

Design of a monitoring interface for a three-phase asynchronous motor speed stabilization system using PLC S7-1200 connected to an HMI screen.

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Abstract: This topic focuses on designing and implementing a monitoring interface for a speed stabilization system of a three-phase asynchronous electric motor, using a PLC S7-1200 connected to an HMI screen. The research context is defined by the practical necessity of automation solutions to maintain stable electric motor operating performance. The objective of this topic is to build and deploy this monitoring system to ensure optimal working conditions for the electric motor, while providing immediate feedback on critical parameters. The research methodology includes both theoretical and experimental approaches to test the effectiveness of the design. The significance of this topic lies in its wide applicability in industries requiring automation, as well as its contribution to the development of PLC and HMI technology.

Keywords: PLC S7-1200, HMI interface, 3-phase electric motor, Automation, Speed control