IS 15884 IS 13779

AC STATIC WATTHOUR METER

Multifunction | Dual source | Over voltage/current cut off for protection

SINGLE DEVICE FOR ELECTRICITY, GAS & WATER MEASUREMENT!

Features :

- Ability to pay-as-you-go.
- Provides Overload tripping for EB and DG
- Provides Overvoltage protection
- Provides a Dual source measurements Up to 80A whole current / CT operated (for BIS upto 60A)
- Meters are available in Single Phase or Three Phase
- Monitors and display the balance, VLL, VLN, A, Hz, W, PF, VA, kWh EB and DG, Gas and Water usage.
- Allows Time of Use / Time of Day [TOU/TOD] profiling
- Anti-tamper Features provided in the meter as per Indian standards.
- Explicit view of energy usage & tariff rates.
- Communication: RS485, Ethernet, GPRS, LoRa & Wifi.

PE with LoRa

- No dependency with service provider,to make private network
- QR Code scanning for auto configuration Gateway for interfacing with cloud network by using MQTT lite protocol.
- Mobile application for Pre Paid Software (PPS).
- External antenna for the longer range
- Limited amount of data transfer make sure the data delivery
- Completely encrypted End to End solutions
- Optional 4G connectivity
- Data delivery to the PC through MQTT, More devices can be connected to one single server
- Long range up to 1kM radius
- Multiple applications network for EB DG broad casting

Applications :

- Prepaid metering solution will provide flexibility for consumers to pay for electricity from any location without any hurdles, no more standing in queues, the hassle of bills & receive better customer service.
- Shopping Malls & Commercial Complexes.
- Gated residential societies /Residential apartments.
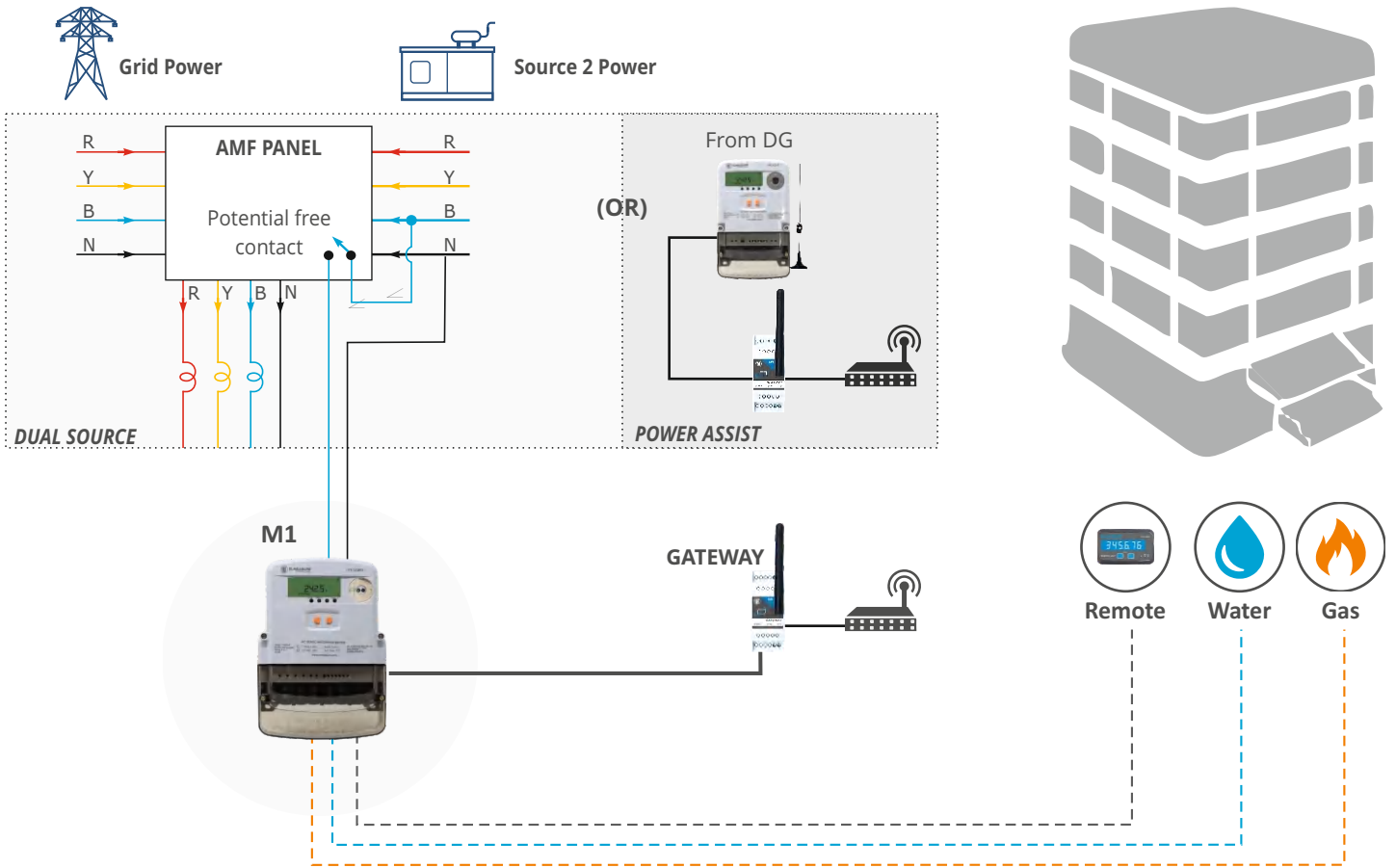- Industries & Government Sectors.

Technical Specification:

Specification	Description
Accuracy	Class 1.0 (default) as per IS 13779/15884, Class 0.5 as per IS14697 (Optional).
Sensing/ Measurement	True RMS, 1 Sec update time. 2 Quadrant Power & Energy.
Input voltage	4 Voltage inputs (V_1, V_2, V_3, V_N) .
Input Frequency:	45 - 65Hz
Input current	Current inputs (A_1, A_2, A_3) whole current 10/60A or CT operated 5A. *Overload*: 3 times for 3s. *Burden*: 0.5VA Max. per phase.
Whole current CT Operated	5/30A or 10/60A or 20/80A ___ /5A
CT PT Ratio Max	2000 MVA Programmable for CT operated.
Display Resolution	1 row, 6 Digits, (Integrated 6 Digits) 10mm.
Communication	RS485, Ethernet, GPRS, RF & LoRa
Gas / water input option	Factory configurable Digital input with Maximum Frequency 3 Hz for upto 4 channel.
Weight	3 phase: Unpacked - 1650 gms, Packed - 1850 gms Single phase: Unpacked - 670 gms, Packed - 750 gms
Torque	2 N-m
Wire gauge	6 AWG

Product Selection:

Models	Type	Whole Current	CT Operated	RS485	LoRa	Ethernet	GPRS	Single Source	Dual Source	Remote Display Unit	Digital Input 2	Digital Input 4
PE 5121 Single Phase, 10/60A	Prepaid	✓		✓	✓				✓	✓		
									✓	✓		
	Postpaid	✓		✓				✓	●	✓		
PE 5120 Three Phase, 10/60A	Prepaid	✓		✓	✓	✓			✓	✓	✓	✓
									✓	✓	✓	✓
									✓	✓	✓	
			✓	✓	✓	✓			✓	✓	✓	✓
									✓	✓	✓	✓
									✓	✓	✓	
	Postpaid	✓		✓		✓		✓	●	✓	✓	
								✓	●	✓	✓	
			✓	✓		✓		✓	●	✓	✓	✓
								✓	●	✓	✓	
PE 5120 Three Phase,10/60A	Prepaid or Postpaid	✓	✓	✓			✓	✓	✓	✓	✓	

Note: Input upto 60A is with BIS mark for RS 485 version. Possible to give up to 80A prepaid and 100A post paid in 3 phase meter. All LoRa will have maximum 2 DI ● Optional Feature

PREPAID METERING SOLUTION

Grid Power

Source 2 Power

DUAL SOURCE

AMF PANEL
Potential free contact

R Y B N

R Y B N

R Y B N

POWER ASSIST

From DG

(OR)

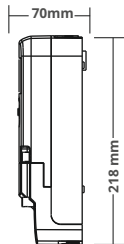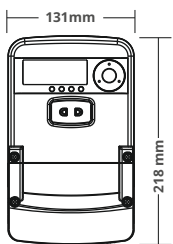**M1**

GATEWAY

Remote

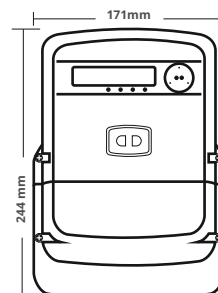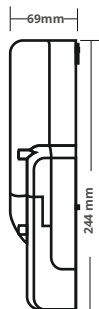**Water**

Gas

Remote Display Unit

- Allowing customer to monitor consumption.
- Elegant design & no separate power is required.
- Display all parameters including balance.
- Display blinks & buzzer beeps in frequent interval to indicate low balance.
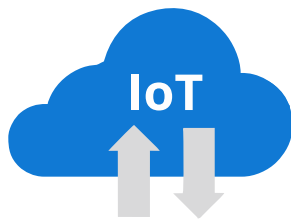
Mechanical Specification:

Single phase: Dimension Bezel:
218 x 131 mm (Depth 70mm)

131mm · 70mm · 218 mm · 218 mm

Three phase: Dimension Bezel:
270 x 171 mm (Depth 69mm)

69mm · 171mm · 244 mm · 244 mm

LoRA SOLUTION

IoT

LoRa GATEWAY

- 4G connectivity
- Reduce 50% of Network operational cost
- Single Gateway can connect
  - 256 Energy Meters with 15 Minutes log interval
  - 512 Energy Meters with 1 Hour log interval
  - 1024 Energy Meters with 12 Hours log interval
- Achieve better accuracy by transmitting limited parameters to the gateway

Within 1 Kilometer Radius

NETWORK SERVER

- No dependency with service provider,to make private network.
- Single Network server can connect upto 5 gateways
- Two Network Server can be connected to a single ELnet server
- Network server and ELnet server has to be placed in the same location
- Scan QR code from ELConfig APP for quick Installation

SOURCE CHANGEOVER

DG wireless broadcasting from Outdoor Gateway to each meter is on Point -To- Point basis, not as like Zigbee(Mesh) network.
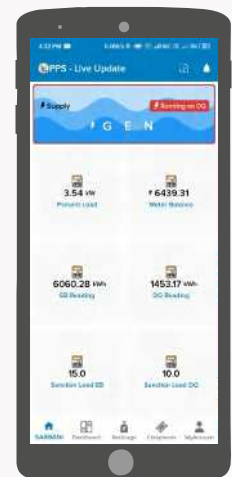
LoRa METERS

- Quick installation of Lora based system, as each Prepaid meters will have unique QR Code and the same will be scanned by Elmeasure App 'Elconfig' wh avoids delay in the configuration with software.
- Ability to monitor grouped meters, integrate gas & water meters.
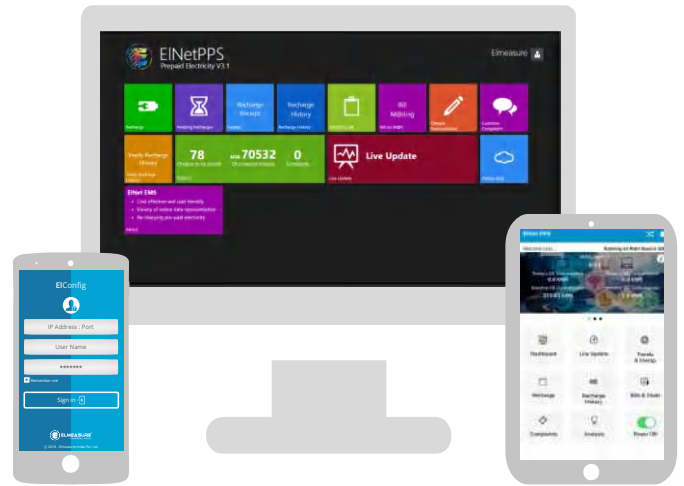- Direct recharge through smart phones

MOBILE APP

- Alarm notifications for low credit balance
- Recharge & monitor from anywhere
- Explicit view of energy usage and tariff rates
- ELNetPPS_API : ERP / SAP Integration

elmeasure.com

Software Features :

- Monthly fixed charges based on kVA/kW.
- Maintenance charges based on area or fixed.
- Advance information about tripping with 2 Alert SMS/Email for the different balance amount.
- Holiday cut off prevention.
- Night time cutoff prevention.
- SMS / Email will be sent stating negative threshold.
- EB/DG Grace threshold setting.
- kW/kWh logging every 15 minutes for future clarification, Profiling.
- Intimation on ELNet whether it is working on EB or DG to prevent misuse.
- ELNet displays EB/DG kWh, kW and Balance.
- Wrong Recharge reversal entry.
- Online Customer Login Portal- User can get balance credit through any of the interface (Mobile / web-portal) or through Apps.
- Service provider name logo, Grievance forum.
- Information through Smart mobile app where in no need of remote display.
- Communication option LoRa for post or pre paid
- 1KM Radius, 1000 meters with 4 hours data log for LoRa based meters.
- No dependency with service provider.
- Alarm notifications for low credit balance.
- Reduces manual supervision.
- Live updates on energy consumption at your fingertips.
- Keep records of recharge & consumption history.

Customer Web Portal | Mobile App

- Live, Energy consumption, Balance, Energy source monitoring trough App
- Recharge through digital / online payment system
- Remote switch ON/OFF through mobile app

ENERGY BILLING SOLUTION

Energy Bills, Consumption & Pricing

- Real time data monitoring
- Recharge Slip, Recharge history for the selected date range
- Monthly billing with breakup of EB/DG energy bills and Maintenance bills
- Running Hours of DG and Mains Supply is provided
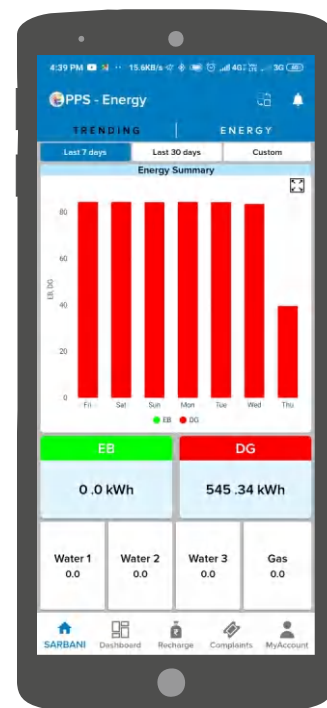- Cheque reconciliation

ONLINE PAYMENT, PAYTM, CREDIT CARD, DEBIT CARD

Alerts over Email | SMS

- Warning SMS at 20% and 10% of kWh threshold level, step tariff crossover
- Sending SMS to the users during power outage:
- Get alerts for activities like Account recharge, Recharge status,
- Low Credits, Overload, Overvoltage, etc.

ELNet PPS APP

Dashboard   Update   Trends   Recharge History

elmeasure.com