



Metering Solutions



LARSEN & TOUBRO

It's all about Imagineering



Larsen & Toubro (L&T) is a technology-driven USD 9.8 billion company that infuses engineering with imagination. The Company offers a wide range of advanced solutions, in the fields of Engineering, Construction, Electrical & Automation, Machinery and Information Technology.

L&T Switchgear, which forms part of the Electrical & Automation business, is India's largest manufacturer of low voltage switchgear, with the scale, sophistication and range to meet global benchmarks. With over four decades of experience in this field, the Company today enjoys a leadership position in the Indian market with growing presence in International markets.

It offers a complete range of products including: controlgear, powergear, motor starters, energy meters, wires and host of other accessories. Most of our products conform to International standards, carry CE markings and are KEMA certified.

L&T manufactures and markets a comprehensive range of high quality electronic energy meters and metering solutions for utilities, industries and commercial establishments.

L&T products are designed and developed in-house and conform to relevant Indian and International standards. The products are manufactured at L&T's Mysore Campus, which is equipped with the latest range of testing facilities.

L&T through its emphasis on innovation, technology and quality is committed to support its customers with accurate, reliable and easy to use electronic metering solutions.

RESIDENTIAL METERING

L&T provides accurate and reliable solutions for residential metering.

Single Phase Meter | EM101+

This compact single phase meter fits snugly into any meter box. The bright back-lit display ensures error free reading.

Features

- Class 1.0 accuracy as per IS & IEC standards
- Forward energy recording irrespective of current direction
- Optical port/RS 232 port (optional)
- Indication for Power ON, Current Reversal & ELT
- Reset backups & TOD facility (optional)
- High surge withstand capability
- Anti-Tamper features

Dimension (H x W x D)

174 x 141 x 74 mm



Single Phase DT Meter | EM101+

The unique single phase meter designed for the DT (Distribution Transformer) metering application offers higher accuracy with better features.

Features

- Class 0.5 for active & 1.0 for reactive as per IS & IEC standards
- CT operated meter with 5A(Ib) to 10A(I_{max})
- Pulse LED output
- Indication for Power ON, Current Reversal, ELT & Neutral Missing
- Multiple Display Modes
- Load Survey, Reset Back ups & TOD features (optional)

Dimension (H x W x D)

174 x 141 x 85 mm



Three Phase Meter | EM301

The superiority of this meter lies in its ability to work normally under reverse current, unbalance voltage and current, different phase sequence, voltage variation etc.

Features

- Class 1.0 accuracy
- LEDs indicating presence of each phase
- Withstands 440 Volt between Phase and Neutral
- Maintains accuracy under current reversal conditions
- High surge withstand capability up to 8kV
- Polycarbonate enclosure
- Anti-Tamper features

Dimension (H x W x D)

172 x 180.5 x 76 mm



COMMERCIAL & INDUSTRIAL METERING

The trusted choice for industrial and commercial metering, L&T offers products with a wide range of features.

LT Whole Current Meter | ER300P

Model ER300P is a multipurpose unit which integrates several functions and replaces various equipment for metering energy parameters. This meter is used for commercial metering as well as for small industrial loads. The meter has advance data recording capabilities.

Features

- Class 1.0 accuracy as per relevant IS & IEC standards
- 10-40, 10-60, 20-100 A current rating
- Up to 3 maximum demand registers
- Load survey
- Anti-Tamper features
- Self diagnostic capability
- Optical port/RS 232 (optional)
- Time of day metering

Dimension (H x W x D)

327 x 187 x 120 mm



CT Operated Meter | ER300P

This meter is designed for the metering of HT and LT consumers and at feeders. The meter has advanced data and failure recording capabilities and is provided with communication ports for data downloading - a software is provided for data collection, load survey analysis and energy management applications. This meter can be interfaced to variety of communication devices.

Features

- Class 0.2s, 0.5s, 1.0 as per relevant IS & IEC standards
- 1A and 5A current rating
- 3Phase 3 Wire/3Phase 4 Wire System
- Anti-Tamper features upto 12 reset backups
- Self diagnostic capability
- Multiple tariff feature
- Upto three maximum demand registers
- Load survey features
- Upto 12 reset backups
- Optical port/RS 232/RS 485 (optional)
- Flush mount version available

Dimension (H x W x D)

327 x 187 x 104 mm



UTILITY METERING

L&T's high accuracy meters are used by many large utilities for measurement of bulk inter-utility power flow in Availability Based Tariff systems.

ABT Meter | ER300P

L&T's high accuracy ABT (Availability Based Tariff) Meter provides a flexible solution for energy monitoring & billing bulk inter-utility power flows. L&T's ABT meters are being widely used in India for utility metering.

ABT Features

- 15 minute block average for Frequency and Energy
- Frequency coding for billing
- Separate Reactive Energy Registers linked to supply voltage
- Midnight storage of energies
- Load profiles

Features

- Class 0.2s accuracy
- 3 Phase 4 wire
- Draw-out/projection type
- Conforms to IEC/IS standards
- 4 Quadrant operation
- RS 485 communication (Optional)
- Auxiliary supply operation (In Draw-out)
- CT/PT error compensation (In Draw-out)

Dimension (H x W x D) - Projection Type

327 x 167 x 104 mm



PANEL METERS

L&T panel meters find wide application in a variety of switch-boards and panels because of their flexibility and ease of use.

Intelligent Panel Meter | Quasar

The meter is designed with DSP technology to combine measurement of both instantaneous and cumulative values in an electrical feeder. The parameters are displayed over 22 screens that can be scrolled up & down by front panel push buttons.

Features

- Class 0.5 & 1.0 as per IS & IEC standards
- kWh, kVAh & kVAh
- LCD with back light
- CT/PT ratio programming
- RS 485 communication
- Phase Sequence/Phase Association
- Harmonic measurement

Dimension (H x W x D)

96 x 96 x 112.5 mm



Dual Source Meter | GEMiNi

An innovative panel meter designed for dual source energy measurement. It serves as a replacement for two separate energy meters necessary for metering same application with dual energy sources.

Features

- Class 1.0 accuracy as per IS & IEC standards
- Dual energy register for dual energy source
- RS 485 MODBUS communication
- Field programmable CT, PT Values & Meter ID

Dimension (H x W x D)

96 x 96 x 105 mm



Intelligent Panel Meter | Acrux

This is an ideal product for control panels to measure kWh energy. Compactness of the meter ensures that it will fit in smartly into any panel. L&T offers this product in 3 phase 4 wire and 3 phase 3 wire system of different voltage and current.

Features

- Class 1.0 accuracy
- Active energy measurement
- Stepper Motor Counter Display
- Pulse output LED
- Terminal covers with sealing provision

Dimension (H x W x D)

96 x 96 x 100 mm



PANEL METERS

L&T panel meters find wide application in a variety of switch-boards and panels because of their flexibility and ease of use.

Three Phase kWh Energy Meter (NOVA)

NOVA is a compact, digital, panel mount meter for kWh measurement. NOVA is flush mount 3 Phase 4 Wire CT operated kWh meter with RS 485 MODBUS communication.

Features

- Accuracy class – 1.0
- Measures kWh & kW
- Forwarded energy registration in case of current reversal
- Phase wise Voltage, Current & Power on display
- Average Voltage & Current on display
- Phase sequence on display
- RS485 MODBUS communication
- Auto & manual display mode
- User friendly menu driven LCD display
- Field programmable CT/PT ratio
- Customised LCD display & Push Button navigation
- Scroll Lock feature for locking of a desired parameter on display
- Low CT/PT burden
- High Resolution Energy
- Auxiliary Supply 88V TO 300 V AC/DC

Dimension (H x W x D)

96 x 96 x105 mm

Panel Cutout: 92 x 92 mm



Pulsar

Features

- Active Energy measurement with class 1.0 accuracy
- LCD with backlight
- Pulse output proportional to kWh for remote energy measurement
- CT/PT ratio programmable with password protection
- No need for Auxiliary supply
- Terminal cover with sealing provision
- Compact and light weight
- Panel mounting: 96 x 96 mm



TESTING FACILITIES

L&T's manufacturing facility at Mysore is equipped with the latest test equipment including environmental test chambers, comprehensive EMI/EMC setups and high energy lightning surge test facilities. Here our products are constantly tested for function, accuracy, insulation, response to climatic conditions, EMI/EMC and mechanical requirements. Incoming inspection of electrical and mechanical components, field failure analysis, calibration of in-house equipment, outgoing inspection and validation of meter software & base computer software is done at the Lab.

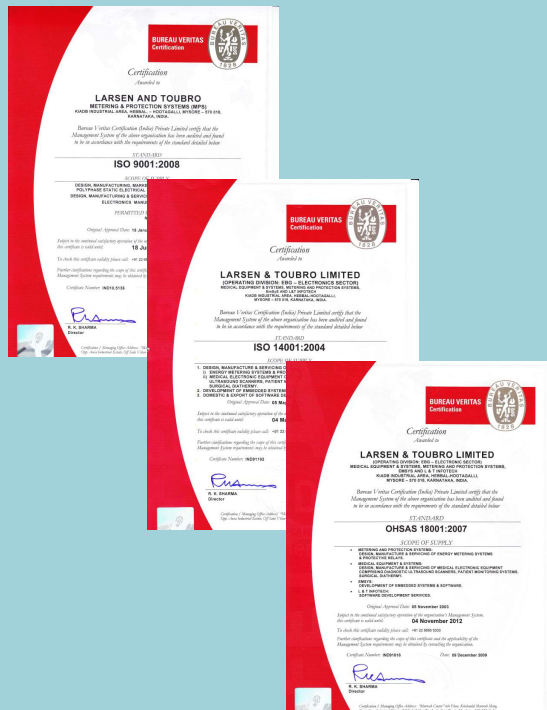
TEST SETUPS

- Dry heat Chamber
- Rain Chamber
- Climatic Chamber
- Dust Chamber
- Electrostatic Discharge Simulator
- Electrical Fast Transient Simulator
- Lighting Surge Simulator
- Damped Oscillator Simulator
- Conducted Wave Simulator
- Vibration Shaker System
- AC Voltage Tester
- Glow Wire Test
- Insulation Resistance Tester
- Mechanical Shock Simulator
- Impulse Voltage Test
- Radio Interference Test
- Radiated Susceptibility Test
- Damp Heat Cyclic Test
- CT/PT Tester
- MMD Calibrator
- Magnetic Test



OUR COMMITMENT TO QUALITY

We at L&T are committed to providing our customers with the highest quality products and services. All L&T meters conform to relevant Indian and International standards.



“ Deliver products and services meeting or exceeding customer requirements and expectations while improving value to stakeholders ”

- From the Quality Policy of L&T's Electrical & Electronics Division

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Product improvement is a continuous process. For the latest information and special applications, please contact any of L&T's offices listed here.



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