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(57) Abstract :
This invention presents the design of a single-axis servo mechanism for conveyor control using Mitsubishi Electric components: R04 PLC, RX81P digital input module, RY41P digital output module, RD77MS4 servo amplifier, 100W servo motor, and MRJE4 servo drive. The R04 PLC ensures real-time control, while the RX81P and RY41P modules handle digital I/O for seamless communication. The RD77MS4 and MRJE4 provide precise motion control for the servo motor, enhancing conveyor performance. The system's integration and control algorithms are detailed, showcasing improved conveyor speed and position control, leading to enhanced productivity and efficiency.

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