## Name :- SmartElex Power Meter - ACS37800

## Sku-

## Features-

## Allegro MicroSystems ACS37800

* + 0.85 mΩ primary conductor resistance for low power loss
  + 1 kHz bandwidth
  + Current sensing range up to +/- 30 A
  + Default I2C address: 0x60
  + Voltage channel RMS noise: +/-0.3mV
  + Current channel RMS noise: +/-0.1A
  + Voltage channel total output error: +/-1% (-40°C to 125°C)
  + Current channel total output error: +/-2% (25°C to 125°C)
  + Current channel total output error: +/-2.7% (-40°C to 25°C)
* Two 0.25” (6mm) through-holes for high current connections

## Description

Need a power sensor that can sense voltage up to 60VDC and current up to 30A? This is the product for you!

The Allegro MicroSystems ACS37800 power monitoring IC greatly simplifies the addition of power monitoring to many powered systems and is ideal for heavy current applications like:

* Monitoring the power drawn by a 3D-printer
* Monitoring the power drawn from a UAV battery
* Battery charging / conditioning
* Solar / photovoltaic panel power monitoring

Allegro’s Hall-effect-based, galvanically isolated current sensing technology achieves reinforced isolation ratings in a small PCB footprint. These features enable isolated current sensing without expensive Rogowski coils, oversized current transformers, isolated operational amplifiers, or the power loss of shunt resistors.

The ACS37800 power monitoring IC offers key power measurement parameters that can easily be accessed through its digital interface. Dedicated and configurable I/O pins for voltage/current zero crossing, undervoltage and overvoltage reporting, and fast overcurrent fault detection are available. User configuration of the IC is available through on-chip EEPROM.

**Important Note:** This product is not suitable for low current applications due to the +/-0.1A RMS Noise on the ACS37800’s current channel. Sensing less than an Amp? This is not the product for you…

**Safety Information:** Although the ACS37800 power monitoring IC is capable of monitoring AC power at high line voltages, the SparkX Power Meter is designed for Safety Extra Low Voltage (SELV) applications of up to 60VDC only. Its use in AC power systems is not recommended or condoned.

**Specifications**

## Allegro MicroSystems ACS37800

* + UL 60950-1 (ed. 2) and UL 62368-1 (ed. 1) certified
  + Reinforced isolation up to 517 VRMS
  + 0.85 mΩ primary conductor resistance for low power loss
  + Compatible with floating and non-floating GND
  + 1 kHz bandwidth
  + Current sensing range up to +/- 30 A
  + Default I2C address: 0x60
  + I2C address can be changed and stored in EEPROM
  + Voltage channel RMS noise: +/-0.3mV
  + Current channel RMS noise: +/-0.1A
  + Voltage channel total output error: +/-1% (-40°C to 125°C)
  + Current channel total output error: +/-2% (25°C to 125°C)
  + Current channel total output error: +/-2.7% (-40°C to 25°C)
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PCB Size ( L x W ) mm - 30.48 x 38.1