

Premier 551

Transformer-operated smart energy meter (India)



Premier 551 is a reliable, new-generation, three-phase transformer-operated smart electricity meter. It is equipped with a bi-directional communication unit to interact with the head-end system (HES) and plays a vital role in cost management.

It supports 4G communication that ensures network redundancy by having GPRS as a fall-back option to suppress the black spots in the AMI network. It works as a common asset for import-export and forwarded mode. The firmware can be upgraded remotely without affecting the usual meter operations.

It provides billing energies, history values, interval data and event alerts to the utility for billing cycle optimisation and effective network planning.



Application

- Distribution transformer metering
- MV feeder and boundary metering
- Renewable farms / Net metering

Benefits

- Reduced operational cost (low cost of ownership)
- Improves billing efficiency by providing periodic remote data
- On-demand data collection
- Network parameters monitoring helps improve network asset planning
- Better utilisation of field crew by having power-down information of specific node point
- Compatible with import-export or forwarded-mode metering

Features

- Four-quadrant energy measurement
- Four digital inputs
- Intuitive, legible and user-friendly display
- Back-end alerts and event logging on tamperers
- Actuators for display access
- Meter data collection through an optical port for no-WAN nodes
- Analysis of interval data
- Battery-mode reading in the absence of mains supply
- Parameters in line with IS15959 part 3
- Supply quality parameters

Highlights

- Reliable bi-directional communication unit
- Data delivery through smart push architecture
- Extensive firmware features to serve multiple applications of utility
- Robust security architecture



Technical specifications

Electrical

Connection type	CT, CT / VT operated
Wiring configuration	3P4W for LT and 3P3W, 3P4W for HT
Rated voltage and variation	LT: 240V P-N, -30% to +20% of Vref HT: 63.5 P-N /110V P-P, ±20% of Vref
Current range	-/5(10)A for LT and -/5(10)A or -/1(2)A for HT
Accuracy	Class 0.5s for LT and Class 0.2s / Class 0.5s for HT
Frequency	50 Hz ± 5%
Burden	As per IS16444 Part 2

Compliance

Standards	IS16444 Part 2, IS15959 Part 3
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Mechanical

Dimension H x W x D (approx.)	285 mm x 179 mm x 70 mm, Tolerance ±5mm
Weight (approx.)	1.35 ± 0.2 Kg
Enclosure	Engineering plastic
Sealing	Break to open enclosure, provision of sealing on meter cover, terminal cover, communication module cover and optical port

Environmental

Ingress protection	IP 54
Temperature	0°C to +55°C (operating) and -25°C to +70°C (storage)
Humidity	95%, non-condensing

Features

Energy channels	As per category D3 and D4 of IS15959 part 3
Digital inputs	Four digital inputs
Maximum demand	As per category D3 and D4 of IS15959 part 3
Tariff rate registers	As per category D3 and D4 of IS15959 part 3
Load survey	Up to 120 days load profile for 15 parameters (configurable) with 30-minute integration period

Communication

Communication options	Optical port for local and WAN (cellular) communication for remote data acquisition
Communication interface	4G fallback to GPRS
SIM Card	4G-enabled, nano SIM card
Antenna	Built-in antenna, and optional high gain extended antenna
Supported frequencies	850, 900, 1800, 2100 MHz

Africa
sales_africa@securemeters.com

Australia
sales_australia@securemeters.com

Europe
sales_europe@securemeters.com

India
sales_india@securemeters.com

South East Asia
sales_sea@securemeters.com

Middle East
sales_middleeast@securemeters.com

UK
sales_uk@securemeters.com

www.securemeters.com