ES Series DataNode®

Energy Management

Encore Series™ enables users to understand and manage energy consumption

ES230

ES230s

UNDERSTAND AND BETTER MANAGE ENERGY CONSUMPTION

To succeed in today's fiercely competitive business environment, companies must reduce both production and service costs. Since energy represents a significant portion of these costs, energy management becomes a key factor in cost reduction. The ES Series Energy Management DataNode's® are designed to help you manage energy consumption. The ES210 and ES220 DataNode's measure more than 60 parameters, including true RMS voltage and current, kW, kVA, KVAR, power factor, frequency. The ES230/ES230s DataNode's add Vthd, Ithd and individual harmonics to the 15th. ES Series DataNode's are available in the standard DIN96 or DIN144 sizes and can be used as stand alone panel meters or, by adding an available Ethernet or serial interface the ES Series can be used with web browser based Encore Series Software for remote access to real time and recorded data.

TRACK POWER FLOW AND ENERGY COSTS

Reducing consumption during peak times or shifting loads to off-peak times can save a typical commercial or industrial facility from ten to fifty percent annually on energy costs. By monitoring energy consumption on a continuous basis using the ES Series DataNode, energy and demand data can be gathered for an entire facility and at key consumption points including energy-intensive processes and key machinery. The ES Series DataNode is part of Encore Series Software, which automatically plots and trends this data to develop daily, weekly, monthly or yearly load profiles. Encore Series Software can also alert the user to shed loads before a new demand level is reached. The available Energy Usage Answer Module® enables Encore Series Software to aggregate energy from multiple points, compute costing information and provide other advanced energy reports. This information can be reconciled with operating data from other systems, including building automation and process control, to understand how variations in facility operations affect the load profile and electricity bill.

Facilities armed with load profile data are better positioned to negotiate energy purchase contracts. Data from the ES Series DataNode can be used to develop a price/risk curve for evaluating options such as fixed, time-of-use, and real-time pricing plans. Without this data, a facility might incur much higher energy or peak-demand charges than necessary, or carry more than the appropriate level of risk.

EVALUATE ENERGY REDUCTION STRATEGIES

When and where electricity is consumed is invaluable information to have when developing energy reduction strategies, which can include lighting upgrades, HVAC replacement, installation of high efficiency motors and/or adjustable speed drives and other cost saving measures. The data provided by the ES Series DataNode arms the user with the information necessary to understand your facility, its loads and energy usage profile. This information, combined with your local utilities rate structure enables you to intelligently target areas of your facility in order to provide the best return on your energy reduction budget. Not only can you reduce your overall energy usage but utility charges such as power factor penalties and time of use demand penalties can be targeted for reduction by mitigating such problems or shifting loads to less expensive times of the day.
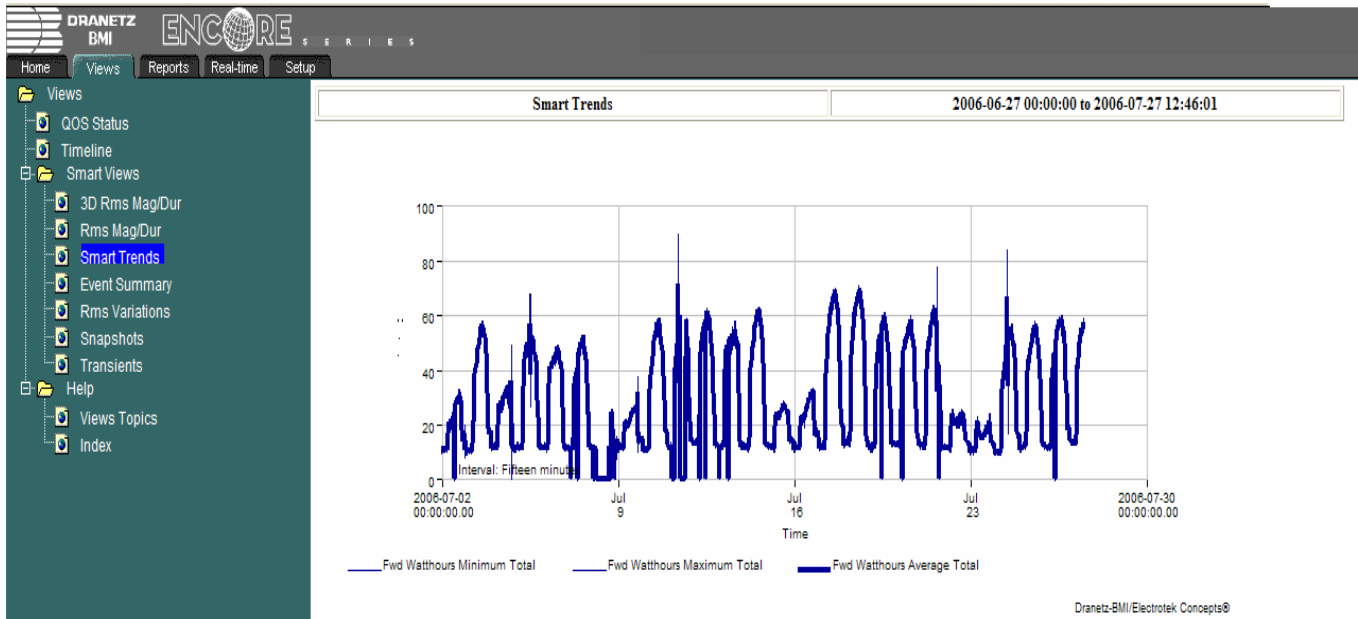
Encore Series Software showing the energy profile of a manufacturing/office building.

ES Series DATANODE® SPECIFICATIONS

MEASUREMENTS
ES210/ES220: 60+ parameters including true RMS voltage and current, kVA, kVAR, kW, PF, frequency, kWh, demand
ES230/ES230S: Adds VTHD, ITHD and harmonics to the 15th

VOLTAGE
ES210/ES220: Single phase, 3-phase, 500VAC L-L or 290VAC L-N, 50/60Hz, 0.5% accuracy, Screw terminals
ES230/ES230s: Single phase, 3-phase, 500VAC L-L or 290VAC L-N, 50/60Hz, 0.2% accuracy, Screw terminals

CURRENT
ES210/ES220: 5A or 1A nominal, 0.5% accuracy
Screw terminals
ES230/ES230s: 5A or 1A nominal, 0.2% accuracy
Screw terminals

COMMUNICATIONS
ES210/ES220/ES230/ES230s:
Available RS232/RS485 Modbus RTU
Available: 10/100baseT Ethernet (RJ45), Modbus TCP

INSTRUMENT POWER
ES210/ES220/ES230/ES230s: 85 to 253V AC/DC, 45 to 400Hz. <3 VA (without extension module)
Screw terminals

AVAILABLE ENCLOSURES
Panel Mount
ES220/ES230: DIN144, 144 x 144 x 46mm, ABS plastic
ES210/ES230s: DIN96, 96 x 96 x 46mm, ABS plastic

DISPLAY
ES210/ES220/ES230/ES230s: 14mm red *LED Digital Display,* adjustable brightness. *Number of digits:* Measured values, 4 digits with sign. Energy counters: 8 digits (top + middle display)

ENVIRONMENTAL
ES210/ES220/ES230/ES230s:
Operating temperature: -10 to +55˚C
Indoor use only

SAFETY AND COMPLIANCE
ES210/ES220/ES230/ES230s: CE, IEC1010, EN61010. Protection class II. *Enclosure protection:* Front IP66, terminals IP20

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