



CUSTOM DESIGNED RECLOSER/SECTIONALIZER TEST SYSTEM

Brief Description:

Emerging Technologies, LLC. was called upon to provide a replacement recloser test system. An existing test system was in place and failing due to age. The system required flexibility to test multiple variations of made to order reclosers and sectionalizers.

The new system was designed to using modern hardware and software. A new test application was written to duplicate the existing functionality while adding some new features. A custom made 1000 amp AC current source was developed for the application.

Multiple models of DUT are tested based on model number and added accessories. The test system retrieves the test parameters for required testing, based on operator selected part number as selected from a pull down field on the operator screen. The DUT including its specified accessories are tested. Results of each test are printed to a PDF file and stored in a csv file.

The design package included; bill of material, mechanical diagrams, electrical diagrams, custom application specific labeling and custom developed LabView test application software.

The test application was written to allow the user to configure the test sequence based on the provided test steps.

Customer Benefit:

The customer is able to perform automated testing of a diverse group of product via one easy to use test system. Results are printed and stored. The separate mobile current source allows the use of lighter weight current cabling by locating it near the DUT.

Special Features:

- Mobile AC Current Source.
- Configurable Test Sequence.
- Interlocked Test Cage for Operator Safety.
- Configurable Multi-Model Lookup.
- DUT Specific Cable Connect Bulkheads.



Key Components Used:

- Pacific Power Source Programmable AC Source.
- Sorensen DC Programmable Power Supply.
- Custom Automated 1000 Amp AC Current Source.
- Valhalla Micro Ohm Meter.
- Agilent DMM.
- NI Multi-Function DAQ and LabView Test Application.

Emerging Technologies, LLC.

Responsibilities:

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

Technologies:

- Embedded Computers
- Microcontrollers
- ✓ Visual Software
- ✓ Control Software
- ✓ Data Acquisition
- ✓ Computer Based Control
- ✓ Communications – GPIB
- System Integration
- Other

Customer Category:

- ✓ OEM
- Custom Equipment
- Utility
- R&D

SPECIALISTS IN TEST, MEASUREMENT, AND DATA ACQUISITION

Emerging Technologies, LLC.

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