

packetSENSE AC Energy Meter

with packetMODBUS



The **packetSENSE AC Energy Meter** with packetMODBUS is a compact, high-precision device designed for real-time measurement and monitoring of key electrical parameters, including voltage, current, and power. Suitable for residential, commercial, and industrial applications, it supports both single-phase and three-phase configurations for maximum flexibility.

The device employs direct access and mutual inductor access measurement methods to ensure reliable accuracy. Data can be easily accessed and transmitted via a packetMODBUS interface compatible with the LoRaWAN® network, enabling seamless integration into IoT-based energy management systems.

Widely used for energy monitoring, facility management, and sustainable building operations, the device delivers efficient performance with minimal energy consumption.

Features

- **Measures** total, forward, and reverse active energy (multi-rate)
- **Monitors** V, I, P, Q, S, PF, and F
- **Supports** single-phase and three-phase systems
- **8-digit backlit LCD display**
- **Programmable** communication and control parameters
- **Active pulse** output
- **LoRaWAN®-compatible**, IoT end-node ready
- **Periodic** status update

Applications

- **Eco Smart Buildings**
- **Data Centers**
- **Real Estate** and Residential Complexes
- **Condominiums**
- **Warehouses** and Factories
- **Utilities and Power Distribution** Systems
- **Commercial Offices**

Technical Specification

packetSENSE AC Energy Meter

Electricals

Input Voltage Rating	3 × 220 / 380 V
	Overload: 1.2 times rated value (continuous)
Current Input	Rated value: AC 250 A, 100 A; (external closed port transformer)
	Overload: 1.2 times rated value (continuous) 10 times rated value/second
Auxiliary Power Supply	AC/DC 85-265 V; power consumption ≤10 VA
Power Consumption	≤0.5 VA (per channel)

Pulse

Pulse Output	Output mode: Optocoupler pulse with open collector (one out of two with active input)
Pulse Width	80 ms ± 20 ms
Pulse Constant	3 × 1(6) A, 6400 imp/kWh 3 × 10(80) A, 400 imp/kWh

Switch

Input	4-channel passive dry contact input with built-in power supply 2-channels active wet node input, identify engine oil and Power connection (or pulse output)
Current	Relay normally open contact output Contact rating: AC 250 V / 3 A DC 30 V / 3 A

Communication

RS485 Interface	RS485 interface, Modbus-RTU protocol/QZTT 1017-2015
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Security

Power Frequency Withstand Voltage	>AC 2 kV/min
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Surroundings

Temperature	Operating temperature: -20°C – +60 °C Storage temperature: -40°C – +70 °C
Humidity	≤95% RHNo condensation, no corrosive gas place
Altitude	≤2500 m
Electromagnetic compatibility	Better than level 3
Electric Parametric Alarms	Under-voltage, over-voltage, under-current, over-current, overload, under-load

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Packetworx IoT Technology Hub
G/F iSquare Building, 15 Meralco Avenue,
Ortigas, Pasig City, 1605, Philippines



packetMODBUS

Data Communication Supported

Antenna	Internal
RF power	+25 dBm

Electricals

Input Voltage Rating	220V AC
Operating Current	500 mA (max)
Operating Voltage	3.3 V and 5 V – On-board Electronics

General Device Specifications

Transceiver	ADM485JR-REEL EIA RS-485 Transceiver
Operating temp range	-40 °C to 85 °C
Operating voltage	DC 3.0 – 5.5 V
Operating current	8 mA
Protection grade	IP65

Mechanical

Dimension	250 mm x 195.00 mm x 90 mm enclosed by HT12 IP65 Enclosure
Mounting	Contact rating: AC 250 V / 3 A DC 30 V / 3 A

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