Emerging Technologies

COVER CONTROL TEST SYSTEM

Application Brief

Emerging Technologies, LLC. was called upon to develop a test system for a line of cover control sub-assemblies. The units to be tested included communicating and non-communicating versions of the device. The product required automated testing as well as some operator input to complete the test.

Emerging Technologies implemented a dual fixture system to accommodate the range of product to be tested. The system was designed to prove the operation of all device I/O including LED's (color, intensity, and flash), communication via Ethernet, discrete I/O, front panel membrane switches, mechanical handle operation, and configuration dip switches. Configuration data identifying the device to be tested is recalled from a configuration table based on touch-screen selection by the operator. The compete test is accomplished by automatically cycling through the functions that can be tested without operator input followed by prompting the operator, where required, to provide manual input to the system. Results of the test are stored to local disk in a CSV format.

The system is ergonomically designed allowing the operator to load, operate, and unload the tester from a sitting position. While the computer is touch-screen based, a pullout keyboard and mouse is available for maintenance.

Customer Benefit:
The customer is able to test devices using the Emerging Technologies custom designed test system to verify correct operation of their product. The LED sensor technology removes operator subjectivity from the test. Since the system is configurable, addition of future part numbers can be made on the plant floor. Being mobile, the system can be easily located where it is needed. A manual mode provides a platform for product troubleshooting and development.

ET RESPONSIBILITIES:

- Functional Specification Generation
- ✓ Design/Engineering
- ✓ Fabrication
- ✓ Programming - Software
- Programming - Firmware
- ✓ Field Installation
- ✓ On-Site Commissioning
- ✓ Post Commissioning Support

TECHNOLOGIES:

- Embedded Computers
- Microcontrollers
- ✓ Visual Software
- ✓ Control Software
- ✓ Data Acquisition
- ✓ Computer Based Control
- ✓ Communications - RS232, RS-422, e-net
- ✓ System Integration
- ✓ Other – non contact LED sensing

SPECIAL FEATURES:

- ✓ LED color, intensity, & flash testing.
- ✓ Touch-screen computer.
- ✓ Quick connect UUT spring probe based fixtures.
- ✓ Manual mode for troubleshooting product.
- ✓ Mobile 19" Rack enclosure w/Front and rear access.
- ✓ Ergonomic UUT connection from seated position.