe parameters	NTC 50K B=3950
Probe temperature	Small black head 120 degrees Ring probe 110 Celsius
Board size	43mm*18mm*9mm (excluding extended interface) Fan interface extends 8mm
Setting parameters default factory	Low speed 20%. Acceleration temperature 30. Acceleration width 5. Do not shut down the output. At this temperature setting, holding the probe with the palm of the hand will accelerate in a few minutes. If the probe is clamped into the armpit, it will reach full speed in 2 minutes.

Components

1	Input line: red black power line is only welding 12V positive and negative power cord, as a general use. The three wire connector is equipped with a 2510-3P plug, which is used to measure the speed of some main board three wire fan ports. Large 4P interface facilitates power acquisition from chassis.
2	temperature probe: small black line's head is short, low heat capacity. It is suitable for testing narrow space and air temperature, and the response is relatively fast. The ring probe is enclosed inside a ring metal head with a diameter of 4.2mm. It is suitable for mounting on the radiator or other heating object surface with screws.

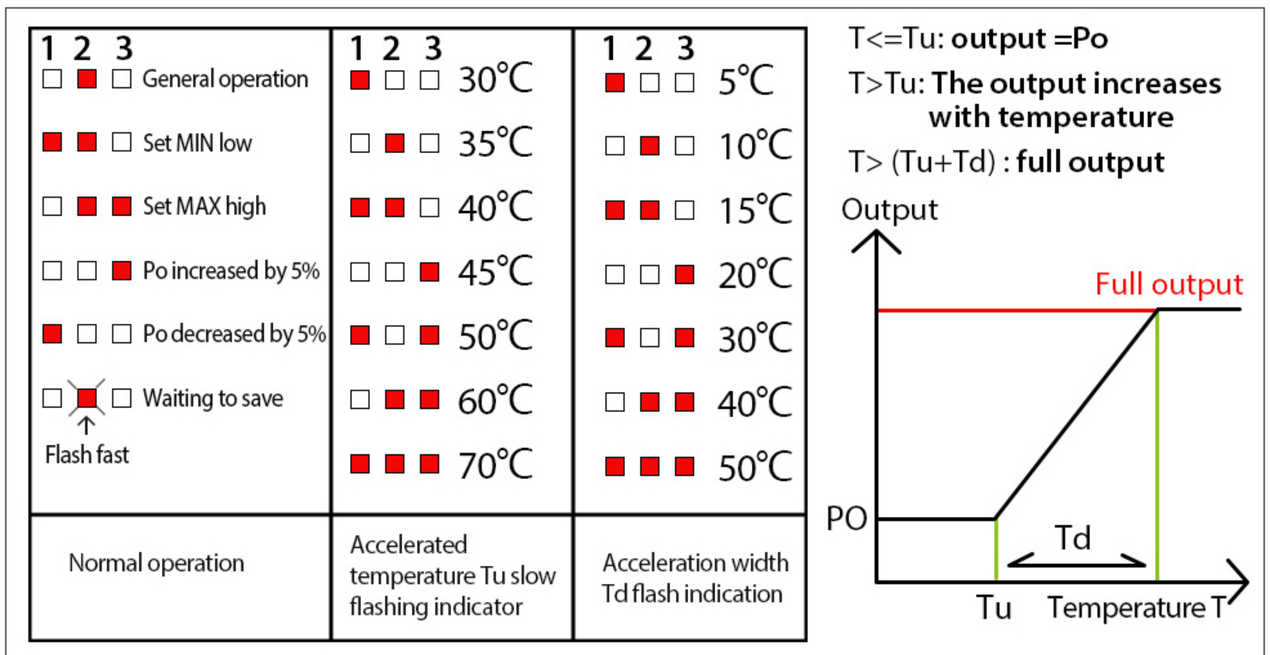
Features

1	12V 2--3 line fan temperature speed controller
2	Manual automatic integration control output without pulse
3	Noiseless and non burning fan
4	MCU control is precise and gentle
5	Set auto save and shut down Fan

Manual automatic integration control

1>. Manual control without temperature probe. Click / double-click (double-click speed not too fast) button up / down gear. Each shift continues after 20 seconds, and the gear is automatically stored. The No. 2 indicator flashes rapidly in 20 seconds (when the temperature control is invalid). When the flash is stopped, it indicates that the file has been stored. The 3 / 1 indicator light is always on when you can not continue to increase / not continue to reduce the position.

2>. When the temperature probe is installed, the manual speed is used as the initial low speed (bottom line speed). When the temperature exceeds the accelerating temperature, the fan speed accelerates smoothly with the increase of temperature.
When the temperature reaches and exceeds the sum of the acceleration temperature and the acceleration width (full speed temperature), the fan runs at full speed.
Set the acceleration temperature and acceleration width parameters as shown in the schematic diagram below. The number 123 represents the indicator light on the board (red) and the (white) state is displayed in binary order:



Normal operation:

Click the button bottom line output increased by 5%. Double click the bottom line to reduce output by 5%.

After changing the value, run for 20 seconds. Automatically save the parameters until the intermediate indicator stops flashing. Enter the temperature control setting by long press button.

Temperature setting state:

speed setting (slow flash), click and double-click to set up the value, and then enter the acceleration width setting.

Acceleration width setting (flash), click and double-click to change the value, then press save and exit the temperature settings.

Note: if you do not operate in the set state for 20 seconds, then automatically exit the settings, do not save parameters.

3>.Fan shutdown strategy setting:

First, power off and remove the fan. Press the set button to electrify the controller. Keep the settings button always hold (about 3 seconds) until the three lights turn into double flash state and then release the button.
The indicator lamp turns into a single light, which represents the entry mode setting state.

The controller is divided into three kinds of working modes, corresponding to 1, 2, 3 indicator light double flashing, through short press button switch, set the long, press the button to save and exit the set mode and automatically back to normal working state. The three working modes are as follows:

1. Do not shut down the output.
2. Shut down output below 2 Celsius acceleration.
3. Shut down output below 5 Celsius acceleration.

Example instruction

Set the acceleration temperature of 35 degrees Celsius, accelerate the width of 10 degrees Celsius, shut down strategy mode 3 (lower than the accelerating temperature of 5 degrees Celsius shut down). After this setting, when the power supply is lower than 35 degrees, the fan does not turn. When the temperature rises to 35 degrees centigrade, the fan starts according to manual setting. The temperature continues to rise, the speed of the flat acceleration, reaching and above 45 degrees Celsius, the fan full speed. When the temperature drops to 35-30 degrees Celsius, the fan always operates according to manual setting speed, below 30 degrees fan stops.

Note that the fan shut down strategy is controlled by the hysteresis mode, which can effectively prevent the fan repeatedly switching near the critical point. For example, after the above settings, the temperature rise to 35 degrees Celsius, start the fan, cool down below 30 degrees Celsius, turn off the fan.

Warm tips

Because most fans operate at low output, they cannot be started. So when setting the minimum speed of temperature control, should be adjusted to the minimum, and let the fan stop by hand. And then, step by step, high output until the fan starts up. After the actual settings, do not lower than this position, otherwise the fan may not start at low speed.