



SMARTCOMM

PMS

Power Management System

ABOUT US

Lauritz Knudsen Electrical & Automation, formerly known as L&T Switchgear, is a leading player in the electrical industry owing to its 70+ years of strong legacy and commitment to the nation's growth. The brand is dedicated to providing a wide range of electrical and automation products and solutions to vital sectors of the economy, including industries, utilities, infrastructure, buildings, and agriculture. Our extensive portfolio includes low-voltage and medium-voltage switchgear, automation solutions, tailored software, and services.

With manufacturing operations in Ahmednagar, Vadodara, and Coimbatore, we adhere to global standards of excellence. Our operations are supported by well-equipped, in-house design and development centers, as well as tooling facilities, ensuring precision in manufacturing.

We proudly operate six Switchgear Training Centers (STCs) across Pune, Lucknow, Coonoor, Vadodara, Delhi, and Kolkata. These centers offer tailor-made classroom courses and lab learning experiences for technicians, customers, engineers, professionals, and students.

With a deep national presence and one of the largest electrical distribution networks, comprising over 1500 partners across the country, we are committed to driving excellence and delivering superior products and solutions that power India's growth journey.

SmartComm Power Management System



SmartComm Power Management System offers a cutting-edge way to monitor, control, and maximize electrical energy use. It provides real-time insights on power quality, energy usage, and the general performance of electrical systems by integrating sensors, communication modules, and software. By giving businesses worldwide information on the energy

usage and functionality of various systems in their buildings, the solution helps them become more efficient and profitable. The solution helps businesses identify any issues by offering real-time data monitoring and analysis on the systems. This lowers unscheduled downtime and improves safety.



SmartComm revolutionizes how Electrical system is designed, operated, maintained, and monitored. It enhances efficiency, reliability, and safety while reducing costs and downtime.

SmartComm assists businesses in moving from

- › From Reactive to Proactive
- › From local to Remote

- › From restricted to a new level of artificial intelligence and computing

Monitoring the Power Distribution Network/Process, minimizing downtime, receiving system-related warnings, and scheduling maintenance tasks are all made easier with SmartComm PMS.

Everything you need for Smart Power Management

The emerging global concept of 'smart cities' gave LK E&A the opportunity to leverage its electrical and automation strengths to bring you more convenience, comfort, and safety through its uniquely designed Smart Communication solution - SmartComm PMS.

SmartComm PMS is an ultra-modern computer-based integrated Power management system installed in buildings

and factories which reliably controls and monitors entire switchgear and power systems.

SmartComm PMS is a state-of-the-art SCADA-based unified software platform for device communication, integration, data acquisition, data management, monitoring & control and Business Intelligence.

SMARTCOMM PMS SOLUTION ARCHITECTURE



SmartComm PMS supports a wide range of devices and protocols. Scalable, it can expand its functionality to address the growing requirements of smart grids and smarter cities.

It minimizes the engineering effort required for fresh configuration and development. SmartComm PMS extends

its capability to industrial as well as building segment. It is a highly scalable, flexible, modular yet robust and reliable communication platform.

Uniquely virtual, and sustainable, SmartComm PMS is the total smart package.

Key Features

- › **Reliable** - SCADA based, ensuring trouble-free operation.
- › **Scalable** - Accommodate growing needs.
- › **Customizable** - Configure the system to meet your unique requirements, Customized SLD Creation based on IEC 617-2-8 symbol library, like SmartComm Design
- › **Remote Monitoring and Control** - Enables operators to monitor and control switchgear remotely via dashboards. With real-time connectivity for monitoring, control, and diagnostics, operators get reports instantly and, if necessary, start remedial action right away.
- › **Speed and Efficiency** - Ethernet and Serial communication guarantee speed.
- › **Flexible** - Numerous protocols and drivers, including Modbus

- TCP/IP, Modbus RTU, IEC 61850, Simatic S7, OPC UA, DNP3.0, and others, are supported by the system.
- › **Easy to Configure** - All E&A devices come pre-configured, thus device configuration is engineering free.
- › **Minimal training requirements** - System's interactive graphical user interface enables the user to understand the System easily.
- › **Easy to read reports** - Reports are easy to read and understand and are fully customized reports with user created templates.
- › **User Access Control** - Role-based Authentication
- › **Instant alerts** - System provides a facility alarms and event alerts and acknowledgement.

Benefits

- › Integrating all your Products with communication capabilities
- › Monitoring and analyzing data on WAGES (Water Air Gas Electricity & Steam)
- › Built-in Energy Management features
- › Controlling Power Distribution Network & Process via Communication
- › Avoid excess demand charges by reducing peak demand.
- › Reducing Power factor penalties from utility company by analyzing and continuously tracking PF.
- › Mitigating the adverse impacts of harmonics through decision-making and system power quality control
- › Automatically control on-site generation and secondary systems
- › Control/Manage an industrial electrical distribution system with minimal workforce.
- › Determine energy-intensive loads and implement remedial actions.
- › Personalize your dashboards to give macro-level information. Important management-level insights.
- › Create your own Dashboard to monitor KPIs such as
 - › Kwh consumption
 - › Power factor
 - › Maximum Demand
 - › Regenerative power
 - › Harmonic distortion
- › Continuously check the motor condition by monitoring the drive parameters, such as power, kwh, current, voltage, frequency, etc.
- › Remotely control motor speed by varying drive frequency
- › Continuously monitor trip, event, and maintenance records
- › schedule maintenance and spare parts acquisition to reduce energy and operation cost.
- › Compile energy monitoring data for various loads to get a comprehensive view.
- › Through aesthetically pleasing dial gauges, view real-time parameters such as voltage, current, and power factor in one place.
- › SmartComm comes with an integrated software system for energy monitoring and billing. It can be used as an energy management system to optimize costs and save energy.
- › Energy Efficiency through Power Management System
- › Avoid tariff-based penalties from electricity boards with maximum demand monitoring feature.
- › Customized Reports with Automatic Scheduler Provision
- › Continuously monitor trip, event, and maintenance records
- › Quickly diagnose fault with planned alarm and fault annunciation feature with MTX releases

SmartComm PMS is in the Savings

SmartComm PMS is a cutting-edge control and management system that is intended to reduce your installation's operating expenses. It aids capacity planning and lowers energy expenses and downtime. Increases productivity, and offers a comprehensive perspective of the system.

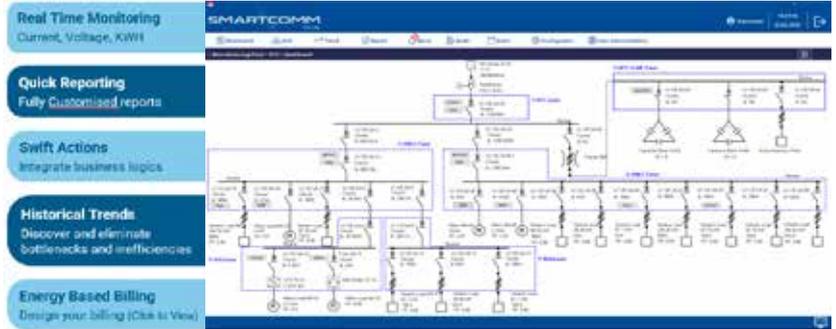


Built In - Energy-Management System

The biggest input expense for most industries is energy usage. A slight variation in energy usage directly affects your input costs.

Energy savings and cost optimization are the results of using SmartComm PMS as an energy management system. Here are the advantages:

- › Avoid excess demand charges by reducing peak demand
- › Reduce power factor penalties from the utility company by analyzing and continuously tracking PF
- › Reduce the negative effects of harmonics by monitoring the power quality of the system and making decisions.
- › Automatically control on-site generation and secondary systems
- › Identify energy-intensive loads and take corrective measures.



Communicable Device Compatibility

From digital panel meters to circuit breakers, protection relays, AC drives, soft starters, and IO modules, SmartComm PMS is a single platform that unifies all our communicable devices.

ACB & MCCB

Matrix Releases



Relays

Motor, APFC & feeder Protection



Drives & Soft Starters



Meters

Digital Panel Meters & Tariff Meters



SmartComm PMS: 'Intelligence' through Integration

- › Continuously monitor trip, event, and maintenance records
- › Quickly diagnose faults with the planned alarm and fault annunciation feature with MTX releases
- › Remotely control and monitor the circuit breaker and changeover through CB-COM for centralised jurisdiction of Plant Supply (EB or DG)
- › Get 'trip info' details such as cause of tripping, date and time stamping of tripping.
- › Monitor incomer ACB terminal temperature (individual ACB pole), along with real-time trending and overtemperature annunciation for planning maintenance.
- › Undertake time-based harmonic monitoring and analysis for the complete plant, taking necessary action to reduce respective losses.
- › Monitor load-trending for ACBs which can help in implementing dual set group for intelligent selection of protection settings.
- › Compile energy monitoring for different loads to obtain holistic picture.
- › View instantaneous parameters like voltage, current and power factor at a single location, through aesthetic dial gauges.
- › Continuously monitor drive parameters, e.g. power, energy, current, voltage, frequency etc. thus check motor conditions.
- › Remotely control motor speed by varying drive frequency

SmartComm PMS: Smart is in the Reporting

Fully Customized Dashboards

Personalize your dashboards to give macro-level information. Important management-level insights.

Create your own dashboard to monitor KPIs such as:

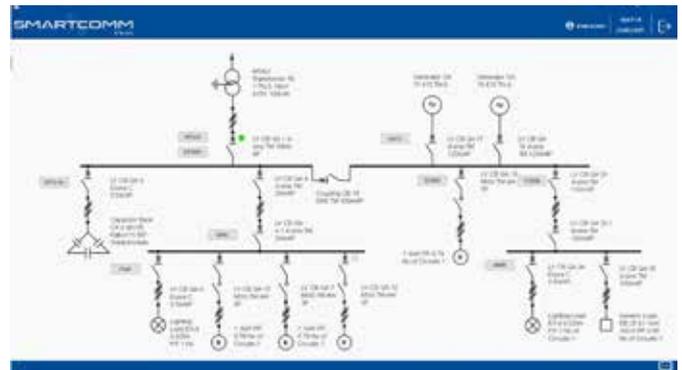
- › Energy consumption
- › Power factor
- › Maximum demand
- › Regenerative power
- › Harmonic distortion
- › Specific energy consumption



Create your plant SLD

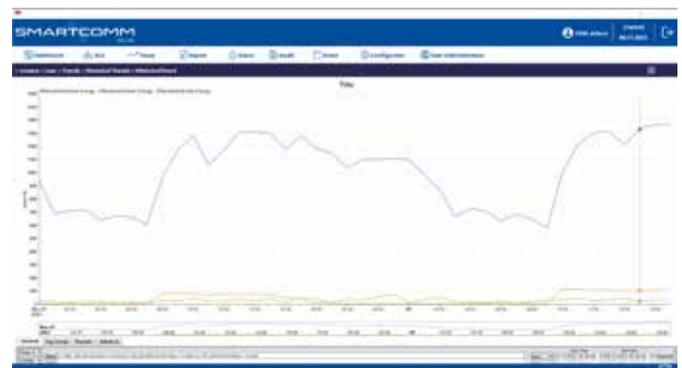
See Device Parameters by just clicking the specific device.

Plant's Single Line Diagram monitoring with Real time Data



Analysis of Historical Trends

Historical trends can be generated for any selected parameters for further analysis.



Powerful Reporting Tool

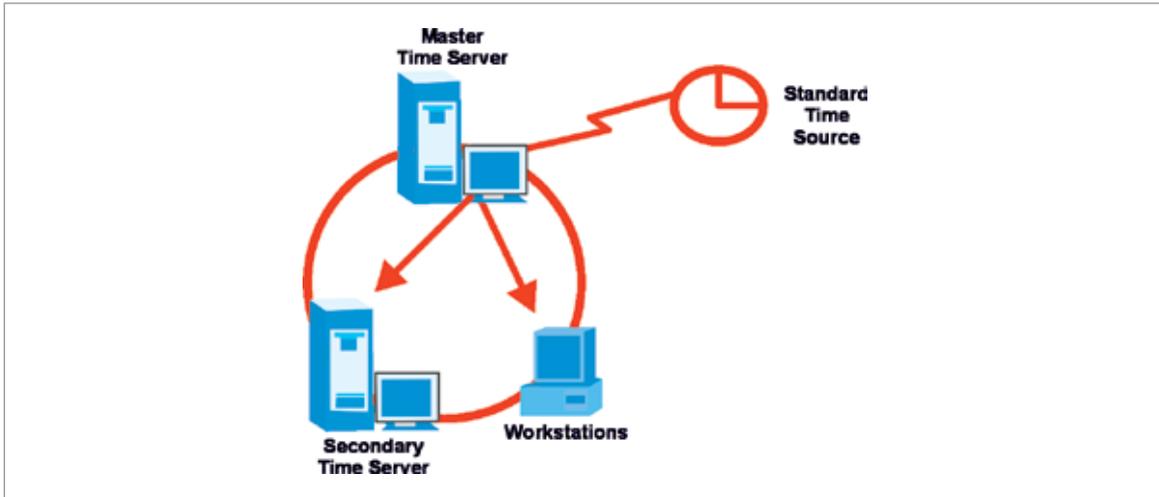
- › The chief criterion for the selection of a Power Management System is the reliability of its reporting tool.
- › In addition to offering conventional reporting templates, SmartComm's reporting tool lets you generate completely customizable reports with unique layouts and logos that incorporate user-selectable parameters.
- › The software's report feature includes time-of-use configurations, providing reports with energy and demand values for time periods to meet specific billing requirements.
- › For convenience of data access and customer reporting, reports are published in Microsoft Excel. They offer information for documentation, evaluation, and plant operation analysis.
- › Energy reports may quickly assess a building's energy efficiency using pre-made reports. For all operation data, gap-free processing and presentation are guaranteed by the data assessment and reporting program.
- › Energy Reports compiles robust reports using the data from the process data management database in a variety of combinations and timeframes. The reports are available in a variety of print and display formats.
- › Standard reports include:
 - › **Measurement:** Trend patterns for electrical energy usage, power demand or any other logged parameter. Utilize these numbers in Excel to generate comprehensive reports, facilitate additional research and reveal actual business conditions.
 - › **Energies by day; energies by hour** - Analyze measured kilowatt-hours for cost allocation or comparison purpose.
 - › **Time of Day (TOD)** - 8 in-built TOD schedules each with multiple periods for energy accumulation

 Average Power Factor-Report 2004-02-27 00:00:00 2024-02-27 23:59:59		
DaarComments/ Date/Time	Meter 5000 PowerFactor	D5000 DownFactor
27-02-2024 00:00:00	0.98	0.97
27-02-2004010000	0.98	0.97
27-02-2004 02:00:00	0.98	0.98
37.00.2004 10000	0.98	0.98
27-02-20040400:00	0.97	0.97
27-02-2024 05:00:00	0.97	0.98
27-02-2004 06:00:00	0.98	0.97
27-02-2024 07:00:00	0.97	0.97
27-02-2004 08:00:00	0.97	0.97
27-02-2024 09:00:00	0.97	0.97
27-02-2004 100000	0.98	0.98
27-02-2004 11:00:00	0.97	0.98
27-02-2004 12:00:00	0.98	0.97
27-02-2004 13:00:00	0.98	0.97
27 02 2034 140000	0.98	0.98
27-02-2004 150000	0.97	0.98
27-02-2004 16:00:00	0.98	0.98
27.10.2004 17:00:00	0.98	0.97
27-02-2004 18.00.00	0.97	0.98
27-02-2024 19:00:00	0.97	0.97
27-02-2024 20:00:00	0.98	0.97
27 02 2034 21:0000	0.97	0.97
27-02-2024 22:00:00	0.98	0.98
27-02-2024 23:00:00	0.98	0.98
Minimum	0.97	0.97
Minimum	0.98	0.98
Average	0.98	0.97

 Multi Device-TOD Cost Report 2024-02-25 00:00:00 to 2024-02-27 23:59:59					
UserComments/ Date/Time	TOD Time	Meter 5000-Energy	Device 5000-Energy	Meter 5000-Costof Energy	Device 5000-Costof Energy
Unit/Date/Time	TOD Time	kWh	kWh	INR	INR
2024-02-25	07:00:00-09:00:00	1117.11	1117.11	16756.65	16756.65
2024-02-25	11:00:00-14:00:00	1614.51	1614.6	40365.25	40365.0
2024-02-25	17:00:00-20:00:00	1614.51	1614.6	72657.45	72657.0
2024-02-26	07:00:00-09:00:00	1117.8	1117.8	16767.0	16767.0
2024-02-26	11:00:00-14:00:00	1614.51	1614.6	40365.25	40365.0
2024-02-26	17:00:00-20:00:00	1614.51	1614.6	72657.45	72657.0
2024-02-27	07:00:00-09:00:00	1117.31	1117.8	16767.15	16767.0
2024-02-27	07:00:00-09:00:00	1613.91	1613.91	40347.75	40347.75
2024-02-27	17:00:00-20:00:00	1614.59	1614.59	72656.55	72656.55
Minimum		1117.11	1117.11	16756.65	16756.65
Maximum		1614.51	1614.6	72657.45	72657.0
Sum		1303966	3039.61	38934050	389338.95
Average		1448.35	1448.85	43260.06	43259.88

Time Synchronization

Time synchronization in SmartComm PMS synchronizes your time and the device time with the SmartComm server, and the server time with the GPS or NTP server.



Email/SMS

Emails Notifications
(Click to View)

email@

Get scheduled reports & Alarms via email.



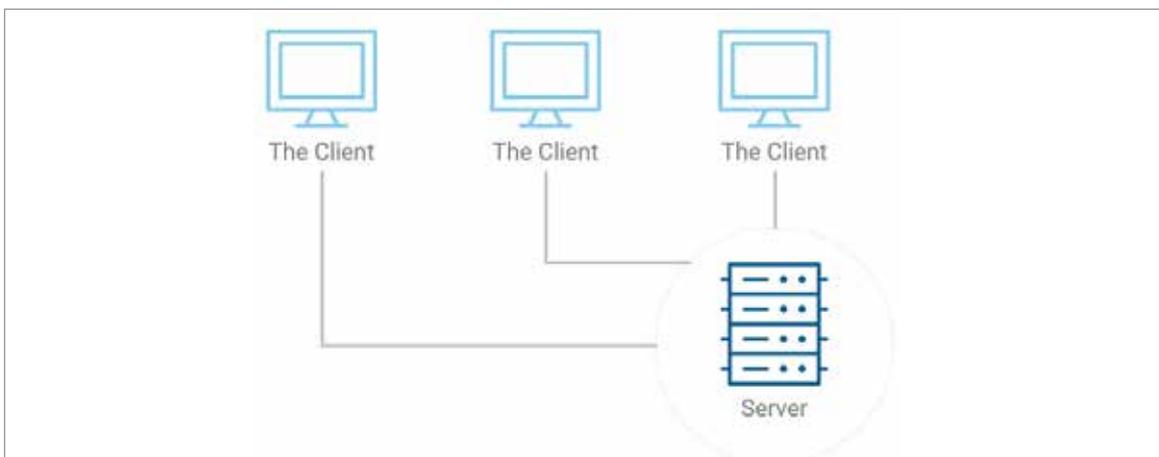
Mobile Messages
(Click to View)

SmS

Get Alerts such as trips, faults, MD any many more.



Thin/Web Clients



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Product improvement is a continuous process. For the latest information and special application, please contact any of our offices listed here. Product photographs shown for representative purpose only.



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