

Energy Saving and Reducing Costs for Factories



E-SINE
Engineering Solutions



Insure Power Quality and Increase Reliability with Advanced Metering

- Monitor Power Quality in All Parts of a Factory
- Respond to PQ Problems Before Outages Occur
- View Voltage Events and Current Faults
- Avoid Downtime and Lost Revenue
- Use SCADA to Manage Energy Usage in the Factory
- Analyze Factory and Process Energy Consumption Enterprise-wide
- Determine Inefficiencies and Lower Energy

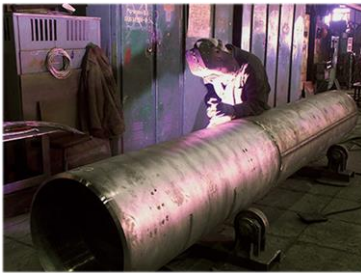
Contact E-Sine at:
Email: info@e-sine.com Tel: 0208 242 4936

► Monitor Power Quality in All Parts of the Factory

Good power quality is essential to the smooth running of any factory. Power quality problems can result in damage to equipment, downtime, and lost productivity and revenue. E-Sine's advanced and highly accurate meters and submeters let you monitor power quality for specific loads or parts of the factory. E-Sine meters let you set alarms for multiple conditions – drops in voltage, current faults, change in phase angles, change in I/O state, flicker, etc.; and to send emails on alarm to multiple users. You can also monitor in-rush current for large pieces of equipment to be proactive in equipment repair or replacement to avoid downtime. In addition, non-linear loads in factories cause harmonics, inter-harmonics and flicker, all of which can have a detrimental effect on power quality. E-Sine's meters and submeters let you view and analyze all of these power quality components and provide detailed reports showing if power quality is within normative standards.



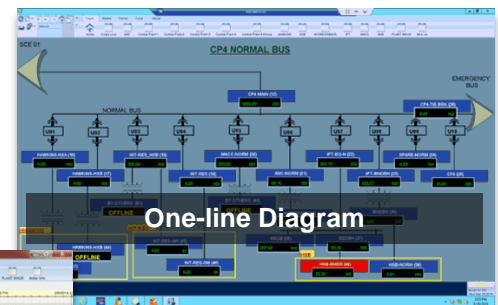
► Respond to PQ Problems Before Outages Occur



Reliability of the power running your factory is essential. Factory downtime = lost revenue. By giving you access to PQ information at the point a problem occurs, E-Sine meters let you be proactive in fixing problems, avoiding downtime and the lost revenue it causes. And E-Sine's meters have generous amounts of memory for logging measurements and recording waveforms, which lets you perform detailed forensic analysis of any electrical anomaly problems that occur. E-Sine tools allow you to study what went wrong in order to prevent it the next time.

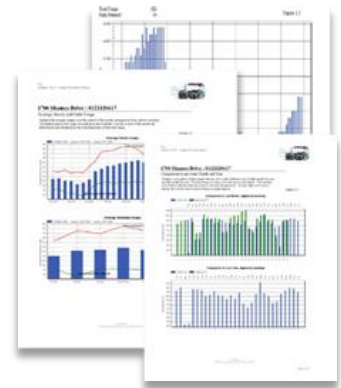
► Use SCADA to Monitor Energy Usage and Flow throughout the Factory

EIG's HMI EXT™ software application lets you set up E-Sine meters in a SCADA system that works with your entire factory. With this flexible and powerful application you can manage energy usage, monitor power quality, and respond to power quality problems factory-wide from any local or remote computer in your system. HMI EXT™ software lets you set up a graphical interface for your meters and other equipment used on the factory floor and in your other buildings, such as administrative office space and warehouses.

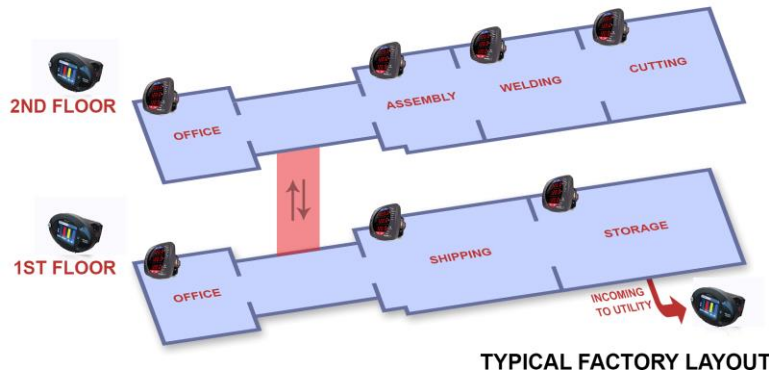


➤ **Analyze Factory/Process Energy Usage - Find Inefficiencies and Reduce Costs**

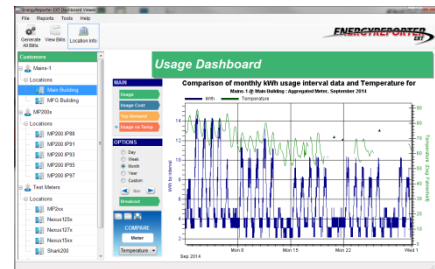
EIG meters have extensive memory for trending. The EnergyReporter EXT software application uses the historical log data to produce detailed reports of energy and other commodity usage. And you can use the software's Dashboard Viewer to compare usage in different areas of the factory, for specific loads, or for different timeframes, to find areas where efficiency can be improved, thereby saving energy and lowering costs.



Auto-Emailed Detailed Energy Usage Reports



TYPICAL FACTORY LAYOUT

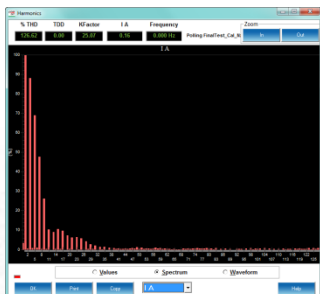


Enterprise Energy Dashboards

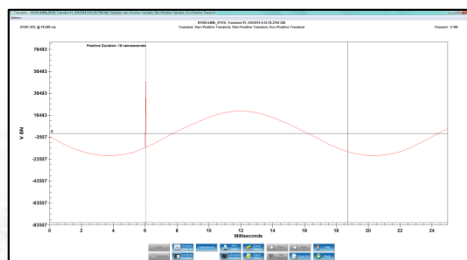
➤ **Helping Factories' Energy Usage Become More Reliable and Cost-Effective**

According to the U.S Department of Energy (DOE), factories and industrial plants account for a third of U.S. energy use, costing roughly \$200 billion annually. The DOE believes that the industrial sector can save more than 20% of that energy - and the money spent to purchase it - by reducing energy waste. When you use EIG meters to track your energy use and monitor power quality, you gain knowledge about, and increase the efficiency of, your energy usage. More efficient use basically means that the energy you buy performs more work, so you do not need to pay for energy you are not using. This results in lower cost, as well as a better impact on the environment.

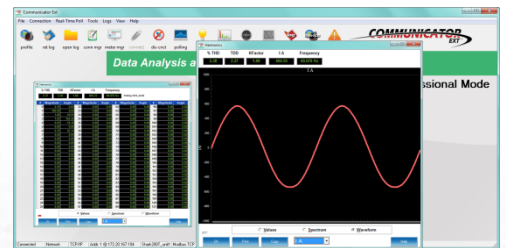
To stay competitive in a global marketplace, factory owners must manage costs and increase productivity. Implementing an energy tracking and PQ analysis system accomplishes both these goals. Using E-Sine meters and submeters to analyze your factory's energy usage lets you identify areas where usage and resulting costs can be cut. And insuring the reliability of the power you purchase, through PQ monitoring, lets you use your energy budget to produce your products most efficiently.



Conduct Harmonic Analysis



View Waveform Captures



View Real Time Waveforms

TYPICAL BILL OF MATERIALS:

Critical Load Point

Nexus® 1500+ - Advanced Power Quality Analyzer and Energy Meter

Example Installation: Utility Entry Points, Critical Loads, High Power Sensitivity Points

Ordering Part #: Nexus1500+-D2-60Hz-20-V3-X-X-X-X



Large Loads (400 Amps or more)

Shark® 200 - Data-Logging Energy Meter for Load Profiling and Power Quality

Example Installation: Typical Building Loads, Substations, Control Panels

Ordering Part #: Shark200-60-10-V6-D2-INP100S-X-X



Smaller Loads (200 Amps or less, high-density)

MP200 Metering System - 8 Three Phase Input Meters

Example Installation: Smaller Panel Boards, High-density Circuits

Ordering Part #: MP200-Y-60-10-V2-WIFI-MDSN



Base Data Collection Software

Communicator EXT™ 4.0 Software for configuring meters, automatically collecting data, and studying Power Quality

Ordering Part #: COMEXT4P

SCADA Application

HMI EXT™ Software - Modular, Enterprise-wide Energy Management Monitoring System

Ordering Part #: HMIEXTC

Energy Dashboard and Billing Software

EnergyReporter EXT 4.0 Software for energy dashboarding, generating usage reports and automated submeter billing

Ordering Part #: EREXT4

ENGINEERING ASSISTANCE:

Contact us for conformance specifications and engineering design assistance. E-Sine has on-staff dedicated application engineers to provide comprehensive support and make your project a success.

Contact E-Sine at:

Email: info@e-sine.com

Telephone: 0208 242 4936

Website: www.e-sine.com

