

Sistem Keyless Menggunakan Radio-Frequency Identification (RFID)

Keyless Systems Using Radio-Frequency Identification (RFID)

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Abstract

Motorbikes are the best-selling motorized vehicles in Indonesia, proven through the Sepda Motor Industry Association, in 2019 the average sales of motorcycles in Indonesia reached 6,487,460 units. With the high sales of motorbikes, the rate of motorcycle-hunting crimes has increased. The motives for motorbike theft are various, the most dominant is using the T key to break into the ignition of a motorcycle. Therefore, in this study the authors designed a safety system for motorbikes using Radio-Frequency Identification (RFID) which is useful for turning on motorbike contacts. In this system the data from the RFID Tag is stored on the EEPROM Arduino Uno. This system has two modes, namely master mode and motor mode. In master mode it is used to register the RFID Tag and delete the RFID Tag data that has been stored or registered. For master mode access, an RFID tag that has been registered is used as the master RFID tag. In motor mode it is used to turn on and off the motor contacts using the RFID Tag. if pasting using the RFID Tag is not registered 3 times then the buzzer is on then the owner gets an sms from the GSM module giving the information to the motorbike owner that there is an unregistered RFID Tag trying to turn on the motorbike contacts, and also in this system a GPS module is installed if the motorcycle owner wants know the last location of the vehicle). The results of testing the system that has been applied to motorbikes can be concluded that this system is successful and to turn off and turn on the motorcycle contacts using RFID the average time is 0.14 seconds.
