

Using PLC S7-300 and inverter to control the speed of a 3-phase AC motor.

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Abstract: This topic aims to solve the problem of effectively controlling the speed of a three-phase AC motor through a control system based on the PLC S7-300 and a variable frequency drive. The practical context has demonstrated the necessity of optimizing productivity in electromechanical projects. The research method combines automatic control theory with experimentation to build an effective motor speed control system. The expected result is to provide a flexible and cost-effective solution for the manufacturing industry, while contributing to the development of PLC and variable frequency drive technology in machine control.

Keywords: PLC S7-300, Inverter, Three-phase AC motor, Speed control, Electromechanical engineering