



THC-102 is a programmable temperature and humidity controller with dual check for both temperature and relative humidity.

Overview

THC-102 is designed to control temperature and relative humidity by means of a heating resistance in order to prevent high humidity or low temperature levels. Device is equipped with two analog inputs to set threshold values and a relay output. 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 the temperature will increase also relative humidity will decrease related with temperature. LED indicators are placed upper part of the device to show status of Vaux and Rout. Relay switches Vaux directly to Rout, so it is important to be aware that the heating resistance should be connected directly to the device, and there is always line voltage at Rout when the relay is ON. In case of a connection error of the sensor, the LED indicators flash periodically.

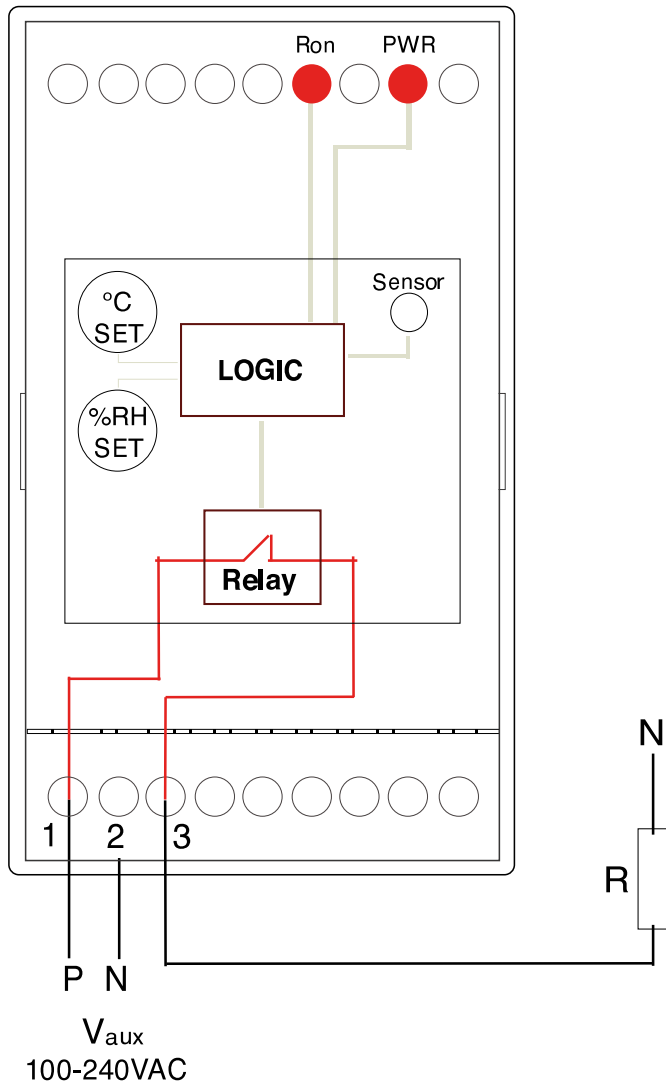
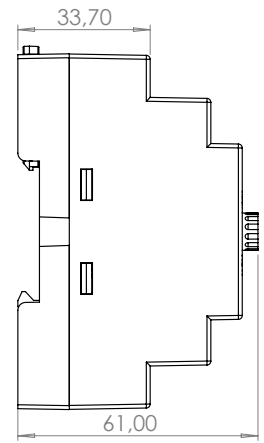
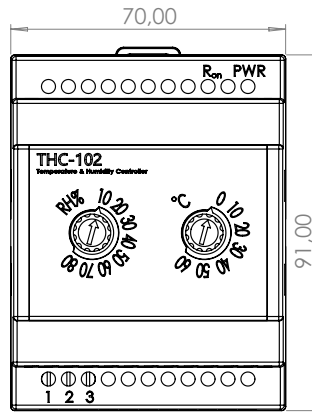
Technical Parameters

Auxiliary Power 100-240VAC 50/60 Hz	Response Time 15s
Power Consumption 2W	Operating Temperature/Humidity -25°C to +65°C / 10-90%RH (No Condensing)
Power Frequency Withstand Voltage 2kV / 60s	Storage Temperature / Humidity -40°C to +85°C / 5-95%RH
Switching Capacity 10A / 240VAC	Hysteresis 5%RH, 5°C *
Setting Method Analog	Tolerance ±5%RH, ±2.5°C **
Setting Range 0-60°C 10-80%RH	Protection Class IP20
Default Set Values 0°C / 10%RH *	Dimensions 70 x 91 x 61mm
Weight 125gr	Installation 35mm DIN rail EN50022
Connection Screw Screw, 15 to 12 (AWG) wire	

* 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



Hysteresis

In order to prevent frequent changes on relay status with small fluctuations, a hysteresis is defined for both temperature and relative humidity settings. As the main purpose of the device is to prevent low temperatures and high humidity, the hysteresis for the temperature is positive where it is negative for relative humidity. For example, if the temperature is set for 30°C and the ambient is less than this, the relay output will stay on until the temperature reaches 35°C. Also, if the relative humidity is set for %60 and the ambient humidity is higher, the relay will stay on until relative humidity decreases %55.