PES Electrical Pvt Ltd

Measuring Energy Every Second

"We manufacture hassle free system with low cost maintenance. We promise for our system & services, no one can beat us".

Amit Singh
1/25/2016

About PES Electrical

PES Electrical was emerged in 1998 with the thought to embellish people's inclination. In PES we stringently passionate for excellence and make fair commitment to develop innovative ideas and provide the best qualitative services to our client. PES manufacture Prepaid Dual source energy meter at its manufacturing plant – Manesar (Haryana) and our testing unit is in Faridabad (Haryana).

Since the inception, PES has been dedicated to provide better solutions to the industry through diverse businesses. We are successful in bringing innovative, reliable and qualitative services. We have the caliber to canvas your imaginations in to the real world of technology and luxury.
At PES, our solutions, our people, and our approach to business are held to only the highest standards so that we can more effectively contribute to better surroundings.

PES smart meters are developed after laborious tests and field study. Apart from being compact, elegant in design, simple in construction, we offer the twin objectives of accuracy, durability can easily comparable with the best products on National repute. Our manufacturing process is under constant review by the in-house R&D, which directs rigorous quality control adopted at each stage of the production. In a step towards the goal of "TOTAL QUALITY MANAGEMENT (TQM)", the company has been certified as a ISO-9001 company for adopting Quality Standards at all levels of its work.

The company has installed fully computerized Electronic Testing Equipment of Accuracy Class 1 along with number of super accuracy digital and rotary standards from Germany. We have installed our system not in India but also in Nigeria, Nepal and many more are on the way.

We Use PLCC for DG signaling through Injector, by using the existing AC power lines as a medium to transfer the information; it becomes easy to connect the houses with a high speed network access point without installing new wirings. The biggest advantage has to be ubiquity, and there is not limit of distance. NO one dare to remove signal because of heavy power line of Transformer. We synchronized stand by Injector in case of any fault.

QUICK HIGHLIGHT OF SMART METERS

- Meters are as per IS 13779 ISI Marked from Bureau of India Standard (BIS).
- Single phase 5-60 A and Three phase 10(60) A with In-home Display (wired and wireless, Optional).
- Meters can run in two modes, Main supply, DG supply.
- Internal Connect/ disconnect switch as per UC2 standard for high reliability and longer life.
- Can be configured for prepaid and postpaid at the time of installation. Builder or RWA can do audit of group of meters to see actual loss of KWH.
- Electrical characteristics as per IS standard.
- Meters has partial load feature to connect a particular phase for DG backup supply to avoid in convenience to consumers in night
- Meters are connected via MODEM using wire for communication through server via GPRS.
- The vending system has secured login option to change the tariff structure, deduct onetime or special charges without going to each meter.
- Consumer can configure its buzzer for shifting of source of energy credit limit and also send request to increase or decrease load limit of mains supply to central vending station through Mobile app.
- Meter and In-home display have LED to differentiate meter running on main or auxiliary supply.
- Consumers can login complaint and queries via your web portal.
- Automatic SMS is send to consumers when they recharge or have low credit limit.
- Automatic Bill is send each month to consumers on their email address which describe the consumption and maintenance charges.
- Billing can be done either in Kwh or Kvah mode
- Consumer can login to mobile app to see their consumption history in charts and they can check their recharge history and recharge their meters via web using secured payment gateway with credit/debit card or Net banking (optional).
- RWA can send tariff change request from our user friendly software interface and after our authorization new tariff uploaded on all meters automatically.

MAIN FEATURES - Three Phase Meter

Energy Measurement
Measure energy in two separate registers (AC mains & DG supply) can be configured to prepaid or postpaid meters

Easy to use and robust to all consumer
Secure data transfer with STS encryption technique and protocol
Additional features can be applied on customer request

Proven high reliable technology meter design
Last 50 tokens stored and can be recalled 6 months meter data (historic energy (data) is available for tracking.

Technical Specification

Load Control
Maximum current of 100A relay & Built-in circuit-breaker for Power dis/ connection.

Experienced design for Anti tamper function
Detecting open Meter cover or Terminal Cover
Detecting and warning of magnetic interference

Communication Interface
Optical local communication
RS485
PLCC

Measure Standard
IS: 13779,

Accuracy class
Active: class1.0

Measure parameter
KWH; KW MD, Kvah, Kva

Other function
Measure AC Main Power and DG supply
Configure to Prepaid and Post paid

Electrical specification

Meter type
3 Phase; 4 Wire system

Rating current/voltage
10-60 A, 3x240v/ 415v

Meter impulse
1000 imp/kWh

Environment Temperature
Operating temperature range: -100C +600C;

Starting current
20mA

Power consumption
V Circuit < 2W/10VA,I circuit <0.5VA per phase

Power Factor
0 lag-unity-0 lead

Voltage & Frequency range
3x240v/ 415v (-40% to +20%) at 50 Hz (5%)

Short over current
30 Imax

External magnetic
Immune to external magnetic influence (if not) record at Imax

Storage and transport temperature range: -400C +800C

Humidity
Relative Humidity: Up to 95% non condensing

Interface Display type
Segment LCD

Display mode
Auto scroll mode

LED
Six red led

Relay Type
Three Phase integrated relay for Load control

Control
Relay (maximal continual current)
Automatically disconnect (connect) by load control, manually by push button
Configurable separate overload disconnect for Mains and DG

MD
Import active and reactive MD
Export active and reactive MD

Tariff
Configurable - Season/week/

Billing Parameters
Daily energy profile data
Monthly billing data
Cumulative
Increment
Import/Export active MD
Default billing date

Billing mode
Automatic billing by

Communication category
Communication protocol
MODBUS Communication

IR
Standard equipped

GPRS
Communication to the server through MODEM

Setting software
Qubixlinks

Command billing via communication ports

Load curve
Record snapshot;
Load profile status;
Period increase energy;
Cumulative energy.

Payment
Credit or Prepayment alternatively;
Energy or Money billing alternatively;
Monthly fixed charges;
Pre-defined amount of emergency credit;
Friendly credit hours;
One time charges on request via SMS

EVENT
Record required
Standard Event Log (100 entries)
Disconnect Control Log (20 entries)
Power Quality Events Log (30 entries)
Fraud Detection Event Log (10 entries)
Common Events Log (100 entries)

Alarm
Low credit
Over load
Main or DG indication by LED & burger
LED blinking alarm for main/DG Change over

Anti-tamper Detect type
T-Cover removing detection
Power reverse;
Current unbalance;
Neutral disturbance;
Magnetic disturbance;

Structure & mechanical requirements
IP protect
IP54

Dimension (L x W x H)
225 x 175 x 85 (mm)

Weight (kg)
2 kg

Material
Engineering plastic (Polycarbonate

In Home Display (Customer interface unit)

MAIN FEATURES

Display meter parameter
Instant Voltage
Instant Current
Instant Power
History energy and cost
Meter date & time

Indicator and alarm function
Balance credit energy indicator
Over load alarm with buzzer
Low credit alarm with buzzer

Communication with meter
Power source
If connected by RS-485, source power from meter

SPECIALITY

- ✓ LED Blink to show power is mains or DG
- ✓ Alarm on overload, Low credit
- ✓ Load threshold limit can be configured
- ✓ Large LCD screen to view consumption KWh and MD history
- ✓ Connected to meters using RS-485

VENDING System Functions

Basic info Management
Area Management
Sales Department
User Group
User Information
Meter Data Management

Configuration
Tariff Configuration
Configure Threshold limits on Mains and DG separately
Configure Maintenance charges
Configure Penalty on Non - payment

Vending Management
Open Account
User Top-up
Batch Top-up
Re-issue Receipt
Replace Meter
User Overall Management

Settlement
Monthly Bill Settlement
Daily Bill Settlement
User Bill Details

Daily Report
Purchasing/ Selling & replacement detail
Consumption history of Individual
Billing History

System Configuration
Authorization Configuration
Operation Diary
Modify Log-in Password

Audit Function
To monitor overall consumption
consumers can be grouped
Common area can be put into seperate group
Auto audit functions to show losses