

# EM115-Mod-WL

Smart Anti-backflow Module  
(single phase)



Shanghai Rockcore Electronic Technology Co., Ltd

Email: [service@rockcore.com.cn](mailto:service@rockcore.com.cn)

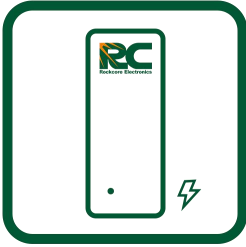
Website: <https://www.rockcore.com.cn/>

# Contents

- BENEFITS AND MAIN FEATURES ..... 1
- 1. METER SPECIFICATION ..... 2
- 2. DIMENSIONS .....3
- 3. MAIN FUNCTION ..... 3
  - 3.1 MEASURING FUNCTION ..... 3
  - 3.2 WiFi COMMUNICATION .....4
- 4. WIRING DIAGRAMS .....5
- 5. SCHEMATIC DIAGRAM OF ANTI-BACKFLOW ..... 6
- 6. TECHNICAL SUPPORT .....8

# EM115-Mod-WL

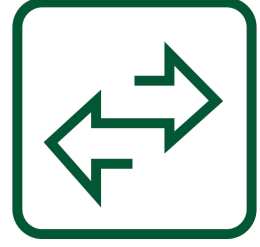
Single phase 1 modular energy meter With WiFi module interface 330mV CT ac input



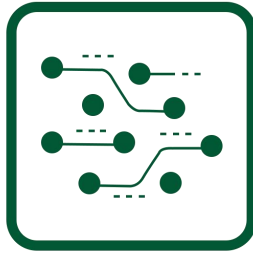
**18mm**



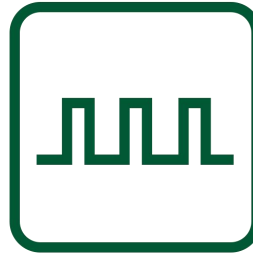
**WiFi Communication**



**Import/Export  
Energy Measuring**



**Multi-Measurements**



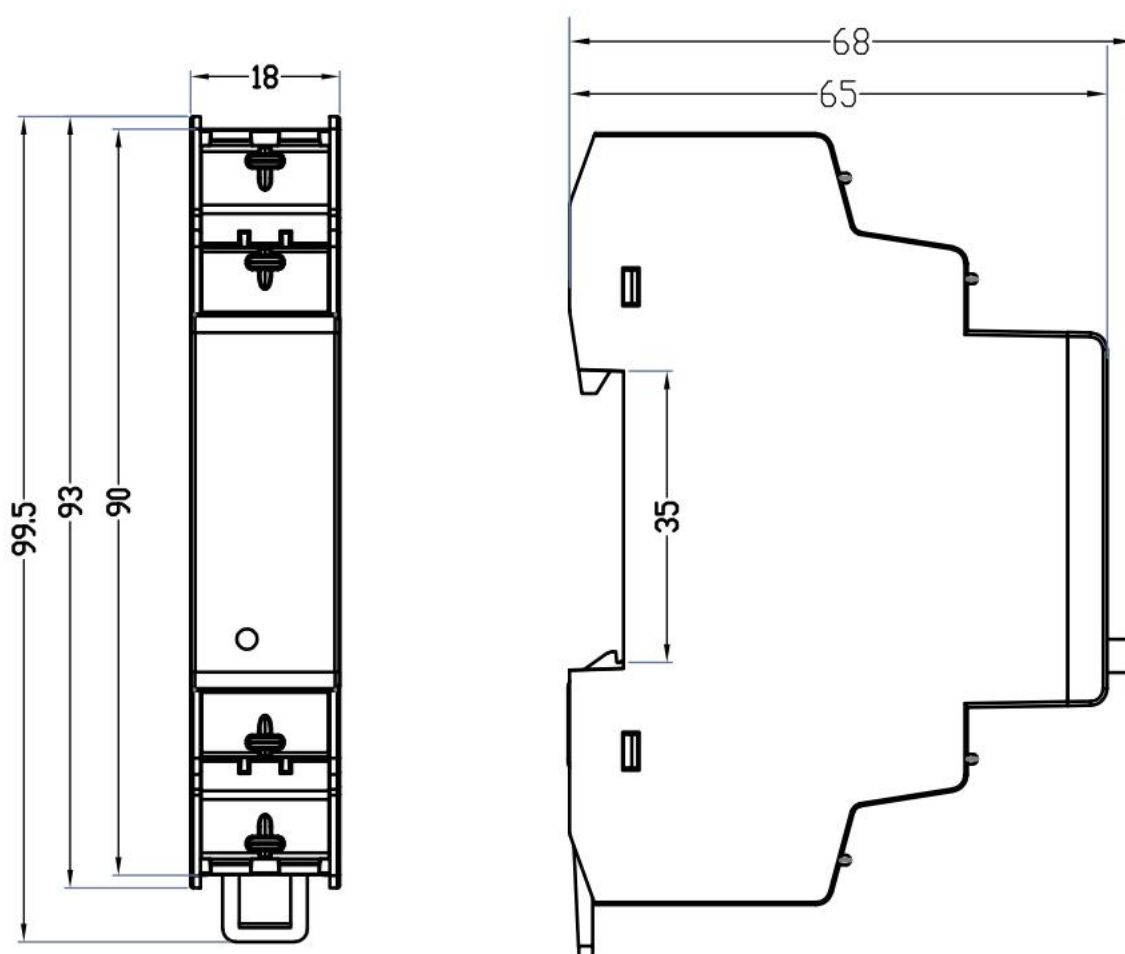
**S0 Output :  
Programmable**

- Bidirectional energy metering 1 DIN modules, 230VAC 50Hz/120V AC 60Hz.
- Accuracy class B according to EN50470-3  
Accuracy class 1 according to IEC62053-21
- Solid-core sensor & open-core sensor, 330mV ac input 100A
- Total energy usage can be calculated via 5 different modes
- Reactive power and reactive energy available through interface
- S0 pulse output, transmission of measured values via pulses
- Wifi support 802.11b/g/n, Frequency range: 2.412GHz-2.484GHz

# 1. Meter specification

Voltage/current inputs	
Nominal voltage(v)	230V AC
Voltage range	(120-275)V
Power consumption	0.5W 2VA
Primary Current(A)	100A
Second input(mV)	330mV( Primary current=100A)
>> Wifi comms	
Wifi standard	802.11 b/g
Frequency Range	2.412GHz~2.484GHZ
Power consumption	802.11 b:+20db; 802.11 g:+18db
>> General data	
Frequency (Hz)	50 or 60Hz
Accuracy	B
>>Mechanical	
Material	ABS+PC
Weight	100g
>>Environmental	
Operating temperature	-25°C~+55°C
Storage temperature	-40C~+70°C
Humanity	75% yearly average, 95% on 30 days/year, non-condensing
>>Dimension	
Width (mm)	18
Height (mm)	104.5
Depth (mm)	88
Warranty (month)	18

## 2. Dimensions



## 3. Main function

### ● 3.1 Measuring Function

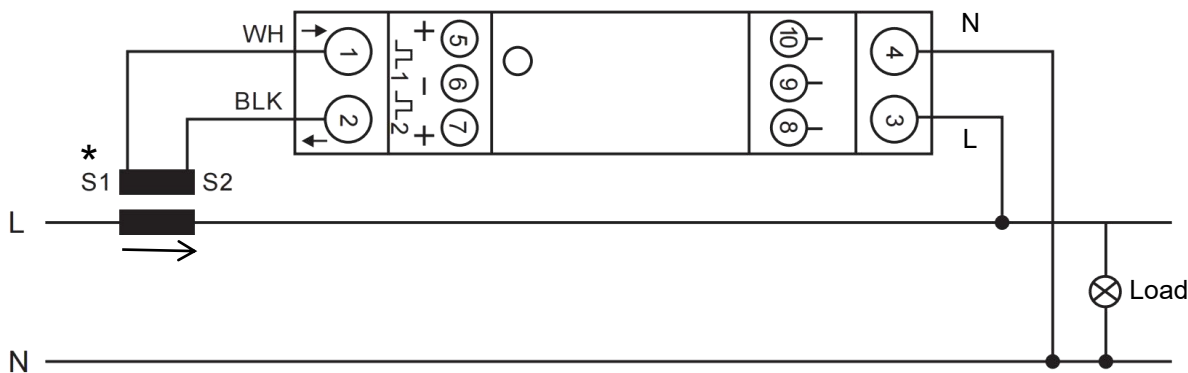
Meter can measure import active energy, export active energy, total active energy. Import reactive and export reactive energy available through interface.

## ● 3.2 WiFi communication

EM115-Mod-WL is a smart energy meter with Wif module . Wifi support 80211b/g/n, frequencyranger:2.412GHz-2.484GHz. The instrument works AP or STA mode. When a link is establishedbetween Wifi and PC or router, the device parameters are searched and configured by web.



## 4. Wiring diagram

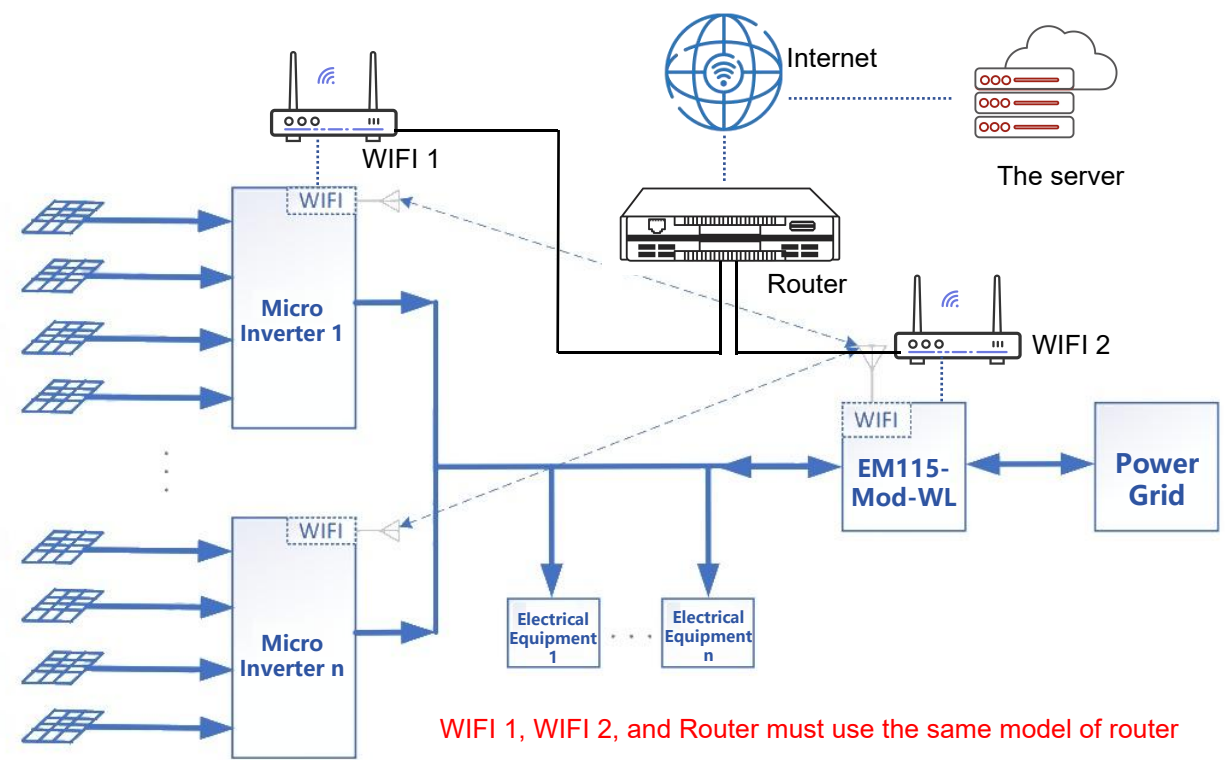


1/2	CT in &Out
3/4	L/N

CT has a reverse connection self-adaptation function:

1. The function of CT only works when the load is over 10W.
2. If the CT installation is re-adjusted during operation, power on the meter again to restart it.

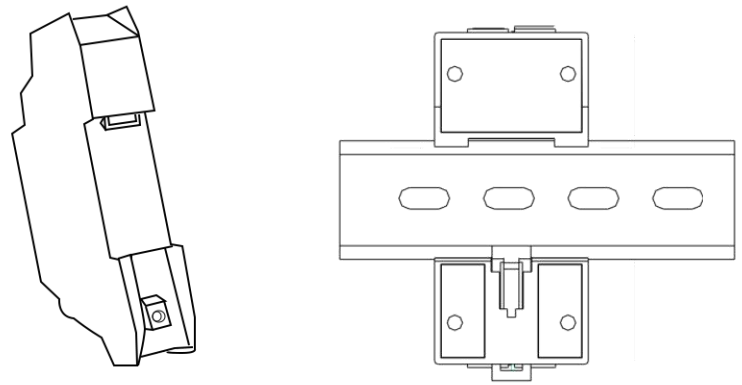
## 5. Schematic Diagram of Anti-backflow



Principle of anti-backflow action:

1. The micro-inverter sends real-time power generation data to the smart CT.
2. The smart CT measures and monitors the power input from the grid.
3. When the grid input power is negative, the CT notifies the micro-inverter to reduce the corresponding power generation.
4. If the anti backflow detection device is close to the inverter, they can use the same WiFi. If it is far away, multiple hotspots can be used, but they must be from the same router outlet (As shown in the above figure).

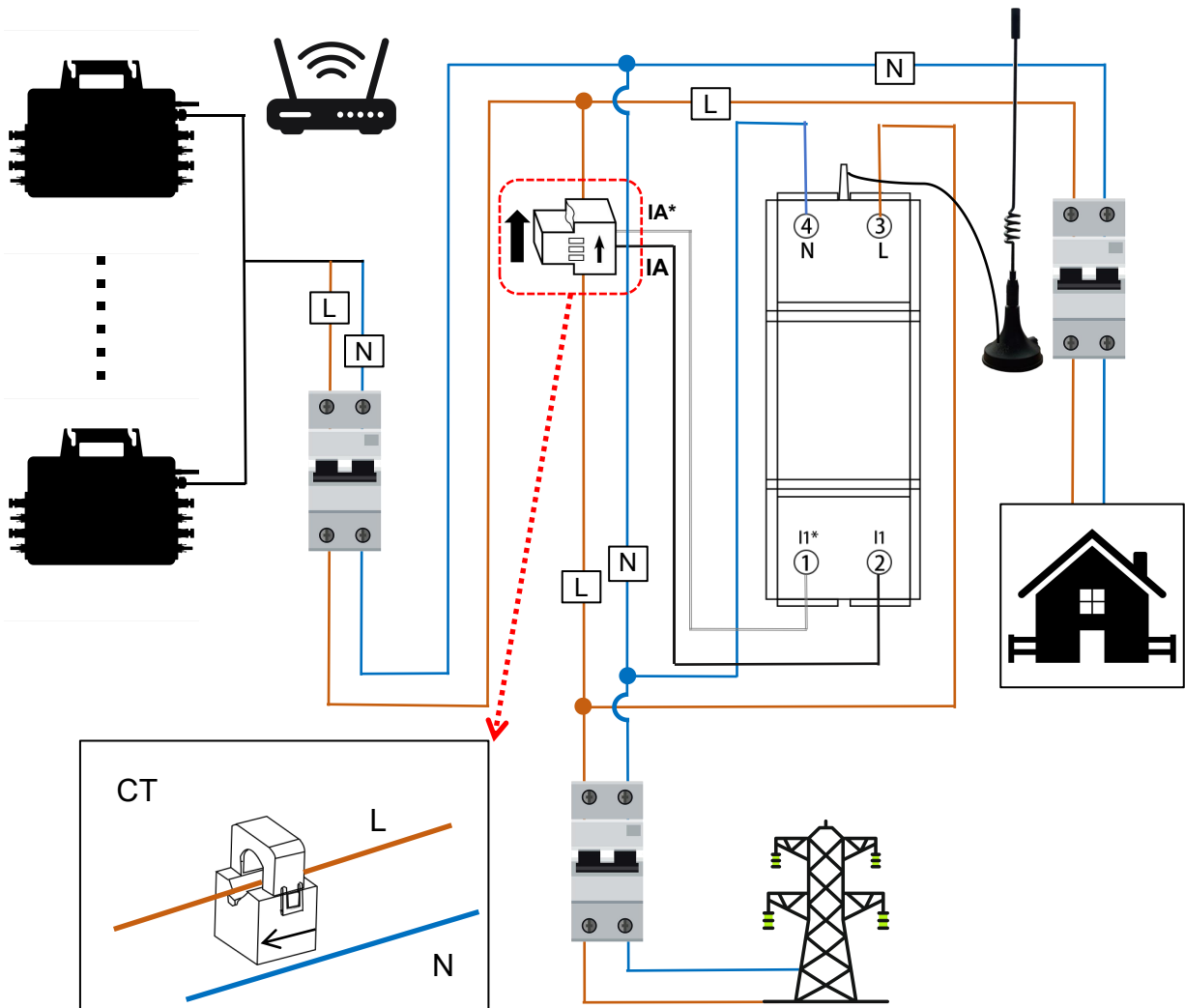
### ● Installation



1. Install the smart power sensor onto the DIN 35mm standard rail.
2. Clip the smart power sensor onto the standard rail from top to bottom, and then push the device into the rail.



- Installation



A 100A CT will be used as default. If there are any differences in project requirements, please inform us in advance.



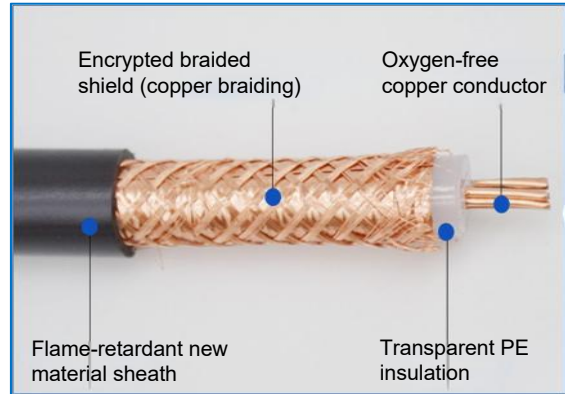
## NOTICE

The L and N cannot be reversed.



## NOTICE

One anti-backflow flow device can control up to 8 micro inverters.

**NOTICE**

The CT cable itself includes a shielding layer and a signal layer. To ensure reliable use, please do not cut it for reconnection.

## 6. Technical support

Any questions, please contact:

Email: [service@rockcore.com.cn](mailto:service@rockcore.com.cn)

Web: <https://www.rockcore.com.cn/>