

Wireless Three-Phase Electricity Monitor ZEM-61

data sheet



FEATURES

- › Easy to install and commission
- › Wide voltage input range: 75V to 265V
- › Wide current measurement range: 0.1A to 3kA
- › Class 1 accuracy, +/- 1% or better
- › Pre-calibrated clip-on CTs included
- › Waterproof polycarbonate enclosure
- › Fully wireless communications
- › Wireless range up to 300m (LoS)
- › Reports kWh, PF, V, I, kVA and more per phase
- › On-board logging of up to 10,000 data points
- › Dimensions (LxWxH): 192mm x 128mm x 40mm
- › 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-61, a highly accurate Wireless Three-Phase Electricity Monitor, can monitor energy consumption patterns in equipment and buildings remotely via the NGR-30 Smart Gateway. This provides facility and energy managers with targeted energy consumption information essential for increasing efficiency and reducing overall power consumption.

The ZEM-61 can be configured with a range of CTs and Rogowski coil options to measure currents from 0.1A to 3kA per phase. A list of CT options is available in the ordering information section on the next page.

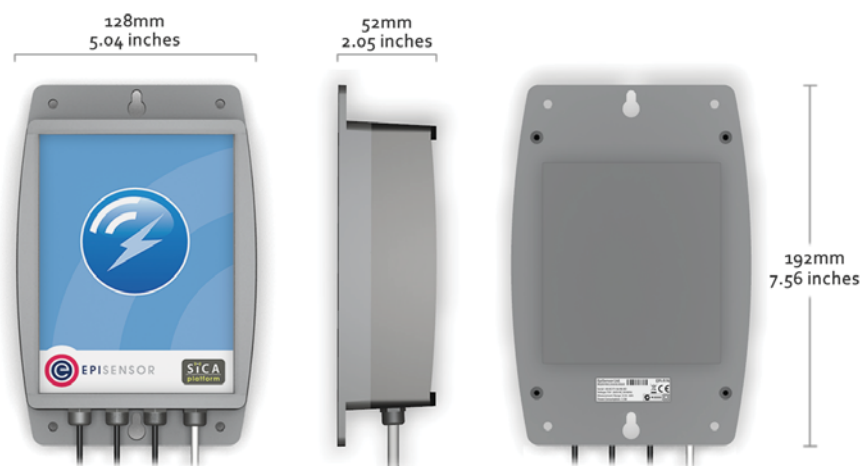
APPLICATIONS

The ZEM-61 Wireless Three-Phase Electricity Monitor is suitable for monitoring energy usage in a wide range of commercial and industrial environments. The monitor can be used to monitor manufacturing lines, HVAC equipment, distribution panels, three-phase machines, main incomers or any other three-phase loads in retail environments, hotels, leisure centers, data centers, pharmaceutical and medical device manufacturing plants, food processing plants, brewing plants or any other commercial buildings. The ZEM-61 also can be used to monitor micro-generators such as wind turbines, CHP systems and PV arrays.

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SPECIFICATIONS



Dimensions of Wireless Three-Phase Electricity Monitor

Voltage	Input Voltage Range	75V to 265V, Three-Phase AC, 50/60Hz
	Voltage Accuracy	+/- 1%
	Voltage Resolution	0.1 Volt
	Voltage Measurement Range	75V to 470V AC
Current	Current Measurement Range	0.1 to 3kA + (Range of current sensors available)
	Current Accuracy	+/- 1%
	Current Resolution	0.1A
kWh, PF, kVAh	kWh Accuracy	+/- 1%
	kWh Resolution	0.01 kWh
	Power Factor Accuracy	+/- 1%
	Power Factor Resolution	1%
	kVAh Accuracy	+/- 1%
	kVAh Resolution	0.01 kVAh
Certification	Certification	CE
	Metering Standard	Class 1
Wireless Technology	Radio Technology	ZigBee Pro
	Radio Frequency	2.4 Ghz ISM band
	Channels	16 channels (11 - 26)
	Max Tx Power	+3dBm (+5dBm in Boost Mode)
	Rx Sensitivity	-98dBm @ 1% Packet Error Rate
	Data Rate	up to 250 kbits/sec
Wireless Range	Indoor Range	up to 50m
	Outdoor Range	up to 300m (direct line of sight)
Security	Encryption	128-bit AES Encryption
Physical	Dimensions (LxWxH)	192 x 128 x 40 mm
	Weight	0.35kg
	Mounting	Wall Mounting Flanges
	Enclosure	Polycarbonate Plastic, IP67 rated
Operating Conditions	Operating Temperature	-40°C to +85°C
	Operating Humidity	up to 80% (non-condensing)

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ORDERING INFORMATION



ZEM-61-120-2m
120A, 16mm



ZEM-61-300-2m
300A, 24mm



ZEM-61-600-2m
600A, 36mm



ZEM-61-rXk-120c

CT Options for ZEM-61 Wireless Three-Phase Electricity Monitor

Ordering Codes	ZEM-61-120-2m ZEM-61-300-2m ZEM-61-600-2m ZEM-61-r1k-120c ZEM-61-r3k-120c	120A CTs 300A CTs 600A CTs 1000A Rogowski Coils 3000A Rogowski Coils
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CT Option 1	Product Code	ZEM-61-120-2m
	Current Range	0.1A to 120A
	Max. Continuous Current	200A
	Aperture Diameter	16mm

CT Option 2	Product Code	ZEM-61-300-2m
	Current Range	1A to 300A
	Max. Continuous Current	360A
	Aperture Diameter	24mm

CT Option 3	Product Code	ZEM-61-600-2m
	Current Range	6A to 600A
	Max. Continuous Current	650A
	Aperture Diameter	36mm

Rogowski Coil Option1	Product Code	ZEM-61-r1k-120c
	Current Range	10A to 1000A
	Max. Continuous Current	1100A
	Aperture Diameter	120mm

Rogowski Coil Option 2	Product Code	ZEM-61-r3k-120c
	Current Range	30A to 3000A
	Max. Continuous Current	3100A
	Aperture Diameter	120mm

Please note some CT cable lengths can be specified. Refer to the price list for more information. If custom CTs are required, please contact sales@episensor.com.