



# Lighthouse Series Three Phase Smart Meter

Residential and Commercial Smart Meter Allows Utilities to stage their Investment, Protect Revenue and have a more Reliable Grid

## Proven, Safe Choice

The Edison series of three phase Smart Energy Meters provides modular, reliable and robust metering solutions for utilities and their customers for residential and commercial applications.. As with the entire line of Lighthouse IoT's smart meters, the Edison smart meter incorporates a highly reliable bi-directional communication network that delivers 99.7- 100% reliability. With readings at frequent intervals, Lighthouse IoT's Smart Metering Solution collects power consumption and power quality data that is imperative to gain visibility of the power distribution network.

## Support Multiple Communication Protocols

Edison meters are available with GPRS, RJ-11, RS 485, Optical and 4G/2G communication module options, allowing the relevant communication module to be used for appropriate portions of the distribution network.

## Protect Revenue and Reduce Operational Costs

With communications enabled, Edison meters create a reliable and robust network, which prevents electricity theft and also helps identify unexpected technical losses.

Tamper events are detected and logged. Edison's rich data collection enables meter data management software to drive operational costs savings. The meter includes remote disconnect/re- connect switch, secure remote communications, firmware upgrades, rate plans, time-of-use tariffs, scheduled and on-demand meter reading without a trip to the field.

## Improve Distribution Network and Grid Reliability

Consumers' heightened demand for power availability, distributed generation, and requirements for greater efficiency in power distribution are creating a need for real-time, accurate and reliable measurements of power consumption and power quality throughout the distribution network. Edison conforms to a powerful revenue grade smart meter that provides real-time, reliable advanced metering data that prevents problems and improve grid reliability.

Some features of Edison smart meters:

### Metrological

- Four quadrant metering
- Time-of-use metering
- Load profile data
- V, I, PF and F
- Active, Reactive and Apparent Power/Energy

### Power Quality

- Over/Under Voltage, THD
- Non-technical loss detection(kVArh, PF)

### Smart Meter functionality

- Integrated disconnect/remote connect
- Remote firmware upgrades
- Net Metering
- Prepayment
- Remote Configuration
- Dual Source
- Outage Details
- Tamper/event detection

### Communication Protocol

- DLMS
- MODBUS



Three Phase Smart Energy Meter

## Specifications

### Voltage

Nominal Voltage: 230/240V (P-N), 400/415 V (P-P)  
Voltage Range: -40% to +20% of nominal voltage

### Frequency

Nominal Frequency: 50 Hz  
Tolerance: +/- 5%

### Power Consumption

As per IS - 16444, Part-1  
Voltage Circuit: <2W & 4VA Per Phase (Idle mode)  
Current Circuit: < 2VA

### Temperature

Specified Operating Range: -10° to +55° C  
Limited Operating Range: -25° to +55° C  
Storage and Transport: -25° to +70° C  
Humidity: ≤ 95% RH, non-condensing

### Current Ranges

10 - 60A  
Starting: 40mA (0.4% of Ib)

### Accuracy: CL 1.0

### Real-time Clock

Accuracy drift +/- 0.5 seconds per day In-built RTC daily synchronization with server

### Service and Connection Types

Designed for direct connection of 3-phase 4-wire Wye/Star

### Control Wiring Terminal

Maximum wire size: 25mm sq. (used cables may not fit)  
Terminal inside diameter: 9.5mm sq.

### Enclosure

IP 54 insulating encased meter

### Insulation class

Protective Class II  
Impulse with stand upto 6 KV

### Data Security

Password protection for optical communication; authenticated, password-protected transactions and encryption for GPRS, 4G/2G communication.

### Certifications

IS13779, IS16444 (type test certified)

### Communication

GPRS, 2G/4G: RS-485, RJ-11, Optical Port

**Please contact us for more details  
at 9773832888**

### Load Connect/Disconnect Relay Specification

Mechanical Life at Maximum Power, PF=1: 3,000 cycles  
Maximum Switching Current: 90 A  
Maximum Overload Current: 72A  
Maximum Switching Voltage: 250 V AC  
Utilization Category: UC1  
Maximum Switching Power: **20 KVA**  
High Voltage Insulation Strength: 4kV at 50Hz, 1 minute  
Insulation Resistance Strength: > 50MΩ

### Energy Measurements and Data Collection

Units Measured: kW forward, reverse; kWh reverse, forward + reverse; kVAR import, export; kVARh import, export; RMS voltage; RMS current; power factor; frequency

### Verification Output: 2 pulse-output LEDs

representing kWh and kVARh; signaling at 1,600 pulses per kWh and kvarh

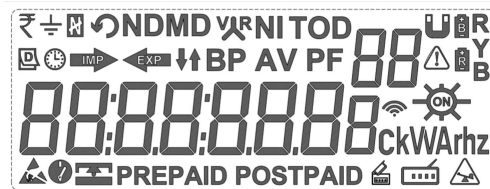
**Power Quality Analysis:** Under/Over Voltage; no. of short power outages; number of long power outages; duration and time of the last 10 long power outages; maximum and minimum frequency, current and voltage harmonics

**Time of Use:** Flexible TOU settings available with eight time zones which are configurable upto 8 channels.

**Data Logging:** Multiple Configurable channels are available for load profiling. Logging intervals (Integration Period) are user selected at 15, 30 minutes. Load survey is 90 days.

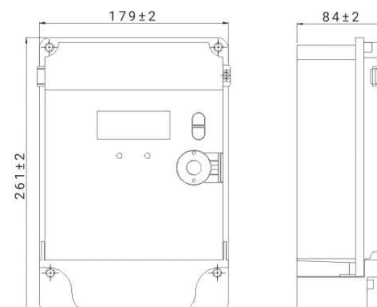
### Display

STN-type LCD with backlight support  
- 8 digit display  
- 10\*5 mm character size  
- 30 icons  
- *Our display includes 30 icons such as*



**GPRS or RF Communication, Relay Connect and Disconnect Forward Active, Import Reactive, Export Active, Reverse Active, Magnetic Tamper Indication, Prepay Enabled etc.**  
**Data Storage:** Non-volatile memory

**Warranty:** Min. 1 year



\*All Dimensions are in MM

**Drawing of Three Phase Smart Energy Meter**