

Wireless AC Motor Speed Control System

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Abstract: *In this paper, we demonstrate the feasibility of controlling the speed of an induction motor using a wireless position feedback over an RF link and compare its performance under dynamic- and steady-state conditions with those obtained by using a wire-based position feedback control. An electronic circuit is coupled to the motor to provide the control-speed signal serially from distant microcontroller. A control panel is designed as an interface for the user to select the appropriate speed. This paper presents a high performance electric assisted bicycle system, where the rotor position is obtained by a position estimation technique using terminal quantities of the motor, which has a capability of starting from standstill. The components of the drive system include a wireless torque feedback, an application specific reference torque generation and torque control. The paper explains the implementation details of the position estimation technique that utilize a motor control DSP and provides real time test results to demonstrate its capabilities under real riding conditions including regenerative braking.*

Keywords: Include at least 4 keywords or phrases.

REFERENCES

- [1]. Wireless AC Motor speed control System, Shubham Wagh, Prasad Khairnar, Anil Rathod, Abhishek Jadhav, Students of S.N.D College Of Engineering & Research Center, Yeola 2022.
- [2]. Sensor less Permanent Magnet AC Motor Drive with Near Zero-Speed Operation for Electric-Assisted Bicycle, UNIVERSITY OF ADELAIDE School of Electrical and Electronic Engineering Adelaide, Australia.
- [3]. The Design and Achievement of Motor Speed Remote Control System Based on CC2510 Jian-sheng PENG Department of Physics and electronic engineering Hechi University Yizhou Guangxi 546300 China..