

# Smart is in the Communication







# Imagination-infused Engineering

L&T Electrical & Automation (E&A) is a market leader for electrical distribution, monitoring and control solutions in the low voltage category.

Popular among customers as L&T Switchgear, E&A offers a wide range of low and medium voltage

switchgear, motor starters, electrical systems, industrial automation, building electrical solutions, energy management solutions, electrical modernization solutions and metering solutions. Its products and Solutions cater to key sectors of economy like industries, utilities, infrastructure, building and agriculture.



E&A's manufacturing operations at Navi Mumbai, Ahmednagar, Vadodara, Coimbatore and Mysuru in India adhere to global practices of excellence and receive support from well-equipped in-house design and development centres as well as tooling facilities that contribute to precision in manufacturing.

# **Everything you need for smart Power Management**

The emerging global concept of 'smart cities' gave 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.

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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 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 minimises 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.



All the communicable devices like Meters, ACB, MCCBs, Drives & Soft Starters, Relays, etc. can be configured for monitor and control purpose..

# [Smart is in the Framework]



# [Smart is in the Benefits]

# SmartComm PMS brings you a host of benefits:

### Reliable

It is SCADA-based, ensuring you of trouble-free operation.

## Meets your growing needs

Highly scalable, it grows to meet your expanding needs.

## Customisable

You can programme the system for your specific needs. The system has a customised SLD creation based on IEC 617-2-8 symbol library, similar to SmartComm Design.

# **Real-time reporting**

Real-time communication for monitoring, control and diagnostics enables you to get immediate reports and swiftly initiate corrective action, if required.

# Speed and efficiency

Ethernet as well as serial communication assure you of speed.

## **Flexible**

The system supports multiple protocols and drivers like Modbus TCP/IP, Modbus RTU, IEC 61850, Simatic S7, OPC-UA, MQTT.

## Easy to configure

The configuration of the devices is engineering-free as all L&T E&A devices are pre-configured.

## **Easy-to-read reports**

Reports are easy to read and understand - they are fully customised reports with user-created templates

### **Instant alerts**

The system provides a facility with alerts and acknowledgments.

# Smart is in the Savings

SmartComm PMS is designed to minimise the operational costs of your installation by providing an advanced control and management solution.

It helps reduce downtime and energy costs, supports capacity planning. Improves efficiency and provide a view of the system as a whole.



# An effective energy-management system

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Energy consumption is the single largest input cost for most industries. A small change in Energy consumption has a direct impact on your input cost.

Using SmartComm PMS as an energy management system will lead to energy savings and cost optimisation. Here's how vou benefit:

- 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**

SmartComm PMS is a single platform that integrates the entire range of our communicable products from digital panel meters through circuit breakers, protection relays, AC drives, soft starters and IO modules.



# 'Intelligence' through Integration

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- Continuously monitor trip, event and maintainence 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

# [Smart is in the Reporting]

# **Fully Customised Dashboards**

Create your own dashboard to monitor KPIs such as:

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



Create your SLD and see device parameters by just clicking the particular device



# **Historical Trends**

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



# **Powerful Reporting Tool**

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The chief criterion for the selection of a Power Management System is the reliability of its reporting tool.

SmartComm PMS reporting tool includes standard reporting templates and enables you to create fully configurable reports with custom logos and layouts to include userselectable 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.

Reports are published in MS Excel, MS Word & PDF for easy data access and custom reporting. They provide information on plant operation analysis as well as for evaluation and documentation.

Using Energy Reports once can easily check a building for energy efficiency-based on predefined reports. The data evaluation and reporting program guarantees gap-free processing and presentation of all operational data.

Energy Reports compile powerful reports from the data stored in the process data management database in any number of combinations and selectable periods. The reports can be displayed and printed in various forms.

- Energies by day, energies by hour-analyse measured kilowatt-hours for cost allocation or comparison purpose.
- THD quantities measure, analyze and compare total harmonic distortion.
- Time of Day (TOD)-8 in-built TOD schedules each with multiple periods for energy accumulation.



### Standard reports include:

• Measurements - Trend patterns for electrical energy usage, power demand or any other logged parameter. Leverage these values in Excel to create detailed reports, enable further analysis and reveal actual business conditions.

# Time Synchronization

The time synchronization feature in SmartComm PMS aligns server time with the NTP server or GPS, and your time and the device time with the SmartComm server.



# Email/SMS

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You can configure SmartComm PMS to e-mail reports and SMS critical alerts. Email/SMSes can be triggered to specified users with reference to pre-determined events/schedules.



# **Thin/Web Clients**

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Multiple thin/web clients help access data on multiple workstations in different locations. You can create different users with different access levels. A security feature protects your system from undesirable operation,



# Electrical System Performance

All communicable devices integrated with SmartComm PMS will provide data which will help you to plan your maintenance schedule. Typical Data for Maintenance records such as date and time of maintenance, maximum 12t, reserved data, etc., will be available easily.





# **Smart Applications**

# SmartComm can enhance the operation - and provide savings - for a number of applications.

- x All Device Integration, Monitoring, Control & Diagnostics
- x Energy Management Solutions
- x Power Management Solutions
- x Smart Cities
- x Renewable Resource Management e.g. water management
- with the help of smart water meters

To save energy and operational costs and to increase the efficiency of your building or factory, contact us today.



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