

Control and monitoring of a 5-floor elevator system using PLC S7-300

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Abstract: In the context of increasing urban building density, improving elevator operational efficiency has become urgent. This topic focuses on the necessity of a control and monitoring system for a 5-floor elevator using the PLC S7-300 to optimize user movement. The objective is to build a system capable of automatically adjusting speed, controlling load, and enhancing reliability through managing the operational status of elevators. The research method combines PLC theory with experimentation to ensure safety and efficiency. The expected result is a practical application solution that can be widely deployed in multi-story buildings, contributing to improving passenger transport service quality.

Keywords: PLC S7-300, elevator system, automatic control, operation monitoring, operation optimization