Handson Technology DRV1017 2-Channel 4-Wire PWM Brushless Fan Speed Controller Instruction Manual

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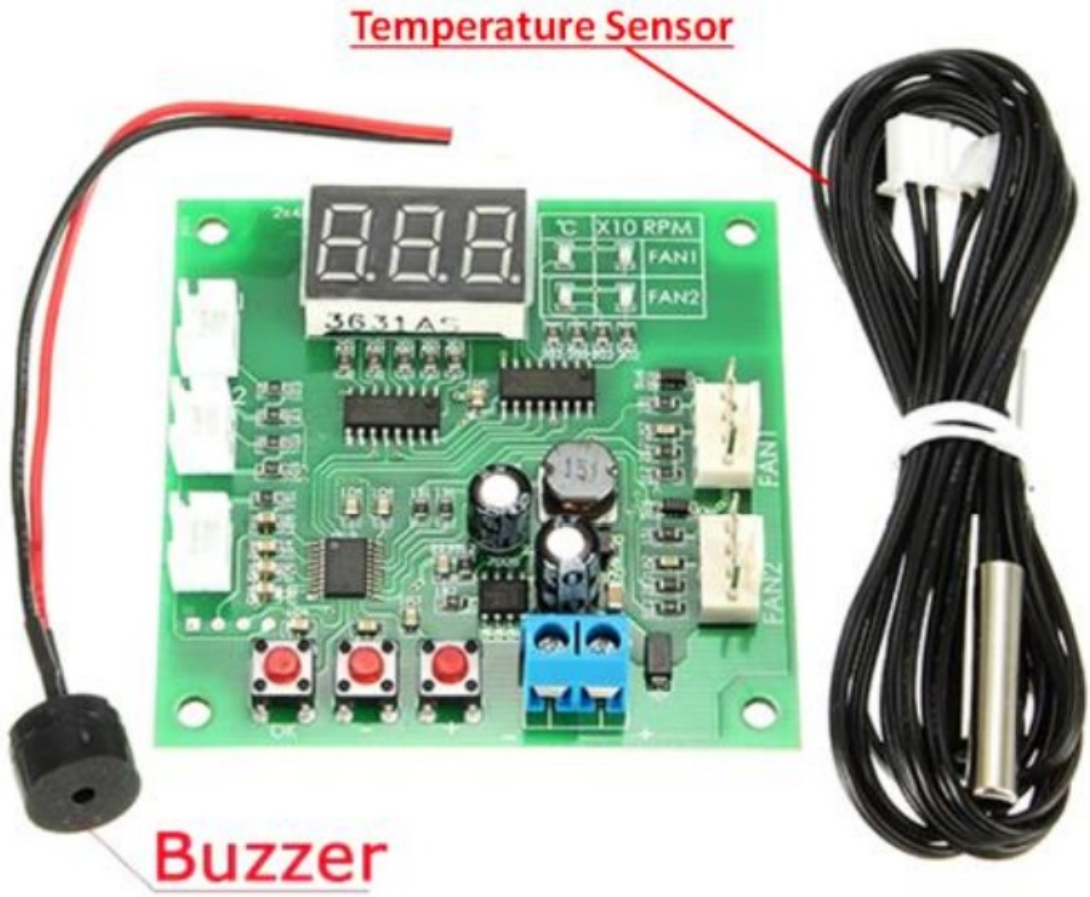
Contents

Introduction

This is a four-wire PWM fan speed controller that can control fans speed that comply with the Intel 4-wire fan specifications. This versatile 2 channel fan speed controller is with temperature sensor to regulate the fan speed according to preset temperature. Easy read out fan speed and temperature with 7-segment LED display.



SKU: DRV1017

Brief Data

- Operating Voltage Range: (8~60)Vdc.
- Number of Control Channel: 2.
- Fan Type: 4 Wires Intel Specification Compatible.
- Temperature Probe: NTC 10KΩ B = 3950.
- Display: 3-Digits 7-Segment LED Display.
- Speed Measurement: 10~9990 RPM. 10RPM Resolution.
- Temperature Measurement: (-9.9°C ~ 99.9°C) ±2°.
- Buzzer Alarm for Fan Stop Warning: <375RPM
- On Board Fan Current Limit: 3A Max.
- Board Dimension: (65×65) mm.

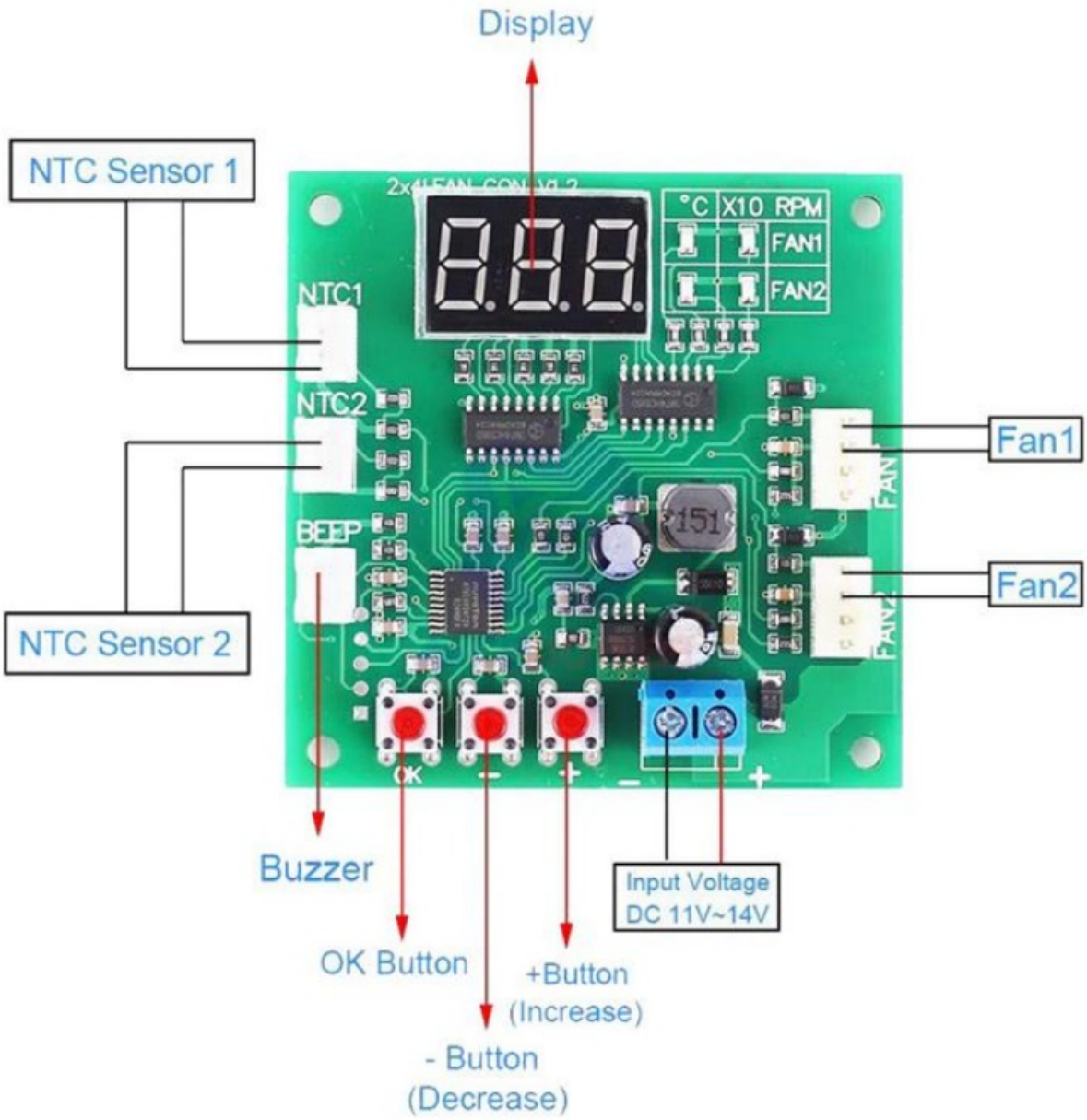
Package Include

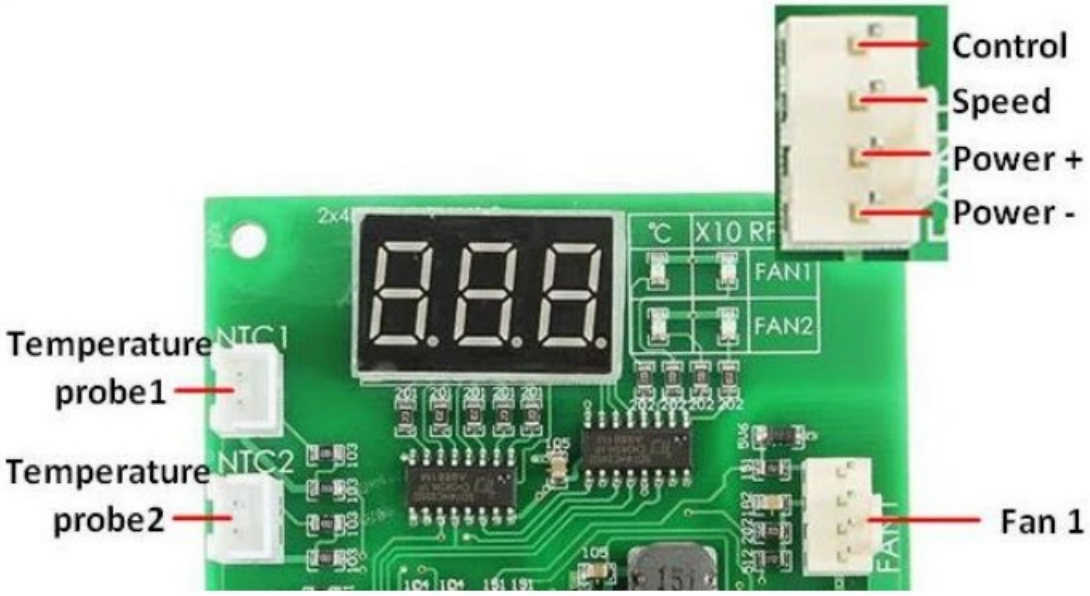
1. 1x Controller Module.
2. 2x 1Temperature probe.
3. 1x Buzzer.

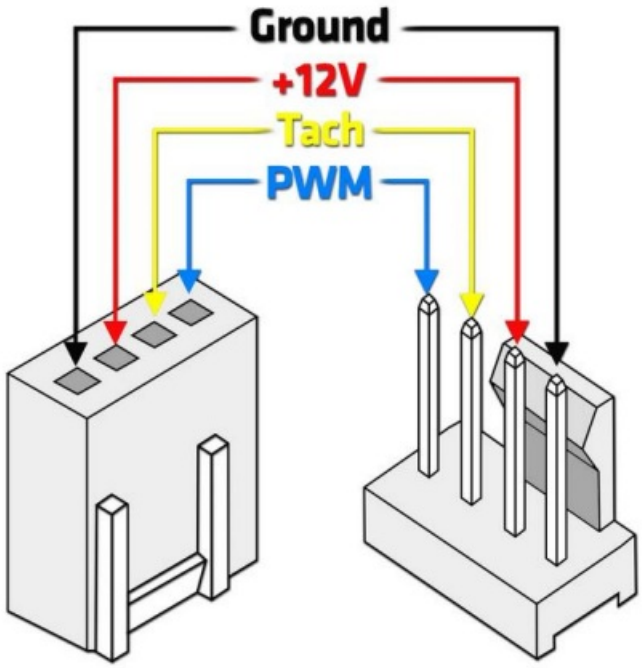
Mechanical Dimension

Unit: mm

Functional Diagram

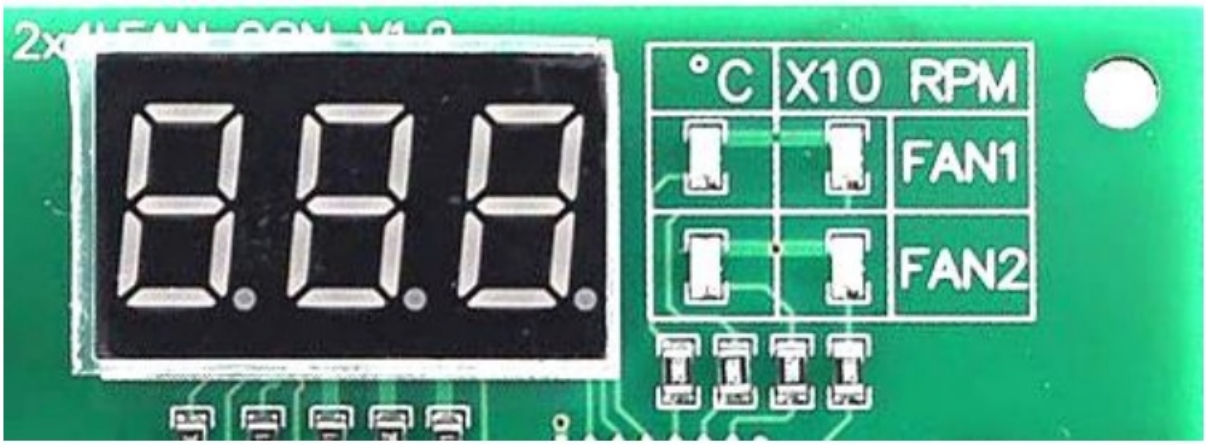

Display
NTC Sensor 1
NTC1
NTC2
BEEP
NTC Sensor 2
°C X10 RPM
FAN1
FAN2
Fan1
Fan2
OK
Buzzer
OK Button
+Button
(Increase)
- Button
(Decrease)
Input Voltage
DC 11V~14V


Control
Speed
Power +
Power -
Temperature probe1
Temperature probe2
NTC1
NTC2
°C X10 RF
FAN1
FAN2
Fan 1



Pin Name	Function
PWM	Pulse-Width-Modulation Speed Control Input
Tach	Tachometric Speed output Signal. 2 pulses/revolution.
+12V	Power Supply
Ground	Ground

3-Digit and LED Indicator Description



This module displays the control value through the 3-digits 7-segment LED display. The four LEDs indicator on the right side of the 7-segment LED display indicate the current value of temperature and speed of the fans. Top row of the LEDs indicator (FAN1) represent the temperature in C and speed (x10rpm) of fan on channel 1. Bottom row of the LEDs indicator (FAN2) represent the temperature in C and speed (x10rpm) of fan on channel 2. In normal working state, the fan speed and temperature values will be displayed in sequence. You can manually and quickly switch the value at any time by pressing the “+” and “-” buttons. The display of channel 2 can be disabled as required.

Setup Instructions

1. **Basic Constant Speed Mode:**

   The basic speed setting is used to adjust the fan speed before the temperature control starts, that is, the constant fan speed when the temperature is lower than the acceleration temperature. The setting method is to press the “OK” button in any working state. The top row 2 LEDs indicator will all light up, the 7-segment display will show 10~100. Adjust the fan speed with +/- button to set fan speed. Long press the button to quickly and continuously modify the setting. Press the “OK” button to enter the basic speed setting of channel 2, use the same method to set the value and press the “OK” button again to save and exit. The fan will run at this set speed before enter the “acceleration speed” control mode.

2. **Acceleration Temperature Control Mode:**
   1. In normal operation condition, press and hold the “OK” button until it displays L** (** is numeric figure), then release the button. The two LEDs indicator in the top row of “FAN1” will all light up representing the current acceleration temperature setting state of FAN1.
   2. Adjust this value through the “+” and “-” buttons (range 5-94, unit Celsius) for lower temperature setting and press OK button.
   3. Follow OK button in step-2, will enter the FAN1 full-speed temperature setting, it will displayed as “H**”. Adjust the temperature for FAN full speed and press OK button.
   4. Press the “OK” button to enter the channel-1 alarm setting. Use “+’ and “-“ button to toggle the buzzer alarm. Buzzer alarm will sound if the fan speed is below 375RPM. “boF” (Buzzer Off) > means to disable alarm for this channel, “bon” (Buzzer On)> means to enable buzzer alarm of this channel. Confirm the setting by pressing the “OK” button to enter the setting for channel-2. Follow the sequence on Channel-1 to set the parameter for Channel-2. When the above settings are completed, press the “OK” button to exit and save the parameters.
   5. **Turn Off Channel-2 Display:**
      1. Power Off the control module.
      2. Keep pressing “OK” button and power on the control module and release the button.
      3. The display will show “2on” (channel-1 and channel-2 enable) or “2oF” (Channel-1 enable,Channel-2 disable).
      4. Use “+” or “-” button to toggle the selection and press “OK” button to save the setting and exit.
      5. Controller will enter to normal working condition.

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Documents / Resources

	Handson Technology DRV1017 2-Channel 4-Wire PWM Brushless Fan Speed Controller [pdf] Instruction Manual DRV1017, DRV1017 2-Channel 4-Wire PWM Brushless Fan Speed Controller, 2-Channel 4-Wire PWM Brushless Fan Speed Controller, 4-Wire PWM Brushless Fan Speed Controller, PWM Brushless Fan Speed Controller, Brushless Fan Speed Controller, Fan Speed Controller, Speed Controller, Controller

References

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- Breakout Boards & Modules – HandsOn Tech
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- Electronics Components – HandsOn Tech
- Engineering Material – HandsOn Tech
- Mechanical Hardware – HandsOn Tech
- Power Supply – HandsOn Tech
- Tools & Accessories – HandsOn Tech
- HandsOn Tech – Open Source Electronics Platform
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