



Data Transfer Unit  
**USER MANUAL**

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DTU-W100 3rd Gen

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# 1. Important Safety Information

## 1.1 Read This First

This manual includes important instructions for installing and maintaining the Hoymiles Data Transfer Unit (DTU).

## 1.2 Safety Instructions

Symbol	Usage
	Indicates hazardous situations that can result in deadly electric shock hazards, other serious physical injuries, or fire hazards.
	Indicates directions that must be fully understood and followed in their entirety to avoid potential safety hazards including equipment damage or personal injury.
	Indicates that the described operation must not be carried out. The reader should stop, use caution, and fully understand the operations explained before proceeding.

- Note that only professionals may install or replace DTU.
- Do not try to repair the DTU without approval from Hoymiles. If the DTU is damaged, send the DTU back to your installer for repairing/replacement. Disassembling the DTU without approval from Hoymiles will invalidate the remaining warranty period.
- Read all instructions and warnings on the technical specifications carefully.
- Do not use Hoymiles products in a way that is not suggested by the manufacturer. Doing so may cause death or injury to persons or damage to the equipment.

**Note:** The rated frequency and transmission power used by the radio are shown below.

Frequency Range	2.400-2.4835 GHz
Equivalent Radiated Power (ERP)	≤ 20 dBm

## 1.3 Audience

This manual is intended for use by professional installation and maintenance personnel only.

## 1.4 Contact Information

If you have technical queries concerning our products, contact your system installer or distributor. If further support is required, contact Hoymiles' support at [www.hoymiles.com](http://www.hoymiles.com).

## 1.5 Other Information

Product information is subject to change without notice. The user manual will be frequently updated, refer to the Hoymiles official website at [www.hoymiles.com](http://www.hoymiles.com) for the latest version.

## 2. About Hoymiles Microinverter System

### 2.1 The Microinverter

It converts the DC output of solar modules into grid-compliant AC power. It sends the output information of PV modules and the operation data of the microinverters to the DTU, which is the hardware basis of module-level monitoring.

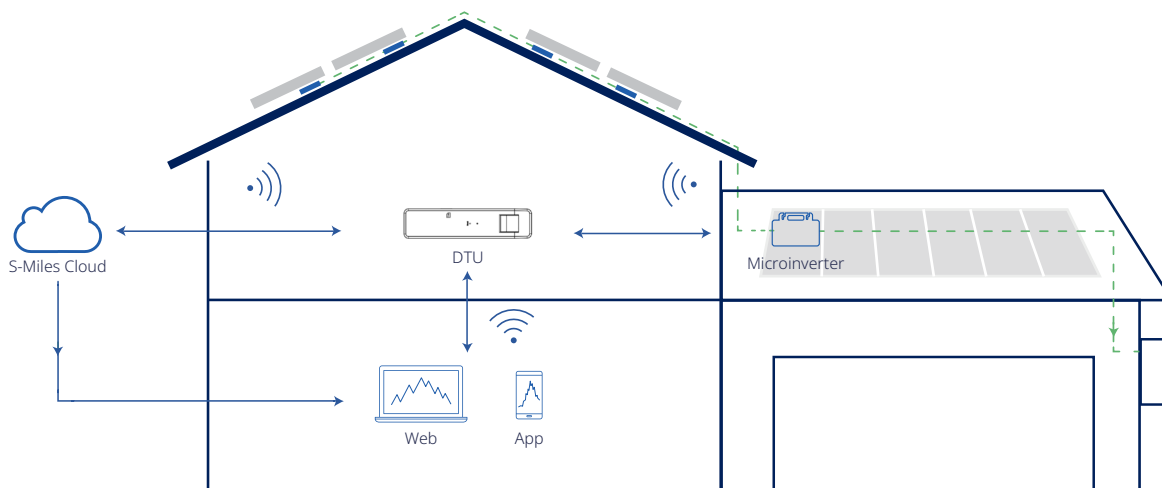
With conversion efficiency up to 96.7% and MPPT efficiency up to 99.9%, Hoymiles microinverters are among the high-quality microinverters in the world.

### 2.2 The DTU

The DTU is a key component in the Hoymiles microinverter system. It works as the communication gateway between the Hoymiles microinverters and the S-Miles Cloud (Hoymiles Monitoring Platform). The DTU communicates wirelessly with the microinverters via 2.4 GHz Proprietary RF (Nordic), and collects the operation data of the system. Meanwhile, the DTU connects to the Internet via the router and communicates with the S-Miles Cloud. The microinverter system operation data will be uploaded to the S-Miles Cloud via DTU.

### 2.3 The S-Miles Cloud (Hoymiles Monitoring Platform)

It collects the operation data and status of the microinverters in the system and provides module-level monitoring for users and maintenance staff. The following diagram shows the operation of the Hoymiles Microinverter System.



### 3. DTU Installation

#### 3.1 System Capacity

The DTU is capable of monitoring up to 99 single units, 49 2-in-1 units or 24 4-in-1 units. If the communication between the DTU and the microinverters suffers interference caused by installation conditions, the number of PV modules that the DTU can monitor may be reduced.

#### 3.2 Basic Conditions Required

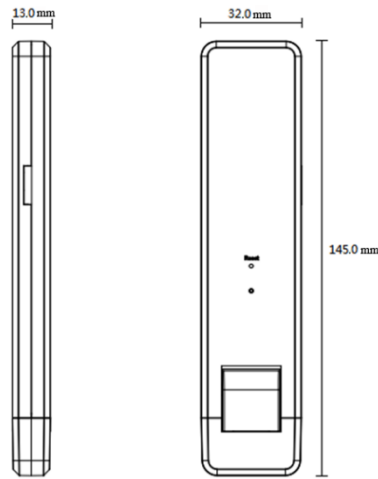
Before installing the DTU, make sure that the site meets the following requirements:

- Install the DTU close to the router.
- Stable Internet connection.
- The straight distance between the DTU and the microinverter must be less than 5 meters.
- The location should be one meter above the ground and 0.8 meters away from corners.

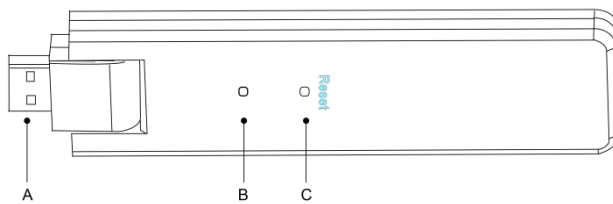
Environmental requirements for DTU installation:

- Away from dust, liquid, acids, or corrosive gas.
- The temperature should be between -20°C and 55°C.

#### 3.3 Dimensions



#### 3.4 Interface Layout



Item	Description
A	USB Connector
B	Status Indicator
C	Reset Bottom

#### 3.5 Local Installation Assistant

The Local Installation Assistant is a new function integrated with the DTU-W100 3rd Gen. Download the S-Miles Cloud Installer App before use.

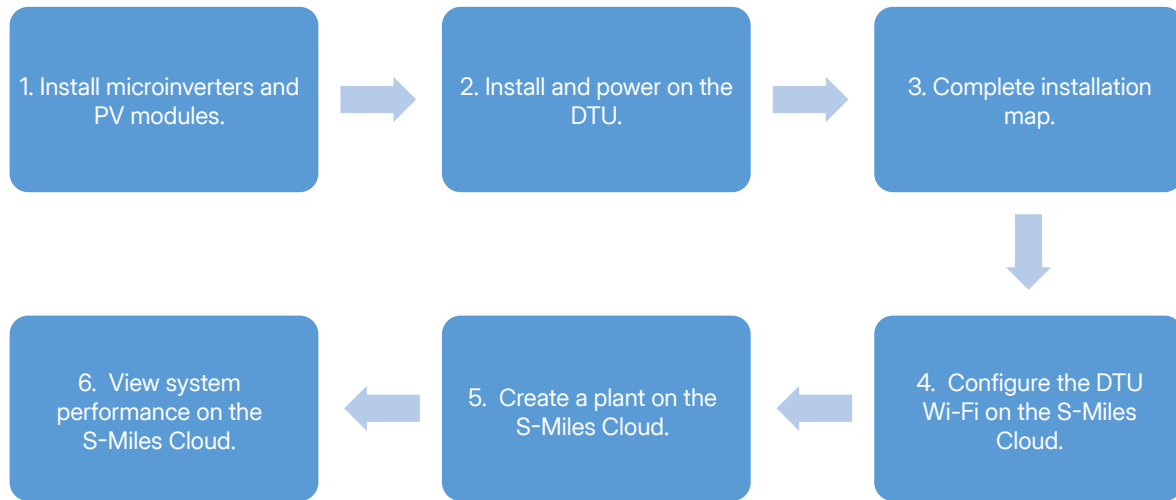


The DTU-W100 is improved over the previous generations of DTU product, and is developed with this new function that allows the installer to:

- A. Complete the Wi-Fi configuration in one step.
- B. See how many microinverters under this DTU are working properly (and the details for each microinverter) and how many are abnormal (and the details for each microinverter) at a glance through the plant overall inverter status indication.
- C. Add connection status, which displays the signal strength between each microinverter with connected DTU, so that the installer can adjust the DTU installation location accordingly. This function simplifies DTU installation and avoids a second visit for installer due to the poor connections between DTU and certain microinverters.

**Note:** Refer to [S-Miles Cloud \(App\) User Manual](#) for more details.

### 3.6 System Installation Sequence



### 3.7 DTU Installation Procedure

#### 1) Install the PV modules and microinverters.

Refer to the [microinverter’s user manual or quick installation guide](#) for detailed installation steps.

#### 2) Locate the DTU.

The maximum communication distance of Hoymiles DTU is 150 m in open space. The walls, roofs, or other obstacles in between will affect the signal and reduce the communication distance in actual installations.

The range of signal reduction for possible obstacles at the site is shown below:

Material	Relative signal range reductions
Wood/Glass	0%-10%
Stone/Pressed cardboard	10%-40%
Reinforced concrete (reduction increases with the amount of reinforcement)	10%-90%
Metal	Up to 100%

Therefore, the DTU must be placed as close to the microinverters as possible at the site to ensure good communication between the DTU and the microinverters.

### 3) Install the DTU.

Connect the DTU to the adapter and plug it into the wall socket (Figure 1).

If you use a power strip, make sure that it is placed at least 1 meter above the ground, and try to install the DTU at a 90 degree angle perpendicular to the ground (Figure 2).

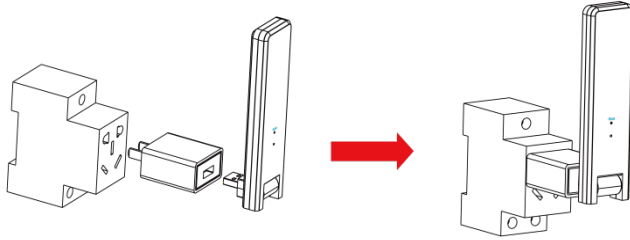


Figure 1

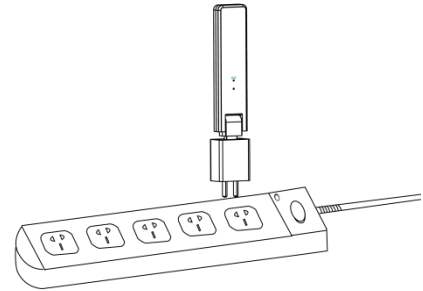


Figure 2

**Note:** To prevent signal interference, do not install the DTU directly above metal or concrete.

### 4) Power on the DTU.

Once the DTU is powered on, the indicator will flash red, green, and blue lights in turn for 30 seconds.

### 5) Complete the installation map.

- A. Peel the serial number label from the DTU and place it on the installation map.



- B. Complete the installation map.

To sheet \_\_\_\_\_ ↓

Hoymiles		Hoymiles Microinverter Installation Map											APP40228 V1.4				
Please Make 'N' for North		Panel type: Azimuth: Tilt: Sheet ___ of ___			Customer Information:						DTU Serial Number:						
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A																	
B																	
C																	
D																	



To sheet \_\_\_\_\_ ↓

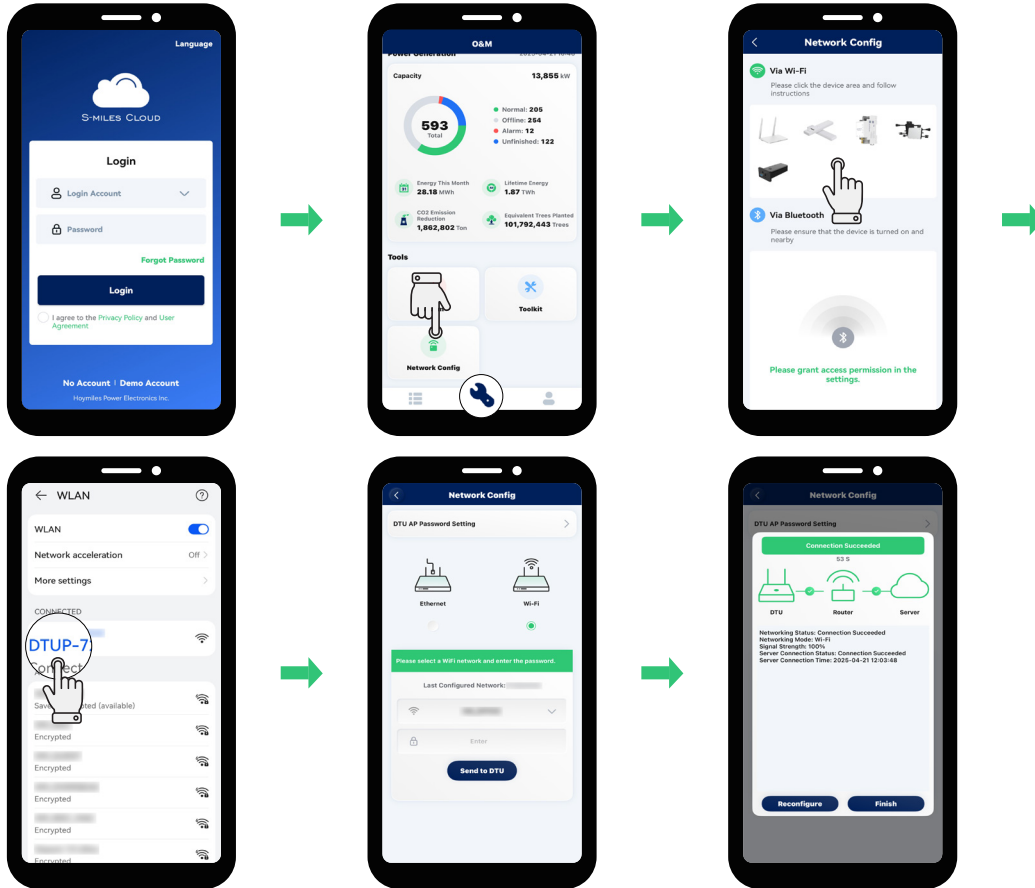
## 4. Plant Creation on S-Miles Cloud

### 1) Establish an internet connection.



**Note:**

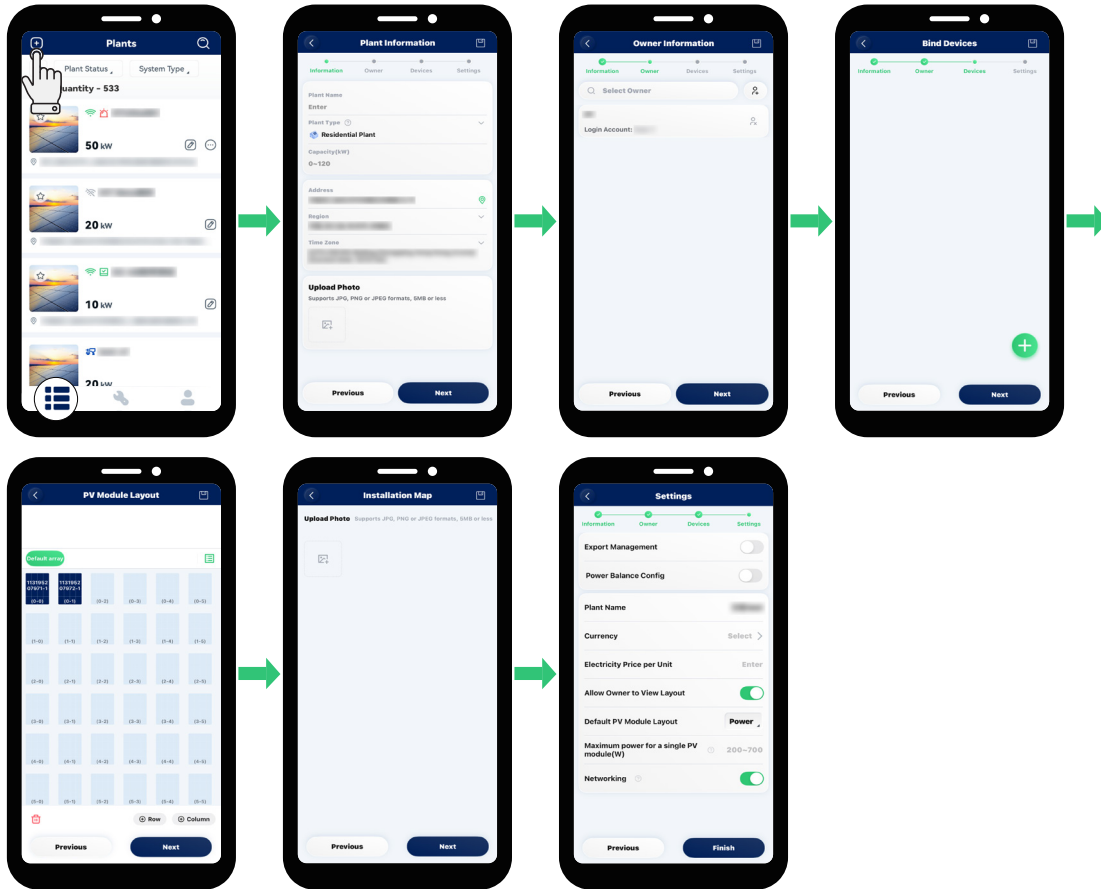
- The screenshots provided in this manual are for reference only. The actual screens may vary.
- The DTU's network name includes "DTU/DTUP/DTUL" followed by the last eight digits of the product SN, and is password-free by default.
- Set the router to 2.4 GHz band. Do not enable 5 GHz band.

- Open and log in to S-Miles Installer using your credentials.
- Tap  > **Network Config** .
- Follow the prompts to configure the network connection.



## 2) Add a plant.

- A. Tap  > .
- B. Follow the prompts to fill in the required information.



## 5. Customer Login

- A. Download S-Miles Installer by scanning the QR code.




- B. Open the app and log in with the account that have been set up by the installer.
- C. Wait about 5 minutes for the data to be uploaded. Then customers will be able to view all details.

**Note:** Customers can also view the microinverter details on S-Miles Cloud Web at [global.hoymiles.com](http://global.hoymiles.com).

## 6. Plant Data Viewing


You can view the plant data on the app or Web.

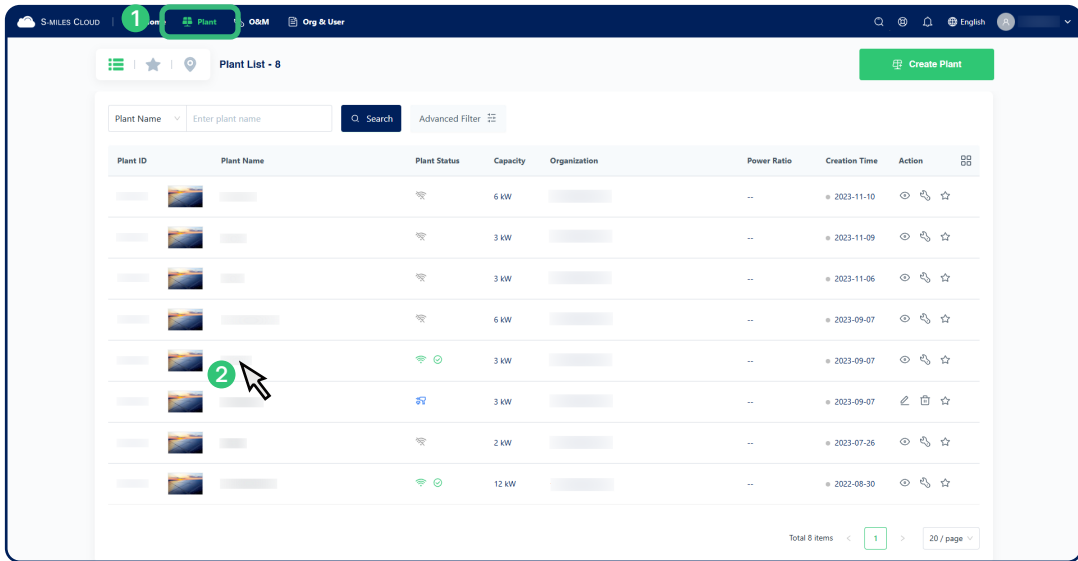
### Viewing on the App

- A. Open the app, Tap .
- B. Search for the desired plant name and tap it to move to the plant homepage.



### Viewing on the Web

- A. Go to [global.hoymiles.com](http://global.hoymiles.com).
- B. Click  **Plant** in the navigation bar.
- C. Find the target plant and click its name to enter the plant dashboard.



## 7. LED Indicator Status

Red Light	Description
Flashes every 1 second	Disconnected from Wi-Fi
Flashes every 0.5 seconds	Disconnected from server
Blue Light	Description
Flashes every 1 second	No SN
Flashes every 0.5 seconds	Receiving data from server
Green Light	Description
Flashes every 0.5 seconds	Incomplete SN
Lights up constantly	Normal
Red+Green+Blue	Description
Each color flashes once every 1 second	Powered on
Each color flashes twice every 1 second	Firmware being upgraded

## 8. Troubleshooting

Indicator	Status	Description	Solution
Red	Flashes every 1 second	DTU without SN inside and disconnected from Wi-Fi	<ul style="list-style-type: none"> <li>Check if the distance between the router and the DTU is out of range.</li> <li>Check if the router's password has been correctly input during configuration.</li> </ul>
	Lights up constantly	DTU with SN inside but no Wi-Fi connection	<ul style="list-style-type: none"> <li>Use another device to connect with the router and make sure that there is an effective reception.</li> <li>Try to connect with the hot spot from the phone to see if any data uploads successfully.</li> </ul>
	Flashes every 0.5 seconds	DTU disconnected from server	<ul style="list-style-type: none"> <li>Re-do configuration.</li> <li>Double-check the port and server address inside the DTU. (Contact the <a href="#">Hoymiles Technical Service Center</a> for the correct address.)</li> </ul>
Blue	Lights up constantly	DTU has Wi-Fi connection but without SN inside	<ul style="list-style-type: none"> <li>Complete the plant creation on S-Miles Cloud</li> <li>Complete networking.</li> </ul>
	Flashes every 1 second	No SN	Complete networking.
Green	Flashes every 0.5 seconds	Incomplete SN	Relocate the DTU to somewhere close to both the router and the microinverters.

### Note:

- If the DTU is connected to Wi-Fi, and the blue indicator lights up, you can create the plant.
- If the DTU is not connected to Wi-Fi, and the indicator alternates red and blue flashes, connect the DTU to the Wi-Fi again.

## 9. Datasheet

### Communication to Microinverter

Signal	2.4 GHz Proprietary RF (Nordic)
Maximum distance (open space)	150 m
Maximum number of PV modules connected*	99

### Communication to S-Miles Cloud

Wi-Fi communication standard	Wi-Fi (802.11b/g/n)
Sampling rate	Per 15 minutes

### Interaction

LED	LED Indicator
App	S-Miles Installer

### Power Supply (Adapter)

Type	External adapter
Adapter input voltage/frequency	100 VAC–240 VAC / 50 Hz or 60 Hz
Adapter output voltage/current	5 V / 2 A
Power consumption	Typ. 1.0 W / Max. 5.0 W

### Mechanical Data

Ambient temperature range (°C)	-20 to +55
Dimensions (W × H × D [mm])	143 × 33 × 12.5
Weight (g)	43
Installation option	Direct plug-in

### Feature

Compliance	FCC Part 15B, FCC Part 15C, EN 62368-1, EN 61000-3-2, EN 61000-3-3, EN 301489, EN 300328, EN 300440
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### Microinverter Compatibility

Microinverter models	HM series, MI series
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\* This depends on the installation environment.

## 10. Appendix: Regulatory Compliance Statement

### EU Directive Compliance

This product complies with the following EU directives and can be used without restrictions in the European Union:

- Directive 2014/53/EU (RED) and 2009/125/EC: Relating to the provision of electrical equipment within certain voltage limits on the market (Low Voltage Directive).
- Directive 2011/65/EU and 2015/863/EU (RoHS): Restricting the use of certain hazardous substances in electrical and electronic equipment.



The user manual and full text of the EU Declaration of Conformity (DoC) are available at: [www.hoymiles.com](http://www.hoymiles.com).