



ZEM-29

Electricity Monitor

○ INTRODUCTION

EpiSensor's ZEM-29 Electricity Monitor provides a highly accurate means of remotely monitoring electricity consumption patterns for appliances, circuits and buildings. Multiple ZEM-29's can provide users with the flexibility and scalability suitable for single building commercial operations though to extensive campuses and complexes.

The device includes a mains power supply, advanced electricity monitor, waterproof enclosure, Zigbee module and clip-on current sensor. It measures real power, voltage & accumulated kilowatt-hours over a wide voltage range. The unit is designed to Class 1 metering standards and complies with CE safety standards.

○ APPLICATIONS

The ZEM-29 Energy Monitor is particularly useful in areas with concentrations of electrical equipment such as datacentres, processing plants and commercial buildings. It is ideally suited for both short term and continuous energy audits with minimum disruption during installation and operation.

It can be easily reconfigured and extended without the time and expense of installing wired sensor connections. Using the ZEM-29, facility managers can generate detailed appliance level electricity reports to highlight areas of waste and reduce overall energy consumption.

○ FEATURES

- Fully wireless
- Measures 3 electricity parameters
- Wide voltage and current range
- Secure & reliable Zigbee communications
- Clip-on 80A current sensor
- Waterproof enclosure (IP67)
- Programmable reporting intervals

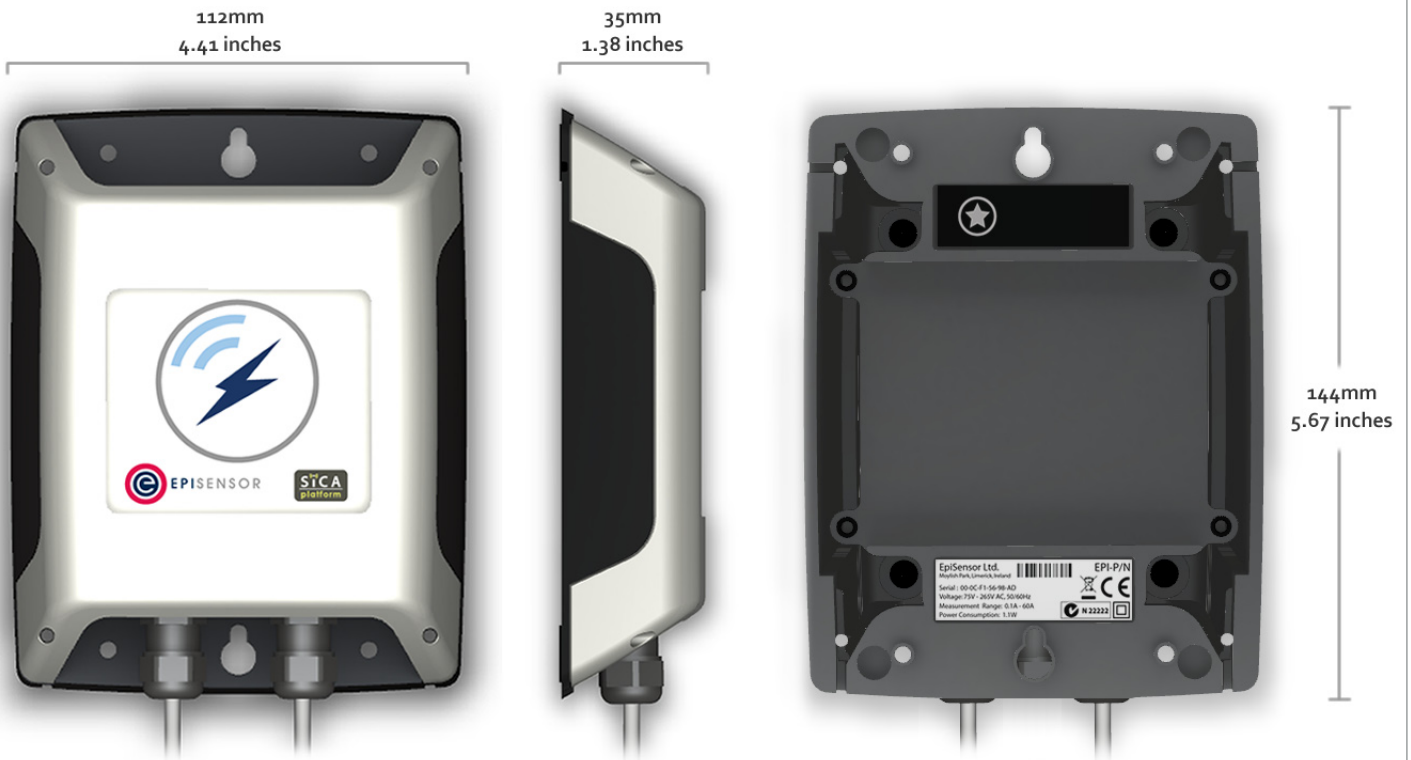
○ SPECIFICATION

- Wireless: IEEE 802.15.4 (ZigBee PRO)
- Radio Frequency: 2.4 Ghz ISM Band
- Security/Encryption: 128bit AES Encryption
- Power: 75V - 265V AC, Mains
- Current Range: 0.1A - 80A
- Measures: V, kW, kWh
- Metering Standard: Class 1
- Dimensions: 144 x 112 x 35 mm
- Enclosure: Polycarbonate
- Operating Temperature: -40°C to +85°C



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rev7, 18/11/09



ELECTRICAL

Parameter	Value
Input Voltage Range	75V - 265V AC Mains
Current Range	0.1A - 80A
Voltage Accuracy/Resolution	+/- 1%, 1 Volt
Current Accuracy/Resolution	+/- 1%, 1mA
kWh Accuracy/Resolution	+/- 1%, 1Wh
Power Consumption	1.1W
Metering Class	Class 1
Certification	CE

WIRELESS

Parameter	Value
Max Tx Power	+3dBm (+5dBm in Boost Mode)
Rx Sensitivity	-98dBm @ 1% Packet Error Rate
Radio Frequency	2.4 Ghz ISM Band
Channels	16 Channels (11 - 26)
Data Rate	up to 250 kbits/sec
Encryption	128bit AES Encryption
Indoor Range	up to 50m
Outdoor Range	up to 300m (direct line of sight)

PHYSICAL

Parameter	Value
Dimensions	112 x 144 x 35 mm
Weight	360g
Mounting	Wall Mounting Flanges
Enclosure	Polycarbonate Plastic, IP67 rated
Operating Temperature	-40°C to +85°C
Operating Humidity	up to 80% (non-condensing)

APPLICATIONS

- Energy sub-metering
- Energy Usage Analysis
- Financial Analysis and Costings
- Energy Audits and Diagnostics
- Energy Saving Initiatives
- Invoice Validation
- Carbon Footprint Analysis
- Power Quality Analysis
- Appliance Monitoring

APPLICATION AREAS

- Commercial & Industrial Buildings
- Manufacturing, Hospitality, Logistics
- Universities, Hospitals and Public Buildings
- Residential AMR