OPTO 22

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Contact:
David Hill, Marketing Communications
800-321-6786 / 951-695-3010
dhill@opto22.com

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Demand-Response Energy Monitoring Unit from Opto 22 Monitors Real-Time Power Usage and Manages Electrical Loads on Demand

OptoEMU Sensor DR provides simple solution for monitoring facility energy consumption in real time and signaling electrical equipment on request

Temecula, CA – May 21, 2012 – Industrial automation manufacturer Opto 22 has announced the new OptoEMU Sensor™ DR, a compact energy monitoring unit for monitoring energy usage at commercial and industrial facilities such as factories, warehouses, retail stores, and office buildings. Connected to utility meters, plant equipment, and facility systems, the OptoEMU Sensor DR gathers real-time energy consumption and demand data. It then delivers that data to enterprise business and control systems and Web-based applications for monitoring and analysis. In addition, the OptoEMU Sensor DR helps businesses take advantage of lucrative demand-response (DR) programs from their local utilities. In response to a request from the utility to reduce power use, the Sensor DR can signal electrical equipment to shed load. DR programs can provide revenue to businesses in three ways: first, from discounts for simply agreeing to shed load; second, from actual reductions in use; and third, from selling electricity back to the utility or energy provider.

The OptoEMU Sensor DR is the latest addition to Opto 22's OptoEMU energy monitoring system, designed to make it simple for facility managers, business owners, and others responsible for managing energy to identify energy use and reduce energy costs.

Monitoring and Analyzing Energy Consumption

Many organizations today share the same problem about energy usage: they receive a bill for the total cost of energy used over a set period, with little or no detail. Without knowing where, when, and how energy is used within a facility, managers have no way to reduce costs. The

OptoEMU Sensor DR solves this problem by connecting to meters and plant equipment to expose this missing energy usage information.

The OptoEMU Sensor DR first gathers energy data from up to two utility meters or submeters that emit a standard pulsing signal. Each pulse emitted corresponds to an amount of energy used, and by counting pulses the OptoEMU Sensor DR can track the total amount of energy used as well as demand. The OptoEMU Sensor DR can also receive power usage and other data from a variety of devices using the widely adopted Modbus communication protocol. Using Modbus over an Ethernet or serial network, the OptoEMU Sensor DR can communicate with devices such as temperature sensors and flow meters, Modbus-enabled current transformers (CTs), and power analyzers, as well as larger facility systems such as plant equipment, building management systems, and HVAC systems.

Once gathered by the OptoEMU Sensor DR, real-time energy data is sent to Web-based "software-as-a-service" (SaaS) energy management applications and enterprise business systems, where it can be viewed and analyzed to develop effective energy management strategies that reduce costs. Connections to SaaS energy management applications like Pulse Energy's Pulse™ and eSight Energy's eSight are easily set up in the included configuration software, making energy data quickly available online for tracking and analysis.

For those with technical staff or expertise, OptoEMU Sensor DR can also send energy data to databases, enterprise management systems, and other enterprise business systems using a standard XML protocol. Free software tools are available for SQL database integration, and a new Microsoft .Net developer toolkit makes it possible to integrate energy data with custom software applications.

The OptoEMU Sensor DR integrates closely with Opto 22's SNAP PAC System™ for industrial control, and includes the ability to visualize real-time energy data with the free PAC Display™ human machine interface (HMI) software package. If additional control over plant equipment and systems is needed, the SNAP PAC System can easily provide it.

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Demand Response and Demand Control

In addition to reducing power usage in a facility, many organizations have the opportunity to lower utility costs—and in some cases generate revenue—by participating in demand-response (DR) programs. In exchange for reduced utility rates and other incentives, electric utilities, demand-response aggregators, and curtailment service providers may periodically request that a customer reduce power usage (the "response") to an agreed-upon level. In this situation, the OptoEMU Sensor DR can signal existing energy or building management systems to respond. Future support is scheduled for the industry-wide automated demand-response protocol OpenADR 2.0.

In addition to implementing demand-response requests, the OptoEMU Sensor DR can also operate independently to shed electrical equipment loads when predefined usage thresholds are reached. This practice, called "demand control," is particularly important in regions where power utilities levy a demand charge.

Pricing and Availability

The OptoEMU DR is available in two models, one for use on both wireless and wired Ethernet networks, and one for use on wired Ethernet networks only. OPTOEMU-SNR-DR1 communicates over a standard 10/100 Mbps wired Ethernet network, over an 802.11a/b/g wireless LAN (local area network), or over both simultaneously. If wireless connectivity isn't required, OPTOEMU-SNR-DR2 communicates over a standard 10/100 Mbps wired Ethernet network.

The OptoEMU Sensor DR is available now at a suggested price of $1095 USD for the OPTOEMU-SNR-DR1, and $895.00 USD for the OPTOEMU-SNR-DR2.

About Opto 22

Opto 22 develops and manufactures hardware and software for applications involving industrial automation and control, energy management, remote monitoring, and data acquisition. Designed and made in the U.S.A., Opto 22 products have an established reputation worldwide for ease-of-use, innovation, quality, and reliability. Opto 22 products, which use standard, commercially available networking and computer technologies, are used

by automation end-users, OEMs, and information technology and operations personnel in over 10,000 installations worldwide. The company was founded in 1974 and is privately held in Temecula, California, U.S.A. Opto 22 products are available through a global network of distributors and system integrators. For more information, contact Opto 22 headquarters at +1-951-695-3000 or visit www.opto22.com.

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