

ENERGY & ELECTRICAL SUBMETERING: MAKING THE SUBMETER CASE

DENT'S POWERSCOUT SUBMETERS OFFER SOLUTIONS



Today's escalating energy costs put increasing pressure on businesses and organizations to proactively manage their energy use. There is a growing sense of urgency to understand energy consumption patterns and to develop effective actions to manage their associated expenses.

Gaining the upper hand on electrical costs often begins with some comprehensive detective work: Taking measurements, locating energy hogs, and understanding time-of-use issues. As facility managers, engineers, and electrical supervisors know, the price of electricity is more than simply a matter of cost per kilowatt hour. Peak demand charges and power factor penalties can drive operating costs through the roof.

Load profile studies and energy audits can provide the baseline data necessary for a comprehensive energy management program. Armed with solid data, energy managers find it possible to reduce demand, contain costs, improve equipment performance, identify energy conservation measures, and curtail use during periods of high energy costs.

Obtaining usage and consumption data by submetering is sound business practice. Submeter benefits can include capturing lost revenues from retail, building, and department tenants, verifying cost savings on capital projects, scheduling preventative maintenance on equipment and optimizing performance of the entire facility.

DEPENDABLE SUBMETER INSTRUMENTS FOR PRECISE ENERGY MANAGEMENT

DENT's [PowerScout™](#) Series networked power meters are sub-metering devices designed to provide timely and accurate consumption data. These meters can capture kWh/kW energy and demand information as well as virtually all relevant energy parameters for diagnostics and monitoring on three-phase or single-phase circuit. The PowerScout's flexibility, size, and ease-of-use make them ideal sub-metering tools for capturing detailed consumption information in commercial, industrial, government and retail environments.

VERSATILE PERFORMANCE ON SINGLE OR THREE-PHASE ELECTRICAL SERVICES



The [PowerScout™](#) uses direct connections to each phase of the voltage and various interchangeable [CT \(current transformer\)](#) options such as split-core current transformers or flexible RoCoils (for large loads or large cables and bussbars) to monitor current on each phase. All DENT [CTs](#) are internally shunted with ETL and CE mark for intrinsically safe operation on energized conductors. Special high-accuracy [CTs](#) are available for existing CT secondary monitoring. The [PowerScout™](#) is available with or without enclosure, depending on the site environment.

The [PowerScout™](#) makes over 50 total electrical measurements which are derived from the voltage and current inputs. Electrical load diagnostic parameters such as power factor (both Apparent and Displacement) and line frequency are captured in addition to energy and demand values. A 4-wire 3-phase version is available for monitoring and Neutral phase on potentially unbalanced loads.

SUBMETERS EQUIPPED WITH INDUSTRY STANDARD COMMUNICATIONS

Communications interface to the [PowerScout™](#) is through an RS-485 serial connection using the industry standard Modbus protocol. Up to 254 PowerScout meters may be connected to a single RTU or data logger for monitoring and recording power usage at multiple locations within a single site. DENT's proprietary [ViewPoint](#) software utility allows you to easily configure the PowerScout for the connected CTs and to check readings.

IDEAL FOR FOOL-PROOF INSTALLATION

The [PowerScout™](#) requires no external power and its power supply can accommodate service voltages ranging from 60-600V (phase to phase). The simple installation is accomplished by connecting the color-coded voltage leads and clearly labeled CTs. DENT's patented PhaseChek circuitry includes a 3 LED indicator display that confirms proper CT to phase installation. The [PowerScout™](#) automatically adjusts for CT orientation-greatly reducing set-up time and all but eliminating installation errors.

FOR MORE INFORMATION

Please contact DENT Instruments:
Toll free 800.388.0770 / Alt phone 541.388.4774
sales@dentinstruments.com
www.DENTinstruments.com

ETA Process Instrumentation 119 Foster Street, Bldg #6 Peabody, MA 01960 Tel: (978) 532-1330 Fax: (978) 532-7325 www.etapii.com sales@etapii.com	
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