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New Features in Power and Energy Monitoring:
The Veris E3xE Panelboard Monitoring System

VERIS INDUSTRIES™

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Introduction

The Veris E3xE enclosed panelboard monitoring system combines all the features of the E3x meter family with advanced protocol capability, making it an ideal power management solution for datacenters and commercial buildings. A number of exciting features distinguish the E3xE from previous E3x meters.

Housing

Unlike the open board design of the earlier E3xA/B/C models, the E3xE meter is enclosed in a sturdy metal housing, reducing the risk of physical damage from accidental collisions with tools or other hardware. As UL 508 open-type devices, all E3x meters must be installed in an electrical enclosure, but the E3xE housing helps protect the internal circuitry.

All connections are clearly labeled on the housing's exterior. The installer is easily able to locate and identify all wiring terminals and ribbon cable connectors, making installation faster and simpler than with previous E3x meters.

Accuracy

The E3xE is specified to 1% system accuracy and verified on every unit shipped. With many metering devices, the manufacturer might claim a particular accuracy, but when branch CTs are connected, the accuracy is downgraded to include the accuracy rating of each branch CT. The accuracy specifications for the E3xE branch measurements include both the meter unit and the 50A or 100A branch CTs.

Accuracy tests were validated by an independant testing company using NIST traceable equipment. A formal letter of compliance from the independent lab is available upon request.

Protocol Support

The E3xE adds broad protocol support into its repertoire of features. The device communicates via ethernet and RS-485 using user-selectable combinations of Modbus, BACnet, and SNMP. The E3xE sends meter data using these chosen protocols. This feature allows separate internal applications to work independantly with the same data set, making the E3xE a more versatile meter for a full range of energy solutions.

Examples:

1. In a commercial building application, the user can select BACnet and Modbus protocols. The E3xE communicates with standard building automation systems to manage the HVAC and lighting control systems using BACnet protocol, while using Modbus to update traditional energy management software.

2. In a datacenter application, the user might choose SNMP to monitor datacenter tasks such as maximizing uptime, avoiding outages, and indicating unexpected load variations, while using Modbus to allocate costs and improve the efficiency of the power infrastructure.

Multi-Phase Logical Circuits

The E3xE has easily configurable logical circuits that provide multi-phase measurement totals similar to those found with independant multi-phase meters. Using the free configuration tool found on the Veris website, the user can assign up to three branch circuits to any logical circuit. In this way, the meter configuration resembles the actual breaker configuration in the panel so that each load has its own virtual meter, regardless of how many phases are used. The measurements that would typically require numerous multi-phase meters are all provided by a single device, reducing hardware costs and installation time.

E3xE: The Full System Solution

The E3xE is available with either solid-core or split-core branch CTs. The robust housing is durable and easy to install. The accuracy testing ensures that all data values can be trusted. By configuring the desired protocols and the logical circuits to the specific needs of the application, the E3xE offers a full power and energy monitoring solution for a broad range of applications.

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