



Energy Management System



EMS

The EMS is combination of MS Windows based software and supported hardware system. It is appropriate for industries, manufacturing plants commercial buildings or any situation where an electrical system is used. The system provides centralized power monitoring, Monitoring of electrical parameters, power consumption, Power Quality, Maximum Power Demand Analysis. The energy management system leads to saving in the overall cost. There saving may be from better utilization of manpower, saving in the energy consumption, avoiding breakdowns in the system etc.

“you can't manage what you don't measure”

Continuous monitoring of the power supply and condition monitoring is an integral part of any proactive management program. It provides data for determining the loading of existing sources and backup supplies and for planning future expansion. The data is useful in determining whether investment is being spent in the most appropriate areas. Continuous monitoring provides the data to perform a post-mortem on disruptive power disturbance incidents. This data is needed to determine how and where events were caused, leading to an understanding of how they may be avoided in the future.





EMS

Versatile to connect with any make Meters and any kind of existing system.

- ◆ Supports any Modbus(RTU/ASCII) or Modbus TCP/IP compliant energy meters.
- ◆ System is versatile to add any makes meters with any Communication protocol. (Optional and on customer's demand)
- ◆ It supports multiple communication ports and Ethernet ports for high speed data acquisition from large number of meters at scattered locations.
- ◆ If number of meters are very large and in scattered form, system can use its real time hardware (EMSDev) for communicating, data logging and data forwarding to main EMS system.
- ◆ Software and EMSDev supports Modbus (ASCII / RTU), Modbus TCP/IP, GSM (GSM Modem), RF Modem, Wireless communication and any new customized protocol for data collection and communicate with meters. Communication over OPC is available (Optional).
- ◆ Software can supports multiple types of meters in single package.
- ◆ Software supports data transaction with any type of existing database systems or existing EPR systems.
- ◆ Data storing over cross platform (Windows to Linux/Unix) will available in special case.





EMS

Features

- ◆ Cost effective
- ◆ Faster data scan with multiple communication ports and Ethernet.
- ◆ Easy to configure and maintain.
- ◆ User level security controls over screens, groups and subgroups of meters.
- ◆ Data storing option for individual parameter, Hence user can select related parameter to store in database and it reduces overall size of database.
- ◆ Alarm setting for all parameters with high and low limits and Alarm notification by visual, audio, SMS and email.
- ◆ Database backup and restore option Attach External Database.
- ◆ Close Watch on demands and thus Avoid demand penalties Built in Schedule for automatic email print and saving of reports to disk.
- ◆ Report can be exported to different formats i.e. PDF, Excel, ODBC etc.





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Views

➔ Online

- ◆ Online meters data
- ◆ Online view of meter's parameters with online trend.
- ◆ Online view of parameter for all meters in group/sub-group.
- ◆ Screen of four parameters for all meters
- ◆ Screen of any four parameter of any meters.*
- ◆ Any parameters of any meters.*
- ◆ One parameter of all meters in group/sub-group.*

➔ Grid View

- ◆ All parameters of meter.
- ◆ Any parameters of any meters.*
- ◆ One parameter of all meters in group/sub-group.*
- ◆ User can re-arrange parameter in grid view.

➔ Trends

- ◆ Trend of any parameter
- ◆ Trend of any 8 parameter for any meter
- ◆ Trend of any 8 parameter/meters
- ◆ Auto scaling for trends.

* User can save this selection criteria for future use.





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Reports

- ◆ Hourly – day energy reports.
- ◆ Daily weekly – month energy/production report.
- ◆ Daily weekly – month energy/production report with specific energy consumption (SEC).
- ◆ Monthly – year energy report.
- ◆ Average PF reports , Min/Max reports
- ◆ Group/Sub-group wise flexi energy report for all meters.
- ◆ Data representation with line graph , bar graphs and pie charts in reports
- ◆ Alarm listing with communication , High and Low alarms separation.

Energy Reports

- ◆ Consolidated group/subgroup flexi energy report
- ◆ Shift report with user defined timing (Max 3 shifts)
- ◆ Shift report with specific energy consumption
- ◆ TOD report with user defined time slots (Max 5 slots)
- ◆ Flexible multi slab tariff definition
- ◆ Parameters report of any 6 /9 parameters in portrait/landscape mode.
- ◆ Energy bill for individual plant/group/sub-group
- ◆ DG and Electricity differentiation in billing.





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