

Line Voltage Thermostat for Your Heat Strips

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If you have a heat strip in your AC, this will be the best 20 bucks you ever spend
Many of the roof AC units that are on our coaches have, or can have, a 1500W heat
strip installed. These are touted as ‘take the chill off those cool mornings’. To my
knowledge, all of these are either on or off.

We have an all electric coach. However, even when we didn’t we did not use our
furnace at night because we don’t like the sound of it coming on or off. Yes, we
don’t live in the frozen north but even you folks who do don’t always camp in cold
weather.

Our problem was that once we got ready for bed, we’d leave the heat strip on and
wake up hot. Or leave it off and wake up cold. Plus we like the white noise.

Here is the solution we came up with, a line voltage thermostat.

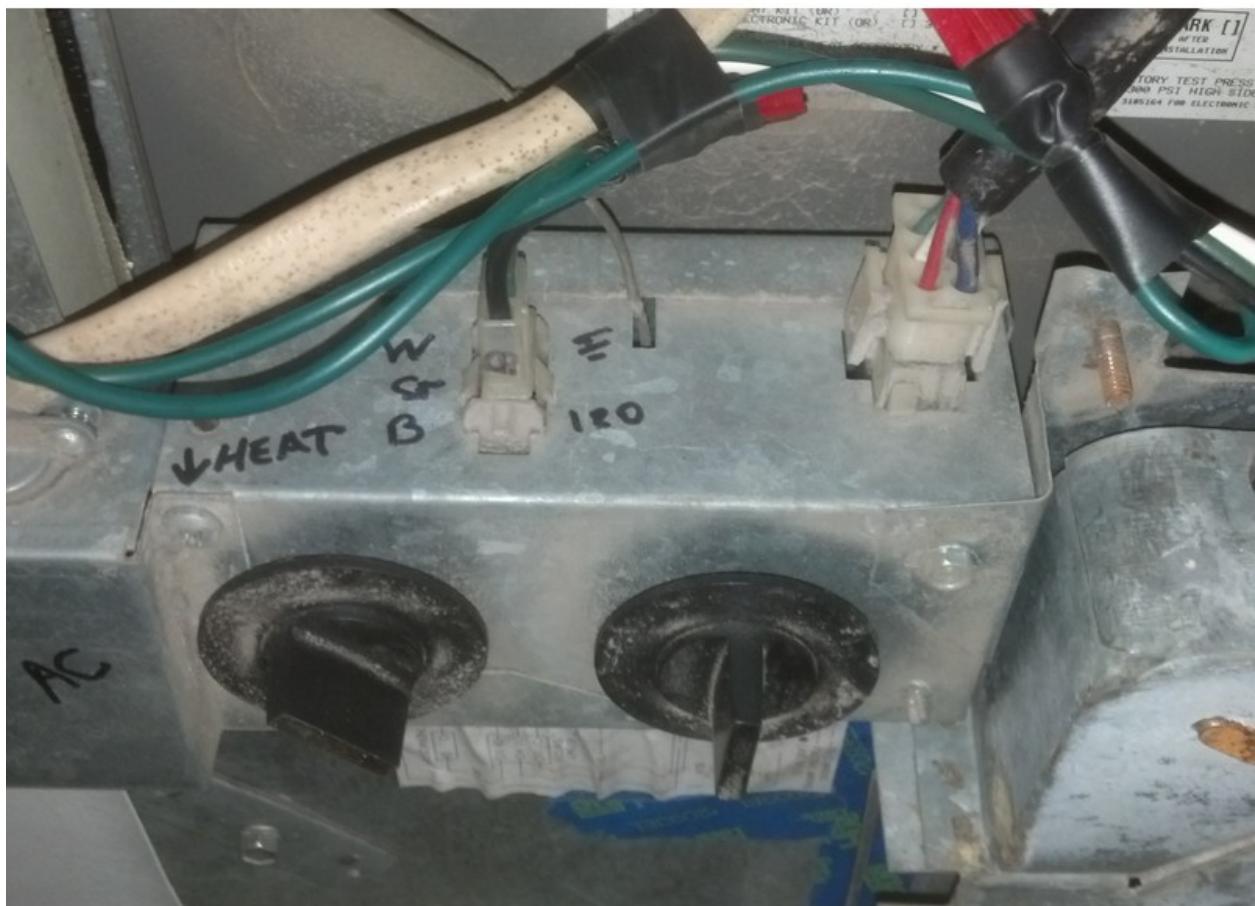


They are all over the internet for less than 15 -20 bucks with free shipping. They are sometimes called baseboard thermostats.

Basically, it's just a thermostatically controlled switch that opens or closes based on setting and temperature. It has only two wires.

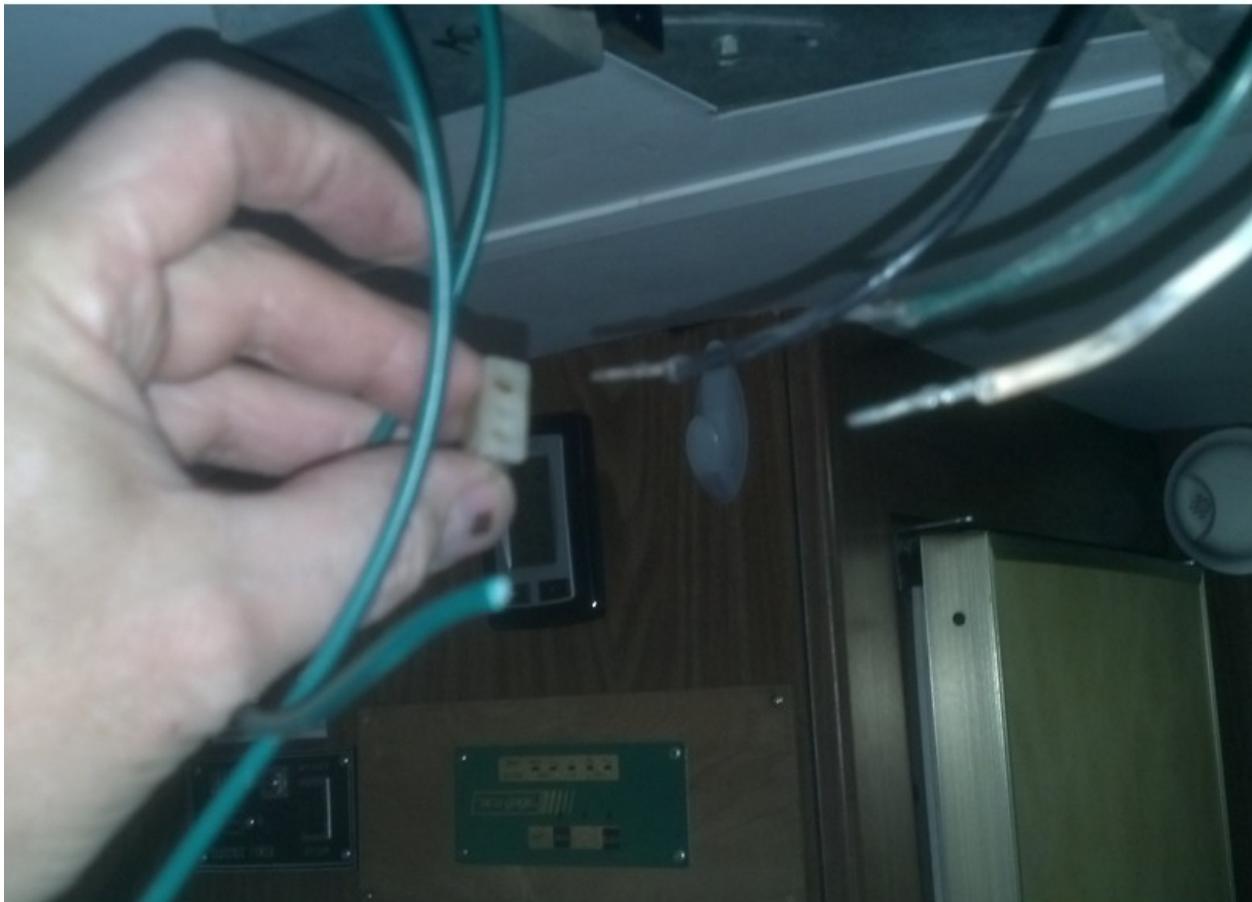
Now this will require some electrical work so if you don't feel comfortable working with 120V, get someone else to do it. I don't work on 120V hot if I can avoid it so be sure to make sure the unit is disconnected from power. **CHECK IT WITH A METER.** 120V can KILL you D.R.T.

Basically all you need to do find your hot leg, normally the black wire, and decide where you want to cut it. On our BriskAire II, once the cover is removed, this is what the plug for our heat strip looks like:



(take the opportunity to vacuum out the unit... ☺)

I probed the connector to determine which was the ‘hot’ leg. It was, and should be, the black wire but always check it. To install the line voltage thermostat, you simply cut the hot leg (black wire) and splice one of the black wires from the thermostat to each side of the cut hot leg. That’s it. Obviously, you need to follow safe practices and make sure your splices are good and well insulated.



Once you’ve got the wires hooked up, you can test the thermostat. Put the AC switch in the on position of the heat strip and turn the thermostat to the off position. The fan will come on the AC unit but no heat will come out. As you rotate the thermostat knob, you’ll hear a click and the heat strip will come on. These things are not calibrated so you’ll have to learn where ‘comfortable’ is to you. In the above photo, the green wires are temporary and I replaced them with black from the line voltage thermostat.

So where do you put it?

Because my ceiling was already in, I just screwed the unit beside the AC on the ceiling by the return air inlet and fished the wires over to the unit.



This means that the thermostat will ‘read’ the temperature being pulled into the unit. Because the fan runs all the time, we have constant white noise and air movement that helps us sleep.

Here is a close up of the cover.



That's it. You can mount it wherever you want. Best 20 bucks you'll ever spend.