THC-202

Temperature & Humidity Controllers

THC-202 is a programmable temperature and humidity digital controller with dual check for both temperature and relative humidity.

Overview

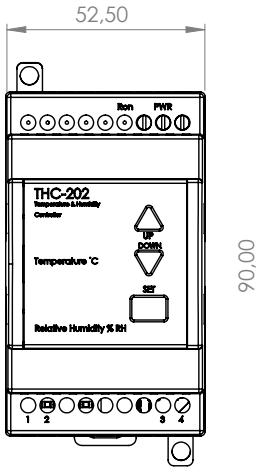
The THC-202 is designed to control temperature and humidity through a heating resistor to prevent high humidity or low temperature levels. The device is equipped with an internal sensor, a relay output and two display. Its relay is programmed to be activated where ambient temperature is less than set temperature or ambient relative humidity is higher than its set value. If it is cold or there is high relative humidity, device will activate heating resistance by means of its relay and temperature will increase also relative humidity will decrease related with temperature.

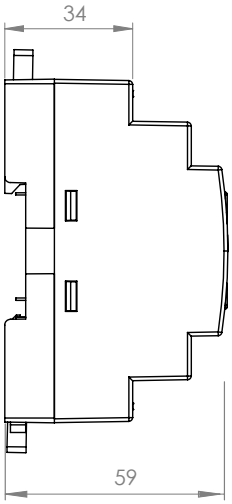
Technical Parameters

Rated Frequency Range 50 – 60 Hz	**Operating Temperature** -25°C – +65°C	**Contact Ratings** 7A / 240VAC
Setting Method Digital	**Operating Humidity** 10-90%RH (No Condensing)	**Dimensions** 52.5 x 90 x 59
Setting Range 0-60°C 10-80%RH	**Storage Temperature** -40°C – +85°C	**Installation** 35mm DIN rail EN50022
Default Set Values 30°C / 60 %RH *	**Storage Humidity** 5-95%RH	**Weight** 125gr
Default Hysteresis +5°C / 5%RH	**Auxiliary Power Supply** 100-240VAC	**Connection Screw** Screw, 15 to 12 (AWG) wire
Tolerance ±5%RH, ±2.5°C	**Power Consumption** Less than 3W	**Protection Class** IP20
Response Time 15s	**Insulation Level** 2kVAC / 60s	

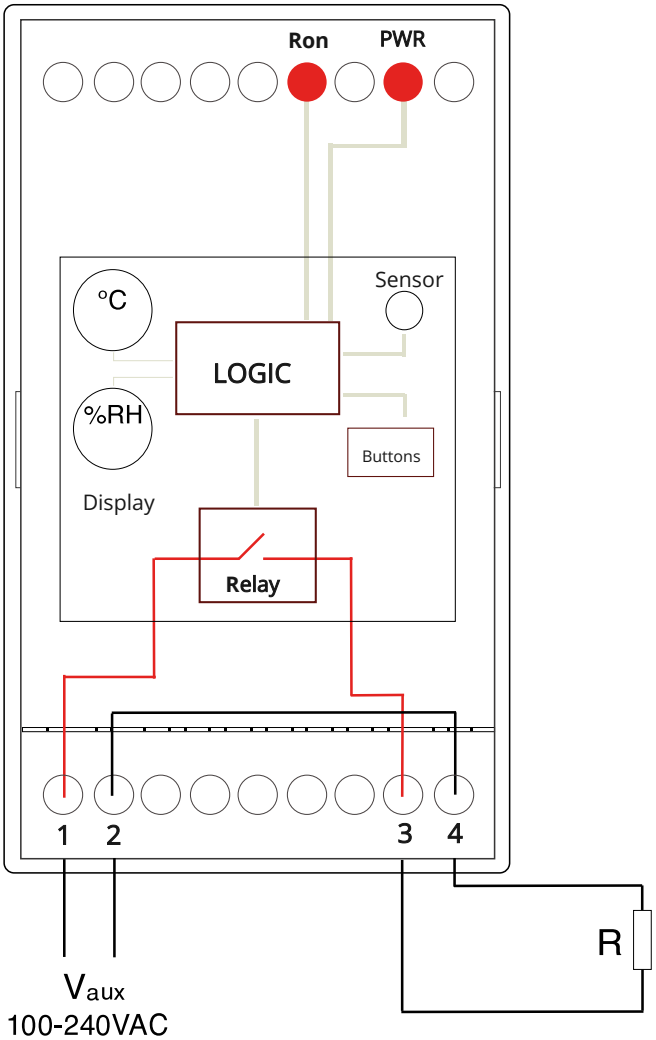
* Further values available upon request
** Tolerances may differ for the first 30 minutes up to additional +3°C and -5 %RH if the device restarts while operating (manually, power outage or etc..) until the device reaches its steady state operation again.

Technical Drawings





Connection Diagram



Hysteresis

A hysteresis is defined for both temperature and relative humidity settings to prevent the relay state from changing frequently with small fluctuations. Since the main purpose of the device is to prevent low temperatures and high humidity, the temperature hysteresis is positive, while for relative humidity it is negative. For example, if the temperature is set to 30°C and the environment is lower than that, the relay output will stay on until the temperature reaches up to 35°C. Also, if the relative humidity is set to 60% and the ambient humidity is higher than that, the relay will stay on until the relative humidity is reduced by 55%.

Configuration

Ambient temperature and relative humidity are displayed on device and set values are adjustable by three buttons. To enter settings menu, press “SET” button for 3 sec. and the temperature display starts to blink and shows the set value. Use the "UP" or "DOWN" buttons to increase or decrease this value. Press the "SET" button again to confirm the value, or wait for the blinking to stop. To adjust the relative humidity threshold, press and hold the "SET" button for 3 seconds to enter the temperature setting mode, then briefly press the "SET" button again once the temperature value begins blinking. The relative humidity setting will then blink and can be adjusted in the same manner using the "UP" or "DOWN" buttons. For rapid adjustments, press and hold the "UP" or "DOWN" buttons to quickly increase or decrease the values in single-step increments.