

APPLICATION BRIEF

2020

MEDIUM VOLTAGE SWITCH FINAL TEST SYSTEM

Brief Description:

Emerging Technologies, LLC. was called upon to develop and build a Recloser Switch Final Test System. The systems provide integrated instruments and power supplies to accomplish the required verification and calibration of single phase, triple single, and three phase recloser switches.

DUT verification includes the comparison of applied and measured values for voltage and current; micro-ohm resistance measurements; and DUT trip and close performance. Permitted users are provided with the tools necessary to customize the setpoints and pass-fail limits for each of these tests.

Customer Benefit:

The customer is able to increase throughput and reduce operator subjectivity. This is accomplished with the automation of an integrated test sequence through the selection of DUTs, the reduction of manual operations required by the operator, complexity required to perform operator tasks, and overall test time due to the consolidation of various tests.

An included manual mode allows Authorized users to manually operate the systems controls providing the capability to troubleshoot potential issues with a DUT.

The addition of data logging and test results improves DUT tracking and analysis by providing information such as operator ID, test time and date, DUT model information, test parameters, measured values, and pass/fail indication. This information is also included in the generation of detailed reports.



ET Responsibilities:

- ✓ Functional Specification Generation
- ✓ Design / Engineering
- ✓ Fabrication
- ✓ Programming – Software
- ✓ Programming – Firmware
- ✓ Circuit & PCB Design
- ✓ On-Site Commissioning
- ✓ Post Commissioning Support

Technologies:

- Embedded Computers
- Microcontrollers
- ✓ Visual Software
- ✓ Control Software
- ✓ Data Acquisition
- ✓ Computer Based Control
- ✓ Communications – RS232, Serial
- ✓ System Integration

Special Features:

- ✓ Micro-Ohm Resistance Measurement
- ✓ Hipot Testing up to 10 kV
- ✓ Current Injection Capability up to 250 A
- ✓ Integration of Recloser Controls
- ✓ Automatic Multiplexing Between Current, Low Voltage and High Voltage