

Wireless Single-Phase Electricity Monitor

ZEM-30

data sheet



FEATURES

- › Easy to install and commission
- › Wide voltage input range: 75V to 265V
- › Wide current measurement range: 0.1A to 300A
- › Class 1 accuracy of +/- 1% or better
- › Pre-calibrated clip-on CTs included
- › In-line version with internal 10A CT available
- › Waterproof polycarbonate enclosure
- › Fully wireless communications
- › Wireless range up to 300m (LoS)
- › Reports kWh, PF, V, I and more
- › On-board logging of up to 10,000 data points
- › Dimensions (LxWxH): 144mm x 112mm x 35mm
- › Self-healing mesh network
- › Relays data from other wireless nodes
- › 2.4GHz ISM band ZigBee® wireless radio
- › Fully secure communications: 128-bit AES encryption
- › Over-the-air software upgrade capability



INTRODUCTION

The ZEM-30, a highly accurate, Wireless Single-Phase Electricity Monitor, can monitor energy consumption patterns in equipment and buildings remotely via an NGR-30 Smart Gateway, which provides building and energy managers with energy consumption information essential for increasing efficiency, reducing overall power consumption and monitoring usage patterns.

Housed in a waterproof polycarbonate enclosure, the ZEM-30 has on-board wireless communications for easy installation and minimum disruption to normal operations.

APPLICATIONS

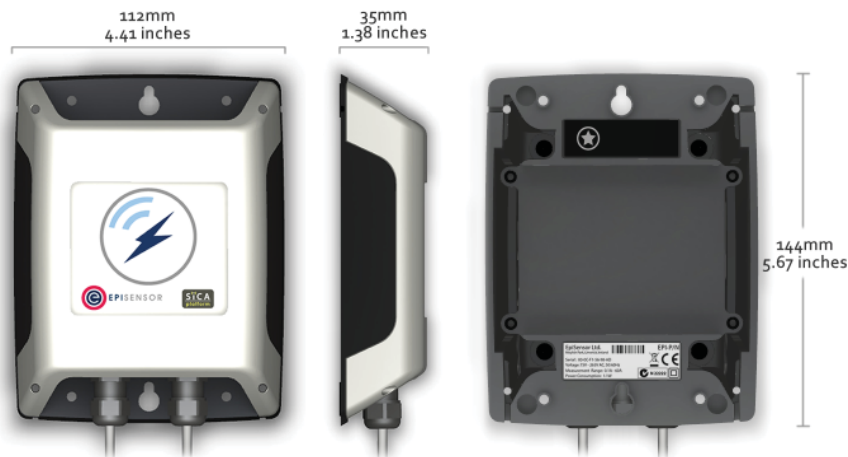
The ZEM-30 is suitable for monitoring power consumption in light machinery, single-phase equipment or small commercial buildings. It can be used to monitor lighting circuits, HVAC systems, boilers, telecoms equipment, servers, kitchen equipment, hotel rooms, trade show stands, commercial and residential buildings or any other single-phase load up to 300A. A 10A in-line version is available with C13/14 plug and socket. The ZEM-30 also can be used for monitoring renewable energy sources such as wind turbines and PV arrays or for monitoring electric vehicle charging in homes or public charging stations.

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SPECIFICATIONS



Dimensions of ZEM-30 Wireless Single-Phase Electricity Monitor

Ordering Codes	ZEM-30-80-2m ZEM-30-120-2m ZEM-30-10i	80A CT 120A CT 10A In-Line CT
Voltage / Current	Input Voltage Range Voltage Accuracy Voltage Resolution Current Measurement Range Current Accuracy Current Resolution	75V to 265V AC, 50/60Hz +/- 1% 0.1 Volt 0.1 to 300A +/- 1% 0.1A
kWh, PF, kVAh	kWh Accuracy kWh Resolution Power Factor Accuracy Power Factor Resolution kVAh Accuracy kVAh Resolution	+/- 1% 0.01 kWh +/- 1% 1% +/- 1% 0.01 kVAh
Certification	Certification Metering Standard	CE Class 1
Wireless Technology	Radio Technology Radio Frequency Channels Max Tx Power Rx Sensitivity Data Rate	ZigBee Pro 2.4 Ghz ISM Band 16 Channels (11 - 26) +3dBm (+5dBm in Boost Mode) -98dBm @ 1% Packet Error Rate up to 250 kbits/sec
Wireless Range	Indoor Range Outdoor Range	up to 50m up to 300m (direct line of sight)
Security	Encryption	128-bit AES Encryption
Physical	Dimensions (LxWxH) Weight Mounting Enclosure Operating Temperature Operating Humidity	144 x 112 x 35 mm 0.35kg Wall Mounting Flanges Polycarbonate Plastic, IP67 rated -40°C to +85°C up to 80% (non-condensing)



IEC C13 / C14 Plug & Socket on ZEM-30-10i