Conference Abstract

Moderation of indoor humidity and temperature using automated motorized window opening and closing system

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Abstract

Thermal comfort and indoor air quality are essential for living in a healthy environment. In this work, based on the assessment of comfortable environmental conditions such as an in-door temperature and humidity in a selected classroom, a pilot motorized window was constructed. The window motor is interfaced with the temperature and humidity sensor via the Arduino UNO microcontroller. Based on the outdoor temperature and humidity, the upper limit for the temperature and humidity are chosen as 29°C and 80% respectively. When these parameters are above the upper limit, the motorized window automatically open and allows an air circulation between indoor and outdoor environment. Once these parameters become lower than this limit, the window closes automatically.

Keywords: Humidity, Temperature, Arduino, Microcontroller