

Adaptive Design Smart Power Sensor



Adaptive Design Smart Power Sensor is a multifunction power meter and is the ideal choice for monitoring and controlling of power distribution system. Some of the features and electric power parameters available are True-RMS Measuring Parameter, 4-Quadrant Energy, Power Quality Analysis and Over Limit Alarm.

Applications

- Metering of distribution feeders, transformers, generators, capacitor banks and motors;
- Medium and low voltage systems;
- Commercial, industrial, utility.

Features

- Metering;
- Voltage RMS tri phase V1 V2 V3;
- Current RMS tri phase with current transformers;
- Active Power P1 P2, P3, Psum;
- Reactive Power Q1, Q2, Q3, Qsum;
- Apparent Power Ssum.

Communication

- Compliant with FCC and ETSI EN 300 220-1 V2.2.1 (2008-04) regarding power, modulation and duty cycle;
- Frequency: 433.92MHz (ISM band License free), Modulation: FSK, Bitrate: 2400 bps, Bandwidth: 67 KHz;
- Max Transmit Power: 6 dBm, Receiver sensitivity: 109 dBm, Transmit duty cycle 1/600;
- Usable radio range: 60m outdoor line of sight, 30m indoor (under ideal conditions)
- 868MHz and 915MHz bands are also supported.

Metering

Parameter	Accuracy	Resolution
Voltage	0.5%	0.1 V
Current	0.5%	0.02%
Power	1%	0.1%
Reactive Power	1%	0.1%
Apparent Power	1%	0.1%
Frequency	0.2%	0.01 Hz – 45 ... 65 Hz
Energy	1%	0.1 kWh
Reactive Energy	1%	0.1 kvarh

Operating Environment

- Operating temperature: -25°C to 70°C;
- Storage temperature: -40°C to 85°C;
- Relative Humidity: 5% to 95% non-condensing.

Input Characteristics – Current Inputs (each channel)

- Nominal Current 40 A ac;
- Metering Range 0 ... 55 A ac;
- Withstand 100 Arms for 1 second;
- Burden 0.05 VA (typical) @ 50 Arms;
- Pickup Current 0.1% of nominal;
- Accuracy 0.2% full scale.

Input Characteristics – Voltage Inputs (each channel)

- Nominal Full Scale 400 Vac L-N;
- Withstand 600 Vac continuous 50/60 Hz for 1 minute;
- Input Impedance 2 Mohm per phase;
- Metering Frequency 45 Hz ... 65 Hz;
- Pickup Voltage 10 Vac;
- Accuracy 0.2% full scale.

Energy Accuracy

- Active - Class 1 – According to IEC 62053-22;
- Reactive – Class 3 – According to IEC 62053-23.