

## Research on Energy-Related Occupant Behavior of Residential Air Conditioning Based on Zigbee Intelligent Electronic Equipment

**Authors :** Dawei Xia, Benyan Jiang, Yong Li

**Abstract :** Split-type air conditioners is widely used for indoor temperature regulation in urban residential buildings in summer in China. The energy-related occupant behavior has a great impact on building energy consumption. Obtaining the energy-related occupant behavior data of air conditioners is the research basis for the energy consumption prediction and simulation. Relying on the development of sensing and control technology, this paper selects Zigbee intelligent electronic equipment to monitor the energy-related occupant behavior of 20 households for 3 months in summer. Through analysis of data, it is found that people of different ages in the region have significant difference in the time, duration, frequency, and energy consumption of air conditioners, and form a data model of three basic energy-related occupant behavior patterns to provide an accurate simulation of energy.

**Keywords :** occupant behavior, Zigbee, split air conditioner, energy simulation

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