

Development of Overcurrent Relay Instructional Devices for Improving the Professional Competence of Vocational Teachers

by Alex Sandria Jaya Wardhana, Istanto Wahyu Djatmiko, Nurhening Yuniarti, Eko Swi Damarwan,

ABSTRACT

This study aims to develop an overcurrent relay instructional device as a medium for increasing the professional competence of SMK teachers in the TITL field. Over Current and Ground Fault Relays were chosen because they have a variety of protection functions and easy wiring.

The final design of this device is arranged in a compact manner where every component needed in electric power protection learning is contained in one trainer with a simple and attractive design, equipped with the notation of each component, as well as the right symbol without excluding convenience for the user. The tests carried out include, three-phase overcurrent, earth fault overcurrent, derived fault overcurrent, restricted overcurrent, thermal overload (true rms), undercurrent, negative sequence overcurrent, broken conductor detected, cold load pick up, instantaneous/start contact, latching output. contacts, circuit breaker failure detection.

Kata Kunci: Protection Relay, Over Current, Ground Fault Relay