

PROTOTYPE OF TEMPERATURE AND HUMIDITY CONTROL AND MONITORING SYSTEM PROTOTYPE IN CUBICLE

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ABSTRACT

Each cubicle is of course equipped with a supporting component in the form of a heater, however, sometimes the heater is in a condition where the temperature rises due to a large load or current cannot help, instead the heat released by the heater causes an increase in the level of saturated water vapor in the air in the cubicle. The cubicle on the customer's side has the potential for disruption due to lack of maintenance, so a tool that can monitor and control temperature and humidity is needed in real time. The DHT22 sensor is used to measure temperature and humidity, when the temperature is above 35°C the fan is active and will turn off when it hits 33°C. At humidity above 55% the heater is active and will turn off after the humidity reaches 45%. Based on the tests that have been carried out, it is known that the error accuracy value at the temperature value is 98.98% and humidity is 98.3%, the system can work well with a 100% system success presentation, with an average temperature reduction time of 1.89 seconds. and the average humidity reduction time is 1.37 seconds. From the tests that have been carried out, the tool is able to control temperature and humidity well and the results can be monitored through the Blynk IoT application which can be in the form of notifications.

Keywords : *20 kV cubicle, temperature, humidity, IoT, DHT22*