E4.5 Design and test a points heater input

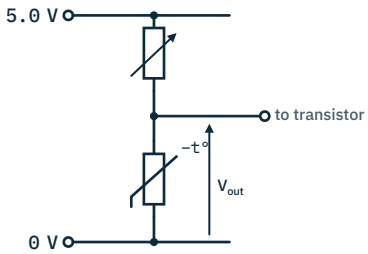
TASK

Build your designed divider in CircuitClass. Test it either side of 2 °C.

YOU NEED

- ☐ CircuitClass · circuits mode
- ☐ Thermistor table or graph
- ☐ About 20 minutes

1 · Build your design



Points heater input

1. 5 V battery: long plate (+) to the top rail.
2. Variable resistor at the top, set to 184 kΩ.
3. Thermistor at the bottom.
4. Voltmeter across the thermistor: V_{out}.

2 · Expected results

Before you test, write what V_{out} should do.

3 · Test

Temperature	Predicted V_{out} (V)	Measured V_{out} (V)	Heater on? (≥ 0.7 V)
-2 °C			
0 °C			
2 °C			
5 °C			
10 °C			

NO TEMPERATURE CONTROL?

Replace the thermistor with a resistor set to the graph value for each temperature. Label it 'thermistor (simulated)'.