

Three-phase Smart Meter USER MANUAL

HMeter-CT-T120-RW

Legal Notice

Hoymiles has made every effort to ensure the accuracy and completeness of this manual. However, this manual may be changed and revised due to product enhancements or user feedback.

Hoymiles reserves the right to modify this manual without prior notice at any given time. The latest version of this manual can be found by visiting the Hoymiles official website (www.hoymiles.com) or scanning the QR Code below.



Emission Compliance

This equipment has been tested and found to comply with the limits applied by the local regulations. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, you are encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

** Changes or modifications not expressly approved by the party responsible for compliance may void the user's authority to operate the equipment.*

Warranty

Follow the installation instructions in this manual to ensure warranty compliance and reliability. The current warranty conditions can be accessed at www.hoymiles.com.

Contact Us

If you have technical queries or any questions concerning our products, please contact our support through the Hoymiles service portal:



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service.de@hoymiles.com

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Using This Manual

Purpose

This manual provides information on the installation, operation, and maintenance of the meter.

Please consider the following before installation:

- Carefully read this manual before operation.
- Keep this manual for reference.

Revision History

Version	Description
REV1.2	Corrected the meter weight to 86 g.
REV1.1	This issue marks the initial official release.

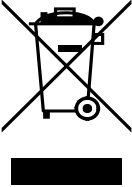
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1 Safety Instructions

1.1 Symbols

The product label contains the following symbols with their meanings described below:

Icon	Explanation
	Treatment Electrical equipment that has reached the end of life must be collected separately and returned to an Approved recycling facility to comply with the European Directive 2002/96/EC on Waste Electrical and Electronic Equipment and its implementation as national law. Return any devices you no longer need to an authorized dealer or an Approved collection and recycling facility.
	CE mark The product complies with the requirements of the applicable EU directives.
	Caution Risk of electrical shock.
	Read the manual first Read this manual carefully before performing any installation, operation, or maintenance.
	Class II equipment The device meets the safety requirements specified for Class II equipment.
	High voltage The device may contain high voltage, causing a risk of death.
	For indoor use only The device is designed primarily for indoor use.
	Wireless The device supports wireless communication functions.

1.2 Safety Instructions

The meter has been designed and tested in compliance with international safety standards and thus requires careful installation and operation. Installers must carefully read and strictly follow the safety instructions in this section. Failure to do so may result in:

- Injury or death to the installer or operator
- Damage to the meter

DANGER

- The meter should only be used when all technical parameters are observed and applied correctly. (You can refer to [5. Technical Data](#) for more details.) Improper use of the meter will void the warranty.
- Do not use meters in a manner not specified by the manufacturer.
- Do not install the equipment in flammable, explosive, corrosive, extreme heat/cold, or humid environments.
- Do not use the equipment in environments where safety devices are not working properly.
- Do not use the equipment if any unusual operations are detected.
- Hoymiles shall not be liable for any damages caused by incorrect or improper operations.
- Do not attempt to repair the product as it contains no user-serviceable parts. If it malfunctions, contact Hoymiles Support to obtain a return merchandise authorization number and start the replacement process. Tampering with or opening the meter will void the warranty.
- Always de-energize the whole system before any maintenance.

WARNING

- Disconnect the meter from all power supplies before making or modifying any device connections.
- Prevent any contaminants or debris from entering the connector.

CAUTION

- Before installation, inspect for transportation damage compromising insulation integrity and safety clearances.
- Do not remove or cover any warning labels or nameplates on the meter.

2 Product Information

2.1 Overview

The new rail-mounted HMeter-CT-T120-RW is launched specifically for balcony energy storage systems. With all terminals adopting spring-type or RJ connectors for effortless and reliable wiring, its compact design reduces installation and maintenance costs.

Equipped with Wi-Fi and RS485 connectivity, the HMeter-CT-T120-RW supports multi-parameter monitoring. It can measure 3P3W and 3P4W grid characteristics, including voltage, frequency, current, power, power factor, and both input / output active and reactive energy.

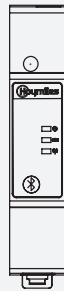
2.2 Unboxing

The meter has been thoroughly tested and was subject to a strict inspection before delivery. However, damage may still occur during shipping.

Conduct a detailed inspection after unpacking the meter:

- Check for any external damage.
- Check and confirm that all items have been included.

1 Meter × 1



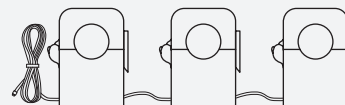
2 Antenna × 1



3 Terminal Block × 1



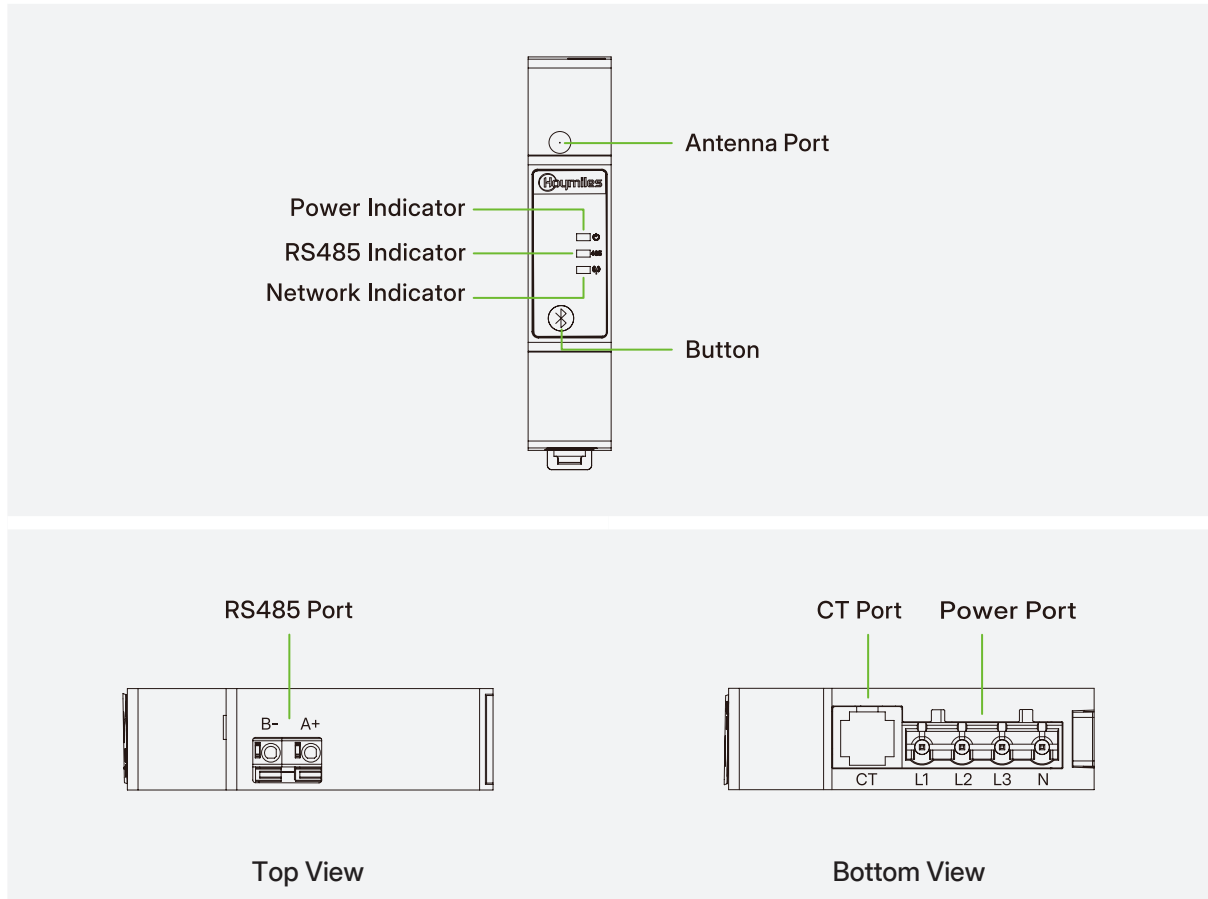
4 Current Transformer (CT) × 3



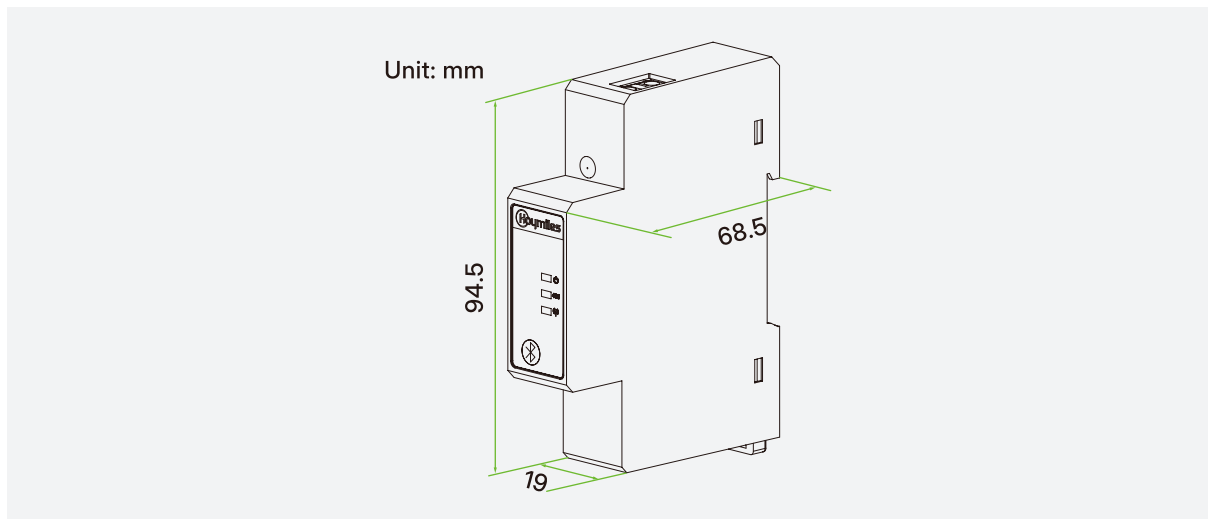
NOTICE

Immediately contact your supplier or distributor upon noticing any damaged or missing parts.

2.3 Appearance



2.4 Dimensions



2.5 Button Functions

	Action	Function
	Press for 3 s	Turn on Bluetooth.
	Press for 1 s	Confirm Bluetooth connection.
	Press for 10 s	Reset the meter.

2.6 LED Indicators

LED		Time Gap	Indication
	Off	-	Powered off
	Solid red	-	Powered on
	Flashing red	-	Electric current measured
485	Off	-	No RS485 communication
	Single green flash	-	RS485 communicated once
	Solid green	-	Over-the-air (OTA) updating (metering module)
	Off	-	Network not configured
	Flashing blue	1 s	Bluetooth broadcasting
	Flashing blue	0.5 s	Waiting for button confirmation to connect Bluetooth (maximum waiting time: 30 s)
	Solid blue	-	Bluetooth connected
	Flashing green	0.5 s	Network configured, connecting to the network / Network connection failed
	Solid green	-	Network connected, but no data communication
	Solid green, flashing blue	Blue: 2 s	Data communicating
	Alternating blue and green flashing	1 s	OTA updating (Wi-Fi module)
	Solid blue and green (3 s)	-	Restarting
	Alternating blue and green flashing	Blue: 2 s Green: 0.5 s	Abnormal

3 Installation

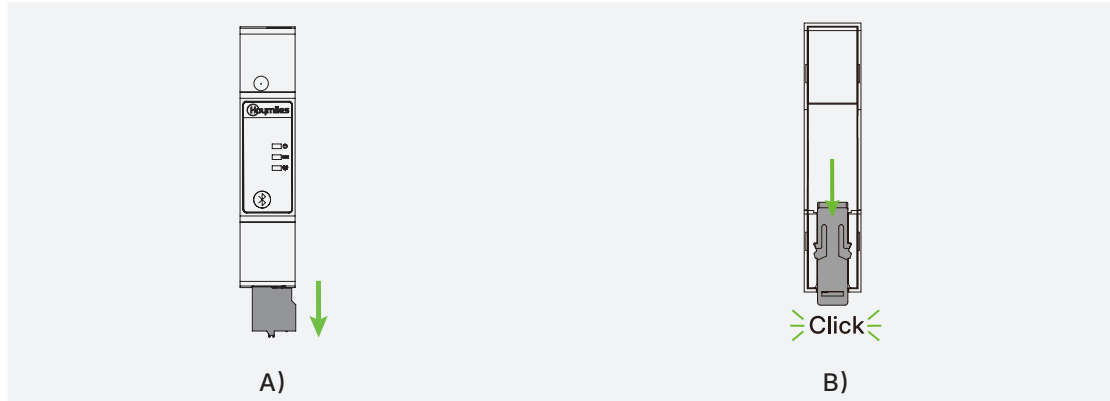
Prerequisite

- The installation must be carried out by a qualified electrician with all devices powered off.
- A 35 mm DIN rail, a slotted screwdriver, personal protective equipment, and other auxiliary tools are on site.
- The installation location is within the coverage of a reliable Wi-Fi network.

Step 1 Install the Meter

A) Remove the terminal block inserted at the bottom of the meter.

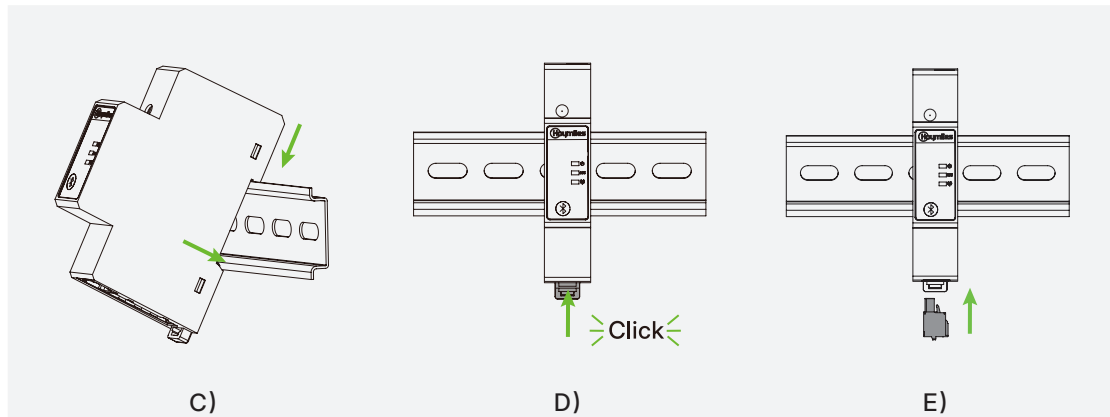
B) Push down the clip at the rear of the meter to unlock the mounting mechanism.



C) Clip the meter onto the DIN rail in the distribution box.

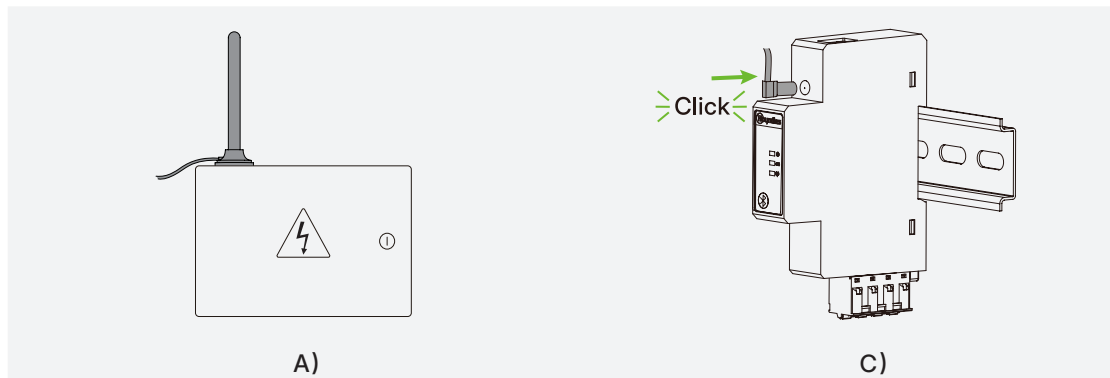
D) Push up the back-end clip to secure the meter on the DIN rail.

E) Insert the terminal block back in place.



Step 2 Connect the Antenna

- Securely attach the antenna body to the top of the distribution box.
- Guide the antenna cable into the distribution box.
- Insert the connector into the antenna port of the meter.

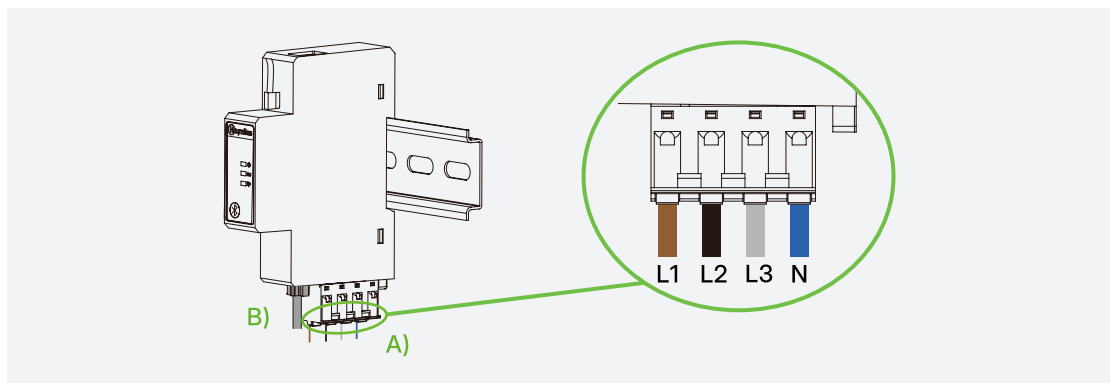


Step 3 Connect the Power Supply and CT

NOTE

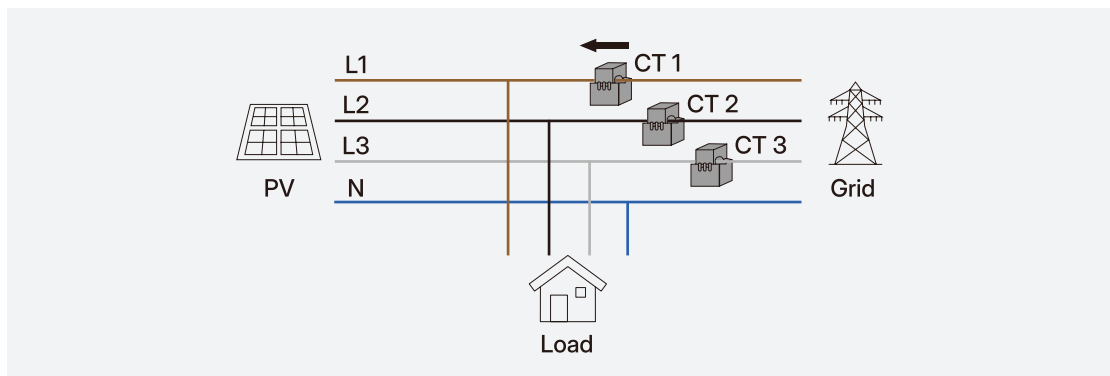
- The minimum AC cable size should be in accordance with local regulations.
- The wiring color code may vary. Always follow the local regulations for wiring.

- Insert the AC wires in the distribution box into the terminal block according to the marks on the meter.
- Insert the CT connector into the CT port of the meter.



Step 4 Install the CTs

- Make sure the arrows marked on CTs point to the load.
- Clamp the CTs in place.



4 APP Setup and Monitoring Activation

NOTE

The screenshots provided here are for reference only. The actual screens may vary.

4.1 App Configuration

Step 1 Download the S-Miles Home Application

Scan the **QR code** located on the right side, or,

Search for **"S-Miles Home"** on the App Store or Google Play Store



Step 2 Pair with the Meter

A) Log in to the APP.

B) Tap + > **Link Smart Device** > **Hoymiles Devices**.

C) Press the button on the meter for 3 s until the network indicator  flashes blue.

D) Tap the meter picture > **Pair**.

The network indicator will flash blue at 0.5 s intervals.

NOTE

The maximum waiting time for button confirmation to connect Bluetooth is 30 s.

E) Press the button on the meter within 30 s.

When Bluetooth is connected, the network indicator will be solid blue.



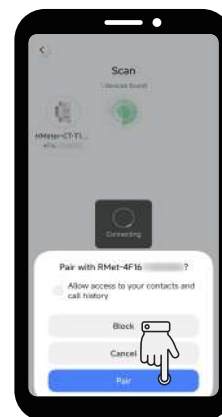
B)-1



B)-2



D)-1



D)-2

4.2 Network and System Connection

Step 1 Connect the Meter to Home Wi-Fi

NOTE

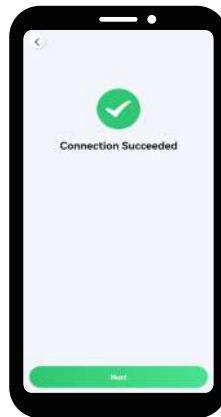
The meter must be connected to the same Wi-Fi as other devices in the system.

A) Enter or select the Wi-Fi name, and enter the password. Then tap **Next**.

B) When the connection is successful, the network indicator will be solid green. Tap **Next**.



A)



B)

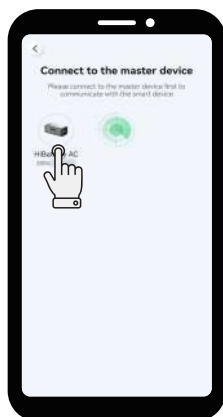
Step 2 Connect the Meter to the Master Device

A) Tap the picture of the micro storage device.

B) Tap the meter picture.

C) Enter the name for the meter, and tap **Confirm**.

D) Tap **Finish** to complete device adding. Or tap **Continue adding** to add more devices.



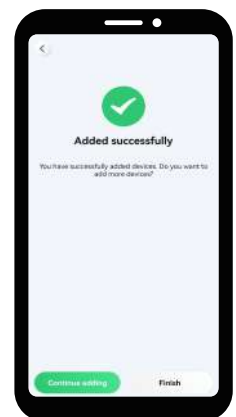
A)



B)



C)



D)

5 Technical Data

Model	HMeter-CT-T120-RW
Electrical Specifications	
Grid type	3P3W, 3P4W
Input voltage range	90 to 277 V ac L-N, 156 to 480 V ac L-L
Frequency	50/60 Hz
Current range	0 to 120 A
Power consumption	2 W
Overvoltage category	CAT III
Measurement Accuracy	
Power	±1%
Active power	±1% (conforming to IEC 62053-21 Class 1)
Reactive power	±2%
Frequency	±0.2%
Current	±0.5% (4 to 120 A)
	±1% (1 to 4 A)
	±3% (0.06 to 1 A)
Voltage	±0.5%
Power factor	±0.1%
Communication Specifications	
Supported communication interface	WLAN / RS-485
Baud rate (by default)	9600
Port protocol	Modbus TCP / Modbus RTU
Wi-Fi	802.11 b/g/n
Wi-Fi range*	30 m (Indoor)
	50 m (Outdoor)
Bluetooth protocol	BLE 5.0
Mechanical Specifications	
Dimensions (W × H × D)	19 × 94.5 × 68.5 mm
Weight	86 g
Operating temperature range	-40°C to +70°C
Storage temperature range	-40°C to +85°C
Relative humidity	≤95%RH, non-condensation
Altitude	≤2000 m
Enclosure protection rating	IP20
Mounting mode	Snap-on
	By DIN 35 Rail
Current transformer cable length	1 m

*: The actual Wi-Fi signal reception range depends on on-site conditions.

6 Troubleshooting

Issue 1

Symptom: The Power Indicator fails to illuminate after installation.

Indicator Status: Off

Possible Cause: The power supply of the HMeter-CT-T120-RW is abnormal.

Solution: Check the AC power wires for issues such as loose connections or missed connections. If any of these issues are found, please refer to [3. Installation](#) to reconnect the wires. (The upstream power supply must be disconnected before reconnecting.)

Issue 2

Symptom: The Power Indicator remains solid when a load is connected.

Indicator Status: Solid red (no flashing)

Possible Cause: The CT connection is abnormal.

Solution: Check whether the CT connector is properly inserted into the CT port of the meter.

Issue 3

Symptom: The HMeter-CT-T120-RW is in the abnormal mode.

Indicator Status: Alternating blue (2 s) and green (0.5 s) flashing

Possible Cause: Meter fault

Solution: Power cycle the meter by disconnecting and then reconnecting the power. If the issue persists, please contact our [after-sales service](#).

Issue 4

Symptom: The Network Indicator fails to illuminate.

Indicator Status: Off

Possible Cause: The HMeter-CT-T120-RW is not connected to the network.

Solution: Refer to [4. APP Setup and Monitoring Activation](#) to reconfigure the network.

Issue 5

Symptom: The network connection of the HMeter-CT-T120-RW is abnormal.

Indicator Status: Flashing green (0.5 s)

Possible Cause: The HMeter-CT-T120-RW is disconnected from the Wi-Fi.

Solution: Refer to [4.2 Network and System Connection](#) to reconnect to the network.

7 Appendix: Regulatory Compliance Statement



Hoymiles HMeter-CT-T120-RW is a class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

The Wi-Fi module frequency band of HMeter-CT-T120-RW is 2400 MHz to 2483.5 MHz. ERP < 14 dBm.

EU Declaration of Conformity

Hoymiles HMeter-CT-T120-RW is in compliance with the essential requirements and other relevant provisions of directives 2014/53/EU, 2009/125/EC, 2011/65/EU and (EU)2015/863.

The original EU Declaration of Conformity may be found at <https://www.hoymiles.com/>.

RF Exposure Information

- This device meets the EU requirements (2014/53/EU Article 3.1a) on the limitation of exposure of the general public to electromagnetic fields by way of health protection.
- The device complies with RF specifications when it is used 20 cm from your body.

