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INDUSTRIAL PRODUCT DATASHEET

XIAO 2-Channel Wi-Fi AC Energy Meter Bundle Kit

Early Build beta XIAO 2-Channel Wi-Fi AC Energy Meter Bundle Kit with dual CT sensors, ESPHome on XIAO ESP32-C6, BL0939, factory-calibrated 100A CTs, bi-directional monitoring, and Home Assistant integration.

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Overview



The XIAO 2-Channel Wi-Fi AC Energy Meter Bundle Kit is an Early Build beta product featuring 3D-printed cases and evolving software. It provides dual CT sensors, factory-calibrated 100A current transformers, BL0939 power monitoring chip, ESPHome firmware on XIAO ESP32-C6, and a 2.81dBi 2.4GHz rod antenna for bi-directional energy monitoring with up to 1% accuracy and Home Assistant integration.

Key Features

Note:

Early Build provides beta products (featuring 3D-printed cases) and evolving software before final release. We welcome your feedback and suggestions to shape the product's evolution. Enjoy exploring!

Feature 1: Dual CT Sensors for Smart Home Monitoring

Monitor two independent power circuits with precision using dual CT sensors. Seamlessly integrate with Home Assistant for comprehensive energy management and smart automation.

Feature 2: Native ESPHome & Home Assistant Integration

Pre-loaded with ESPHome firmware on **XIAO ESP32-C6**, enabling instant **Home Assistant** compatibility. Configure and control directly from your Home Assistant dashboard for streamlined smart home management.

Feature 3: Precise Measurement with Factory Calibration

Equipped with BL0939 power monitoring chip and together with factory-calibrated **100A current transformer**, delivering up to 1% measurement accuracy for reliable energy monitoring.

Feature 4: Bi-directional Power Flow Monitoring

Track both solar production and energy consumption with bi-directional measurement capability. Perfect for solar installations and home energy management systems (HEMS).

Feature 5: Comprehensive Energy Analytics

Monitor real-time solar production or power usage and analyze historical production or consumption patterns through the Home Assistant dashboard. Make informed decisions to optimize your energy production or consumption and reduce costs.

Feature 6: Enhanced Wireless Connectivity

Includes a 2.81dBi 2.4GHz rod antenna for reliable wireless communication. You can also use a extension cable (not included) for installations requiring extended antenna placement.

Product Gallery













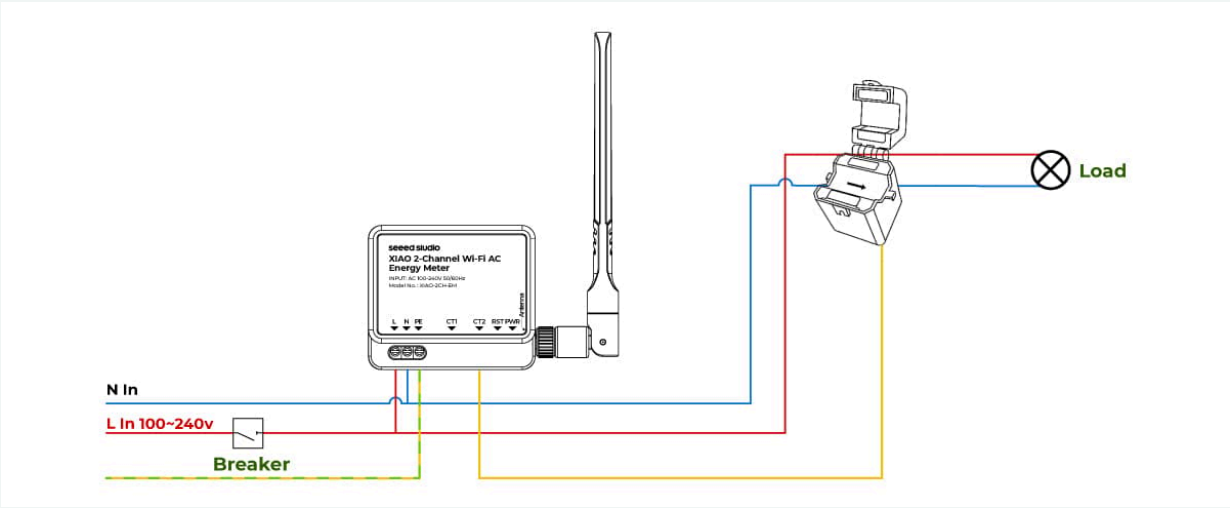
Specification

Parameter	Description
AC Rating	100-240V~50/60Hz
Calibration-Free Metering IC	BL0939

Transformer Current Sensor	Detection Range: 0-100A Accuracy: 1% Turns Ratio: 1:2000 Dielectric Strength: AC 3.5KV/1min 50Hz
Current Transformer Channels	2
Wireless	2.4Ghz Wi-Fi
Dimension	58*70*38mm
Enclosure	3D-Printed in White Open sourced on Thingsverse for custimzation

	Terminals	Wires
N	Neutral Terminal	Neutral Wire
L	Live(100-240 VAC) Terminal	Live(100-240 VAC) Wire
PE	Protective Earth Terminal	Protective Earth Wire
CT1	Transformer Interface	Current Transformer Clamp
CT2	Transformer Interface	Current Transformer Clamp
Antenna	Antenna Interface	2.81dBi 2.4GHz Rod Antenna

Hardware Overview



Part List

Product	Quantity
2-Channel Wi-Fi AC Energy Meter with 3D-Printed Enclosure (White)	1
2.81dBi 2.4GHz Rod Antenna (White)	1
3-Core 1.0 Sq. mm Copper Electrical Cable (30cm)	1

Resource Links

- https://www.seeedstudio.com/XIAO-2-Channel-Wi-Fi-AC-Energy-Meter-Bundle-Kit.html
- Thingiverse
- Printables

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