Implementasi Sistem Keamanan Sepeda Motor Berbasis IoT (*Internet of Things*) (*Implementation of Motorcycle Security System Based on IoT (Internet of Things)*)

Akbar Fitranto
Automotive Engine Study Program
Engineering Department

ABSTRACT

The number of motorized vehicle users in Indonesia is increasing from year to year. The increase in motorbike users indicates that motorbikes have become a necessity and the main mode of transportation for society. The growth in the number of motorbike users is also accompanied by a high risk of crime such as motorbike theft. The high number of motorbike theft crimes cannot be separated from the lack of security features provided by motorbike manufacturers. This research aims to develop an IoT-based motorcycle security system. by using a smartphone to control and monitor motorbikes remotely and in real time. The system designed by the author prioritizes a simple, portable system, with a user interface from the Blynk application that is easy to operate and is equipped with remote contact control, alarm and GPS tracker features. The test results of the IoT-based motorcycle security system show good system performance. The results of testing remote relay control via the Blynk application show an average system response delay of 0.048 seconds and an average accuracy of 100%, while the results of testing remote relay control via SMS show an average system response delay of 2.109 seconds and an average accuracy of 100%. The alarm test results show an average system response delay of 2.177 seconds and an average accuracy of 100%. The GPS tracker test results show an average system response delay of 3.116 seconds and an average difference in distance between system readings and Google Maps of 5.211 meters.

***Keywords**: Motorcycle security system, remote contact, alarm, GPS tracker, IoT*.