APPLICATION NOTE

CAS DATALOGGERS

Fully-Automated Luminaire Testing Procedures With Delphin Technology

Data Acquisition, Automation & Evaluation in a Single System

Every day we depend on luminaire products for indoor lighting, whether at work or at home. As with all electro-technical devices, consumer safety is particularly important. Even the latest LED technology requires high-level luminaire testing for safety and reliability. For this reason, manufacturers put their newly-developed lamps through a multitude of tests before bringing them to market.

Especially important here are the thermal tests which are part of the EN 60598-1 standard to ensure that even in the event of a malfunction, a lamp will not overheat and cause a fire. With this in mind, German manufacturer Delphin Technology offers the latest fully-automated measurement and evaluation systems.

Application Features

- Data acquisition, automation, and evaluation—all in a single system
- Fully-automated testing procedures complying to EN 60598-1 (including test protocols)
- Office compatibility: all data can be exported into MS Word
- All channels are galvanically isolated from each other (up to 650 V)
- Precision electrical measurement of AC and DC currents, voltages, and power

Practical Example

The development of the white-light LED has created a multitude of new fields of application for lamp producers and the light industry. Now a start-up company within the lighting space is producing flexible designer light lines enabling a wide range of lighting options. The company's new developments in lighting technology require new test methods to prepare its products for every conceivable use and to guarantee their safety and reliability.

The business is using its own luminaire testing device during development to automatically perform thermal and electrical testing. In conjunction with this, users rely on Delphin's industrial test and measurement devices for service-life and performance testing.

Delphin solutions are comprised of a high-speed intelligent data logger which performs product test and local data storage. They feature different analog and digital I/O modules for use with a wide range of input signal types including: voltage; 4-20 mA current; thermocouple; RTD; and resistance. Delphin systems also feature flexible alarm and programming capabilities allowing them to process measurements and initiate actions on their own.

Delphin systems can be used for local data acquisition and logging when connected to a PC; for remote unattended data collection, or as stand-alone devices. Data can be transferred online, filtered, and analyzed, providing regulatory compliance and business benefits.

Popular Areas of Application

- Thermal testing on lamps in accordance with EN 60598-1
- Light component testing, e.g. LED modules
- Repeat and retrofit measurements
- Measurement of primary and secondary electrical values
- Determining winding temperatures in ballasts/transformers
- Performance testing of LED lamps
- Service life testing of lamps and luminaires
- Abnormal operation and simulation of malfunctioning events

For further information on Delphin Data Acquisition Systems, luminaire testing or to find the ideal solution for your application-specific needs, contact a CAS DataLogger Application Specialist at **(800) 956-4437** or www.DataLoggerInc.com.