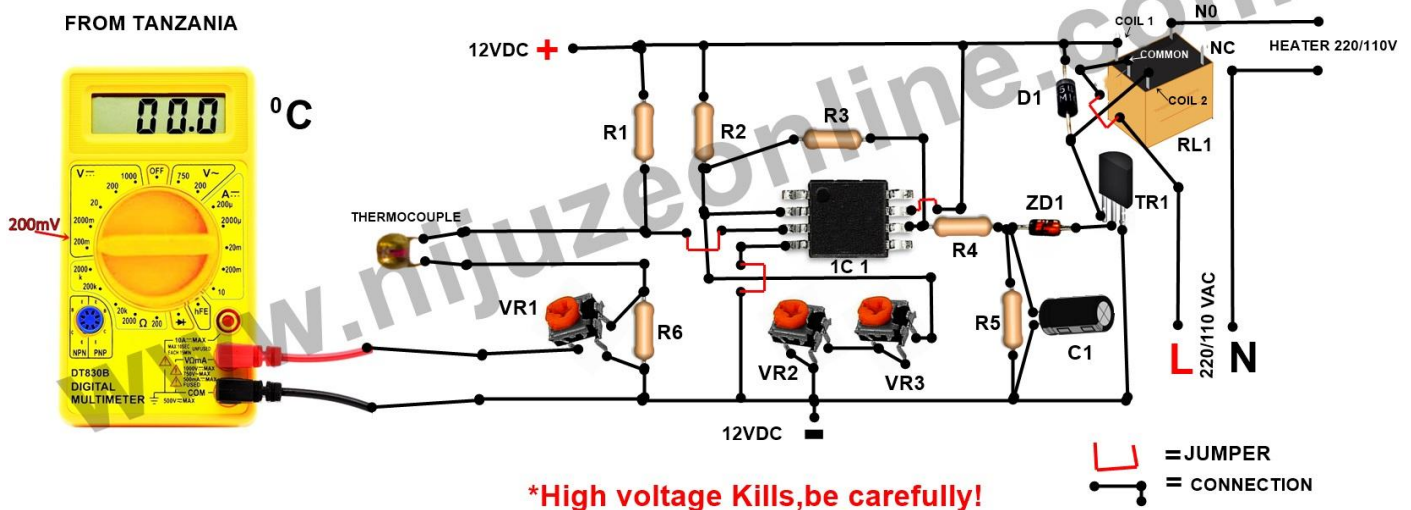


NORMAL MULTIMETER AS TEMPERATURE CONTROL

Simple DIY circuit, but very perfect.

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ABOUT THE CIRCUIT

-Temperature Control Device (TCD) is single bit digital temperature control device which mechanically turns the relay ON and OFF as the result of temperature change.

- It uses normal digital multi meter as temperature reading screen.

- This circuit designed to control temperature in areas where the constant temperature is required throughout, or where the temperature must not exceed or decrease certain temperatures range, such as in incubator machines, machine, refrigerators, rooms, drying machine, etc

-The circuit above can switch load up to 1000 Wattage of 220/110 Vac ,but you can increase the load driving ability by replacing relay with the big one (high current switching relay)

-This circuit can also be used to switch very high voltage and high current devices if it connected to high current conductors which will be switched on by relay. (as version two shows)

SETTING AND CARIBRATION

- A. Select multi meter to 200mV and switch on the circuit.
- B. Hold TC within your armpit for about 10 minutes, then twist VR1 until the Multi meter reads to 36.8 (this will be the real voltage of the world setting).
- C. Release the TC from your armpit and leave it to the surrounding, now the reading will start to copy with the surroundings temperature, the readings to your multi meter will either increase or decrease depending the surrounding temperature.
- D. First move TC close to the any other source of temperature(if it is warm the reading will increase and vice versa) where it cut across your desiring set
- E. When the reading reach the point of your desiring set twist VR2 until the relay switches(repeat the action until you get closer to the point of set.
- F. When you get cutting point exactly of what you want Eg. 3.7 centigrade for chicken eggs incubator, just glue the VR2,
- G. VR3 will be used to set cutting point to the exactly point if VR2 didn't get to exactly point (VR3 is use for further fine setting)
- H. Temperature switching range of this device is between 0 up to 100 degrees of centigrade (depending on temperature set on the VR2 and VR3)
- I. The difference between ON and OFF is 0.5 degree of centigrade of certain range

For example if you limit temperature to 38.5,the device will turn OFF when it reaches 38.5 centigrade and turn ON when temperature drop to 38.0 centigrade
- J. You can vary R5,to increase or decrease the interval between ON and OFF

HOW IT WORKS

1. When the circuit turns on

- if the surrounding temperature where TC is fixed is below the set temperature), Relay switches ON and allow 220/110 voltage to flow to the output (or any device connected to the output side)

- When surrounding temperature where TC is fixed is goes higher than the set temperature), Relay switches OFF and cut 220/110 voltage to flow to the output (or any device connected to the output side)

-The processes is endless.

VIDEO FOR THIS CIRCUIT ON YOUTUBE

https://www.youtube.com/watch?v=yJuMXVm6_W4

<https://www.youtube.com/watch?v=QvwL3O-sUKQ>

<https://www.youtube.com/watch?v=vnBfQIGR4Lw>

FOR ANY QUESTION/CONTACTS

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