



**RED POLE**  
ENERGY



# IAmMeter Bi-directional Three Phase Wi-Fi Power Meter

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**WEM3080T**

# General Specification

Specification	Description
Standard Package	<ol style="list-style-type: none"><li>1. IamMeter Wi-Fi Energy Meter (WEM3080T) x 1</li><li>2. Split-Core Current Transformer (150A, 250A or 500A) x 3</li><li>3. 2.4G Wi-Fi Antenna x 1</li></ol>
Phase	Three Phase
Power Supply	Internal
Communication	Internal Wi-Fi
Antenna	External 2.4G antenna with SMA male
Reporting Interval	1-5 minutes interval, typically 1 minute
Report Contents	Active Energy (Forward and Reverse), Active Power, Voltage, Current, Frequency
Configuration	Laptop with Wi-Fi required for setting Wi-Fi SSID and Wi-Fi password via a web portal. Wi-Fi access point and Internet required to post data to cloud.
Monitoring Scenarios	<ol style="list-style-type: none"><li>1. Monitor on IamMeter cloud (<a href="http://www.iammeter.com">www.iammeter.com</a>)</li><li>2. Monitor locally on your PC via WLAN (Http get interface)</li><li>3. Integrate with third party server, such as your own server, and HomeAssistant (TCP/SSL interface)</li></ol>

# Electrical Characteristics

Specification	Description
Input Voltage	80V ~ 277VAC (Phase Voltage), 140V ~ 480 VAC (Line Voltage)
CT Rating	150A, 250A or 500A
CT Diameter	150A: 16mm / 250A: 24.5mm / 500A: 35mm
Measurement Accuracy	<ol style="list-style-type: none"><li>1. Voltage: <math>\pm 1.0\%</math></li><li>2. Current: <math>\pm 1.0\%</math></li><li>3. Active Power: <math>\pm 1.0\%</math></li><li>4. Active Energy: Class 1 as defined by IEC62053-21</li></ol>
Typical Power Consumption	$\leq 2W$ (220VAC input)

## Mechanical Characteristics

Specification	Description
Weight	0.62kg (150A model); 1.02kg (250A model)
Dimension	90.2 x 71 x 57.5mm (2 DIN pole)
Protection	IP51
AC input	UA-Live wire Phase A, UB-Live wire Phase B, UC-Live wire Phase C, UN-Neutral wire
RS485	A-Positive, B-Negative
CT	IA+ is Positive Phase A, IA- is Negative Phase A; IB+ is Positive Phase B, IB- is Negative Phase B; IC+ is Positive Phase A, IC- is Negative Phase C;
SMA port	External Antenna Port

## Environmental Conditions

Specification	Description
Operating Temperature	-20 ~ +60°C
Operating Humidity	5 ~ 95%
Altitude	0 ~ 3000m

## Wi-Fi Network

Specification	Description
WLAN	Channel: Auto Security: WPA2-PSK
SSID	iMeter_xxxxxxxx (8 digits device SN), no password
Configuration Page	URL: http://11.11.11.1 Login username: admin Password: admin

## Wi-Fi Parameters

Specification	Description
Wi-Fi Mode	IEEE802.11b/g/n, Wi-Fi Channel 1-13
Transmit Power	18.5dBm@11b, 16.5dBm@11g, 15.5dBm@11n;
Wi-Fi Frequency	2.412 ~ 2.484GHZ
Transmit Speed	72.2Mbps@20M Bandwidth; 150Mbps@40M Bandwidth
Maximum Connections	8
Wi-Fi Antenna	External, 5dBi gain

## RS485 Interface

Specification	Description
Protocol	Modbus-RTU
Data format	"n,8,1"
Baud rate	1200, 2400, 4800, 9600Bps; 9600Bps by default

## LED Status Indicators

Specification	Description
RUN	Always on after powering on, flashing while the Wi-Fi module is communicating
REV	Always on when: <ol style="list-style-type: none"> <li>1. The current is reversed as per the bottom-marked current direction of CT for any phase, or</li> <li>2. The CT is connected to the wrong phase</li> </ol>
WIFI	Always on after the Wi-Fi module is connected to the Wi-Fi router

## Certifications

### CE Standard Applied

Essential Requirements	Applied Standard
Health and Safety	EN60950-1:2006+A11; 2009+A1;2010+A12;2011+A2;2013
Electromagnetic Compatibility	EN62311:2008
Effective use of the Radio Spectrum	<ol style="list-style-type: none"> <li>1. ETSI EN 301 489-1 V2.1.1 (2017-02)</li> <li>2. ETSI EN 301 489-1 V3.1.1 (2017-02)</li> <li>3. ETSI EN 300 328 V2.1.1 (2016-11)</li> </ol>

### IEC Standard Applied

Essential Requirements	Applied Standard	Meters of Class
General Requirement	IEC62052-11	Protective class, Indoor
Accuracy Requirement	IEC62053-21	Accuracy index class 1
Mechanical Requirement	IEC62053-21	Protective class, Indoor



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