Emerging Technologies

APPLICATION BRIEF
2020

POWER AT PRESSURE VERIFICATION SYSTEM

Brief Description:

Emerging Technologies, LLC. was called upon to develop a test system for electrically operated air pressure based products. The new system was to be based on an existing system re-using some of the existing components. New components were used where higher accuracies were required. Additionally, the new system was expected use a smaller enclosure requiring less space in the lab.

Emerging Technologies implemented a re-design of the existing pressure controlling, power monitoring and verification system. The system is capable providing manually set voltages from 0 to 300VAC at 50 or 60Hz. Manual backpressure and vacuum controls are provided to set test parameters for the unit under test (UUT). Both pressure and vacuum are monitored via front panel meters. Additionally, a Yokogawa WT210 Power Meter was used to accurately monitor voltage, amperage, and wattage. The WT-210 was wired and configured to provide access to up to four channels of internal data for logging by the customer's existing Yokogawa Darwin data acquisition hardware.

The re-design incorporated a smaller enclosure to free up space in the existing lab. Color matched paint was utilized to coordinate the color of the new enclosure with other custom hardware in the lab.

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 re-application of existing hardware reduced the overall cost of the new system, while the provision of new hardware increased the accuracy of the system.

ET Responsibilities:
- Functional Specification Generation
- ✓ Design / Engineering
- ✓ Fabrication
- Programming – Software
- Programming – Firmware
- ✓ Field Installation
- ✓ On-Site Commissioning
- ✓ Post Commissioning Support
- Other

Technologies:
- Embedded Computers
- Microcontrollers
- Visual Software
- Control Software
- ✓ Data Acquisition
- Computer Based Control Communications
- ✓ System Integration
- ✓ Other - re-application of existing hardware

Special Features:
- ✓ Configurable high accuracy power metering.
- ✓ Configurable metering re-transmit signals for customer provided data acquisition system.
- ✓ 50 & 60 Hz operation.
- ✓ Standard and European UUT connection points.
- ✓ NIST traceable calibration for WT-210 Power Meter.

(920) 793-2782