SMART METERS

For a smarter way of energy and revenue management.

ELMEASURE®
Possibilities...Infinite

SMART METERING

PE 51XXS are a series of smart meter with Advanced Metering Infrastructure (AMI) to effectively measure and record the consumption of electricity, gas, or water for homes or similar residential setups. These meters are able to communicate the metered data via RF to the Head End Systems(HES) in real-time, allowing for more efficient management of resources and improved billing accuracy. They can also help in identifying and notifying outages, detecting and preventing fraud, and enabling customers to monitor their own energy usage.

Meets Standards
IS 16444
IS 13779
IS 15959

Certified products

CONNECTIVITY
LoRaWAN | GPRS

GAS
Electricity | Water | Gas

Helping people transform the way they manage electricity at homes.

BENEFITS

- **Improved accuracy:** Smart meters can accurately measure and record energy usage in real-time, which eliminates the need for manual meter readings and reduces the risk of billing errors.
- **Cost savings:** Smart meters can help utility companies reduce costs associated with manual meter readings and improve their operational efficiency.
- **Better energy management:** Smart meters provide customers with real-time data about their energy usage, which can help them identify ways to save money and reduce their carbon footprint.
- **Time-of-use (TOU) pricing:** Smart meters allow customers to take advantage of Time-of-Use pricing, which can save money by using energy during off-peak hours when it is cheaper.
- **Outage detection and response:** Smart meters can quickly detect power outages and help utility companies respond more quickly and effectively to restore power.
- **Detection and prevention of fraud:** Smart meters can detect and prevent energy theft by identifying abnormal usage patterns.
- **Remote management:** Smart meters enable utility companies to remotely manage and control the energy grid, reducing the need for on-site visits.

One simple solution for energy monitoring, remote controlling and bill management.

FEATURES

- Prepaid/Postpaid direct energy metering
- Dual source energy metering (Utility/Genset)
- Upto 8 slots of Time of Use (TOU) energy monitoring
- Tamper event detection and logging
- Mobile app for end consumers for remote monitoring of

ENERGY & POWER MONITORING

- 4 quadrant Import/Export direct metering and prepayment based disconnection functionality.
- Average maximum demand measurements at interval time of 30 minutes, along with the date and time of occurrence.
- Intelligent disconnection mechanism for protection against high voltages or for controlling loads on genset/utlity.
- Instantaneous measurements of electrical parameters and in-built historical data recording of load profile for 30 days.
- Tamper event detection along with historical log.
- LED output for on-field accuracy testing, based on impulses/kWh and impulses/kVARh.
- Cummulative Energy reading in the absence of mains, using internal battery.
- Remote meter reading over RS485 interface or through optical port over DLMS protocol.

IoT MONITORING

- Data collection and transmission of consumption data in real-time.
- Remote monitoring with strong cybersecurity measures.
- Commmunication options of RF / cellular GPRS / optical port for local communication.
- Automated meter reading and online bill payment through IoT technology provide ease and convenience to consumers.
- Analyze energy usage patterns, identify gaps to reduce consumption and energy bills.
- Easy energy audit and load analysis on-the-go through Theiox platform.
- The communication modem in the device is built-in and can be replaced with either an RF Module or Cellular modem.
- Meter Data Management with Advance Metering Infrastructure

REVENUE MANAGEMENT

- Low credit alerts via SMS and email notifications.
- Non-disconnection of power during holidays or non-working hours.
- Negative credit as an emergency function during zero balance.
- Payment options for consumer - online gateways / offline transactions
- Multiple Tariff options - Fixed/maintenance charges, slab tariff & sourcewise tariff
- Online meter readings & easy utility billing, eliminating manual readings and human errors.
- Single-click tariff updates over an entire network from a remote/centralized location.
- Recharge history along with the payment mode.

More than just a residential energy billing solution.

The smart energy metering solution goes beyond simply managing your residential energy bills. It offers a comprehensive energy management system that helps you optimize your energy usage, reduce electricity bills, and improve overall efficiency.

Residential Energy Management: Smart meters are used for real-time monitoring and management of energy consumption in homes and apartments.

Commercial and Industrial Energy Management: Used to monitor and manage energy usage in commercial buildings suchs office spaces, shopping malls, employee quarters, factories, and other industrial facilities.

Demand Response Programs: Smart meters enable energy providers to implement demand response programs, which incentivize consumers to reduce energy usage during peak periods.

Energy Efficiency Programs: Smart meters enable energy providers to implement energy efficiency programs, encouraging consumers to reduce their energy usage and lower their bills.

Grid Management: Smart meters provide real-time energy consumption data that helps energy providers balance energy demand and supply, avoid power outages, and optimize grid efficiency.

Smart Grid Development: Smart meters play a key role in the development of smart grid infrastructure, which integrates information and communication technologies to improve energy management and efficiency.

Technical Specification - Smart Meter

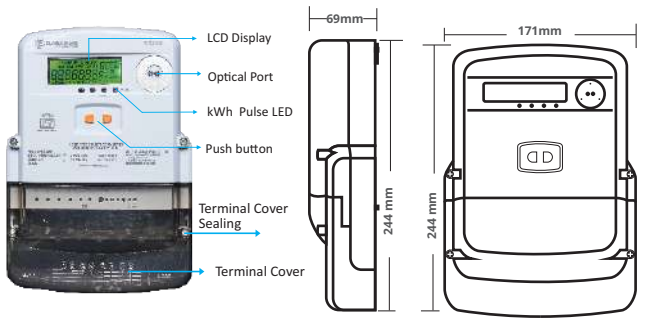
Specification	Three Phase (PE5120S)	Single Phase (PE5121S)
Connection Type	3-Phase, 4-wire AC Static Energy Meter	1-Phase, 2-wire AC Static Energy Meter
Accuracy	Class 1.0 Compliance as per IS 16444 Part 1	
Rated Current	Whole Current : 5/60A, CT Operated : -/5A	
Rated Voltage	3 X 240V (P-N) (-40% to + 20%), Frequency: 50 Hz ± 5%	240V (P-N) (-40%to + 20%), Frequency: 50 Hz ± 5%
Power Consumption	AS Per Standards	
Display Type	LCD with Backlit, Display mode: Auto Scroll, Push Button, Low Power Mode	
LED Indicators	LED Pulse imp/kWh for Energy Parameters	
Anti-Tamper Features	Current Reversal, Phase missing, Top Cover Open, Magnetic Temper	Current Reversal, Neutral missing , Earth Load tamper, Top Cover Open
Backup Power	Internal Rechargeable Super Capacitor	
Communication Port Options	Optical Port, WAN: Cellular LTE , GSM|GPRS:900/1800MHz, NAN 865-867 MHz With External Antenna, With Inbuilt/ Plug-in Options	
Communication Protocol	DLMS COSEM (GPRS/ Optical Port)	
Load Survey Parameters	30 Minutes integration period for 90 days	
Ingress Protection	IP 51	
Temperature	- 10°C to +55°C(Operating), -25°C to +70°C(Storage),Relative Humidity Up to 95% Non Condensing	
Standards	IS 13779, IS 16444, IS 15959, IEC62052-11	
Others Features	Maximum Demand, Time of Day, Load Control for Power Connect / Disconnect, Over Voltage, Over kVA	

Note: For more Information Contact your nearest sales office

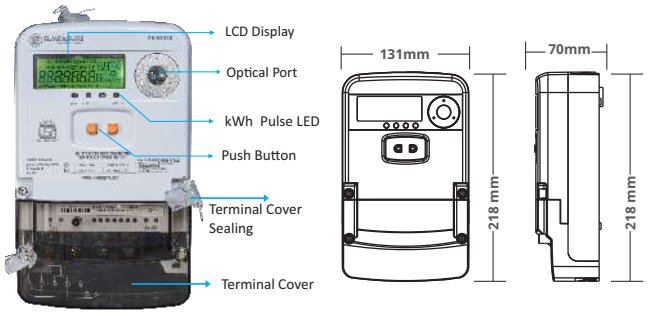
Technical Specification - Prepaid Meter

Specification	Three Phase (PE5120P)	Single Phase (PE5121P)
Accuracy	Class 1.0	
Sensing/ Measurement	True RMS, 1 Sec update time. 2 Quadrant Power & Energy	
Input current	Whole current 10/60A, Starting current 0.4% of Basic Current	
Input voltage	3 X 240V (P-N) (-40%to + 20%) (415 VLL)	240V (P-N) (-40%to + 20%)
Input Frequency	45 - 65Hz	
Display Resolution	1 row, 6 Digits, (Integrated 6 Digits) 10mm, LED	
Display Mode	Auto Scroll, Push Button	
Communication	RF, GPRS, RS485	
Connection	Three Phase 4 Wire	Single Phase 2 Wire
Wire gauge	6 AWG	
Operating temp	-10°C to +55°C	
Ingress Protection	IP 51	
LED Indication	Pules LED for kWh	

Mechanical Specification:



Three Phase



Single Phase

ELMEASURE®
Possibilities...Infinite

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