



Smart Meter By EcoFlow

Basic Features

Installation Method

DIN rail installation

Meter Phases

Three-phase / Single-phase

Communication Methods

Wi-Fi / Bluetooth
(users can enable or disable each connection option);
RS-485 communication (for production testing and monitoring)

Current Transformer Connection

External split-core CTs, 3 current transformer inputs

Voltage Signal Connection

4 line inputs: 3 L and 1 N or 1 L and 1 N

Calibration

Only supports on-site calibration

Accuracy

Rated Voltage

$\pm 0.5\%$

Current

$\pm 0.5\%$

Frequency

$\pm 0.02\text{Hz}$

Harmonics

Class S (GB/T 19862-2016, IEC 61000-4-30, IEC 61000-4-7)

Active Energy

Class B GBT 17215.321-2021 EN 50470-3-2022

Fundamental Reactive Energy

Class 1 (GB/T 17215.324-2022, IEC 62053-24:2020)

Active Power

$\pm 1\%$

Reactive Power

$\pm 1\%$

Apparent Power

$\pm 1\%$

Power Factor

$\pm 1\%$

Fundamental Phase (Voltage/Current)

$\pm 1\%$

CT Specifications

Rated Current (I_n)

48mA

Starting Current

$0.1\%I_n$

Measurement Range

$0.1\%I_n \sim I_n$

Environmental Conditions

Operating Temperature

-25°C to 70°C

Humidity

5% to 95% RH

Storage Temperature

-40°C to 85°C

Maximum Altitude

3000 metres

Data Update & Firmware

Communication Speed

Active power update rate: $<50\text{ ms}$ via RS485, $<100\text{ ms}$ via Wi-Fi

Data Logging

Consumption, fault logs (requires 16M flash in IoT module)

Calibration & Upgrade

Local upgrade via RS485 loop;
Remote OTA upgrade via Wi-Fi;
Parameter setting via ZH app with password

Voltage and Frequency Parameters

Rated Voltage (Un)

~230V L-N / 400V L-L

Measurement Range (L-N)

100V ~ 1.2Un (i.e., 100V ~ 276V)

Starting Voltage (L-N)

100V

Frequency

45Hz-65Hz

Power Consumption

<0.02VA per phase

Physical Specifications

Size (H x W x D)

90 x 66 x 36 mm

Protection Level

IP30

Conductor Cross-section

0.5 to 2.5 mm² / 20 to 14 AWG (solid, stranded, and bootlace lugs)

Colour

Based on ID design

Weight

115 g

Conductor Strip Length

6 to 7 mm

Shell material

Plastic

Electrical Parameters

Power Supply Voltage (AC)

100-276V, 50/60Hz

Current Measurement Range

0-120A (via CT per phase and neutral)

CT Cable Length

50 cm

Power & Energy Measurements

Active / Apparent Power & Energy
Power Factor
Fundamental Active/Reactive Energy
Radio Frequency & Connectivity

Wi-Fi Protocol

802.11 b/g/n

Wi-Fi Range

Up to 30 m indoors and 50 m outdoors
(Depends on local conditions)

Antenna

Built-in or External (user-selectable by manual switch)

Button Requirement

1 button (Reset + Wi-Fi function)

Max Power Consumption

<3W

CT Compatibility

CT 120A

Antenna Extension Cable

1.5 m

RF Frequency Band

2400-2495 MHz

Max RF Power

2.4G 11b 11Mbps, TRP ≥14 dBm, TIS < -80 dBm

Bluetooth Protocol

4.2

Bluetooth Range

Up to 10 m indoors and 30 m outdoors
(Depends on local conditions)

CPU

ESP32 series

Lifetime & Reliability

Warranty

2 years

Design Lifetime

10 years

FFR During Warranty

0.05%

Supported Load Types

Resistive

Incandescent lamps, heating devices

Capacitive

LED drivers, capacitor banks, electronic devices, motor start capacitors

Inductive

Transformers, fans, refrigerators, air conditioners

Active Bi-directional Loads