

# **DEVELOPMENT OF A VARIABLE SPEED DRIVE TRAINING KIT WITH A HUMAN-MACHINE INTERFACE FOR IMPROVING THE STUDENT'S COMPETENCIES**

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## **ABSTRACT**

The research aims to improve the quality and competence of students in learning electric motor control practices at vocational secondary school (SMK). This type of research is research and development with the ADDIE model. The stages of development carried out are Analyze, Design, Development, Implementation, and Evaluation. With the Variable Speed VSD Training Kit, it is hoped that it can help students improve their competence, especially in electric motor control. Broadly speaking, a Variable Speed VSD system consists of two panels, namely 1) the Variable Speed VSD panel and 2) the control and metering panel. The Variable Speed VSD Training Kit module unit using Altivar71 is a learning medium about electric motor control systems. The entire system, both in the form of components and circuits used in the training kit, is adapted to the actual Variable Speed VSD system. The Variable Speed VSD Trainer Kit is designed to be equipped with a Human Machine Interface (HMI). HMI to create a visualization of a technology or system in real-time. So using an adjustable HMI design can facilitate physical work. Feasibility test results from users are included in the very feasible category with a percentage of 91.85%.

*Kata Kunci: Motor control, training kit, variable speed drive, Human Machine Interface*