



**Warning:**

- Read this guide thoroughly before installation.
- Operation personnel must wear proper personal protective equipment (PPE).
- Ensure that AC and DC wires are not live before any connection work.
- Adhere to the applicable codes and regulations of the installation site.
- Hoymiles is not liable for damages resulting from improper installation and use.

**Danger:**

- This installation must be carried out with all devices off the grid.
- To avoid damaging the microinverter or potential fire hazards, ensure all terminals are securely tightened with the correct torque.

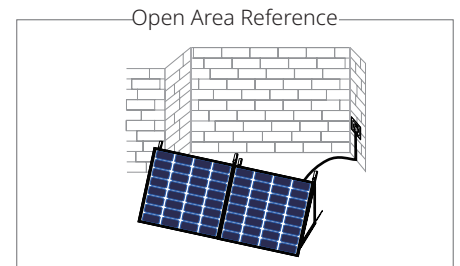
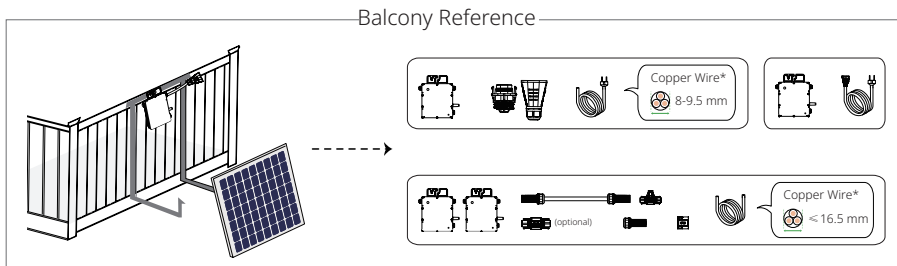
**Notice:**

Operating voltage: 230 V Single-phase and 230/400 V Three-phase grid.

## Application

The HMS-500W-1T series microinverters are designed for mini PV systems in spaces like balconies and open areas, with three configuration options:

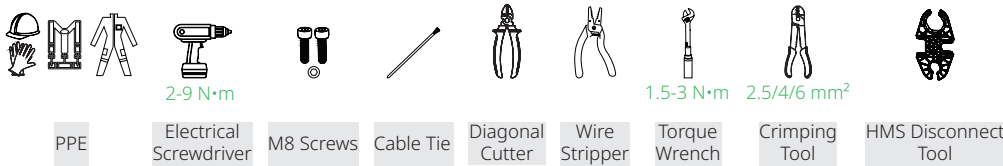
- Single microinverter, one PV module, one HMS Field Connector, and an AC cable (installer-prepared).
- Single microinverter, one PV module, and an HMS Plug and Play Cable.
- Multiple microinverters, multiple PV modules, and HMS Cable System.



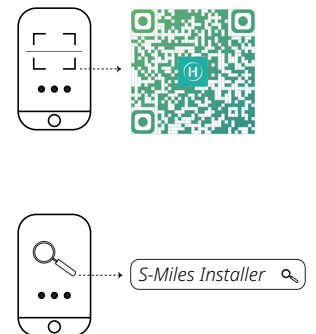
\*: The AC cable's voltage range should be greater than 300 V. For proper installation, consider an AC Cable rated at 450/700 V, as recommended by Hoymiles. Be sure your selection complies with local wiring regulations.

## Preparation

### 1 Check the Tools



### 3 Download the Application



### 2 Plan the Microinverters

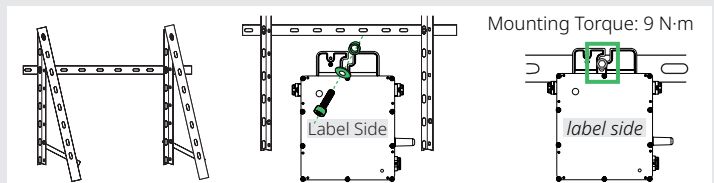
- For single-microinverter systems, the entire system consists of one microinverter and one PV module.
- For multi-microinverter systems, define the number of microinverters per AC output line based on the ampacity of the AC cables. (\*AC cable ampacity determines the limits, which may vary. Check local codes for the actual limitations.)

Model	HMS-300W-1T	HMS-350W-1T	HMS-400W-1T	HMS-450W-1T	HMS-500W-1T
2.5 mm <sup>2</sup>	18	15	13	12	11

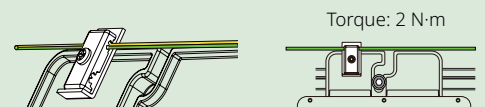
## Mechanical Installation & DC Side Electrical Installation

### 1 Attach the Microinverter to the Bracket

- Follow the manufacturer's instructions to assemble the bracket.
- Attach the microinverter (label side up) to the bracket, ensuring the microinverter is properly aligned.
- Secure the microinverter to the bracket with M8 screws (Torque: 9 N·m). Do not over-torque.

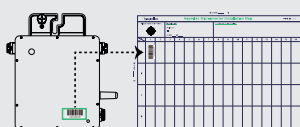


- Warning:**
- Check the balcony railing for its stability, weight capacity, and a smooth, level surface for bracket attachment.
  - Always place the microinverter beneath the PV module to avoid direct exposure to rain, UV, and other harmful weather events.
  - Allow 2 cm of space around the microinverter for ventilation and heat dissipation.
  - The AC cables already include earth wires for direct grounding. Use the grounding clamps as shown on the guide if external grounding is required.



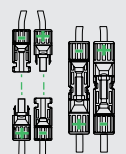
### 2 Complete the Installation Map

- Peel off the microinverter's removable SN label.
- Affix the label to the respective location on the installation map.



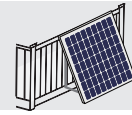
### 3 Connect the PV Modules

- Mount the PV modules above the microinverters.
- Connect the DC leads of PV modules to the corresponding DC inputs on the microinverters.



#### 4 Attach the Bracket to the Railing

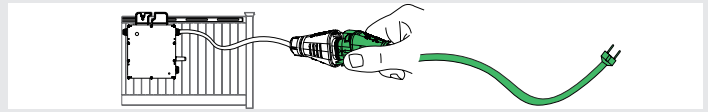
- Follow the manufacturer's instructions to securely attach the bracket to the balcony railing.
- Verify the bracket is aligned correctly, level, and stable.



### AC Side Electrical Installation (Single-Microinverter System)

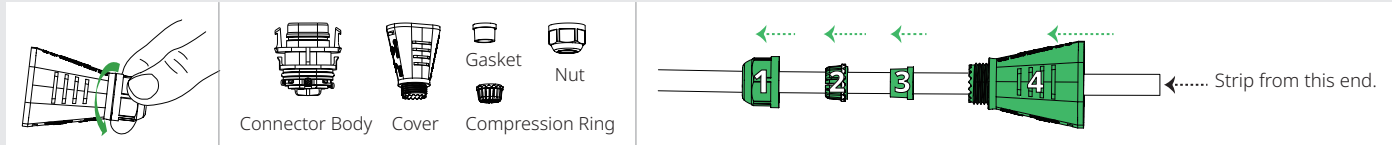
#### ● Use HMS Plug and Play Cable

Connect the HMS Plug and Play Cable to the microinverter. Listen for a click as they engage.

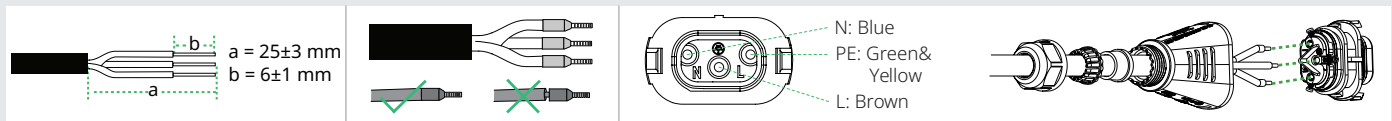


#### ● Use HMS Field Connector

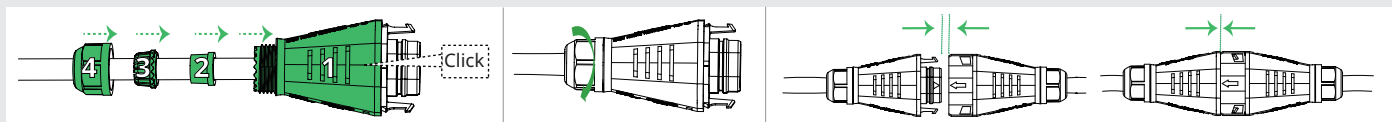
a. Separate the HMS Field Connector into five parts and slide them over an AC cable.



b. Strip the cable, crimp it, and insert the crimped cable into the connector body.



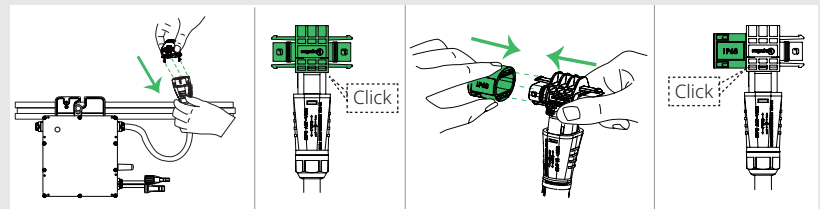
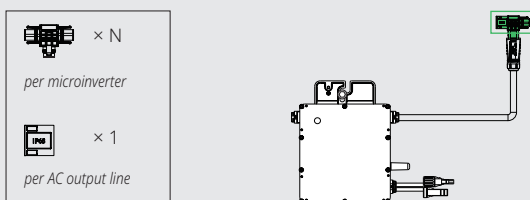
c. Slide the cover, gasket, and nut over the cable, then firmly tighten the nut with a torque wrench (Torque:  $2 \pm 0.5$  N-m). Connect the HMS Field Connector to the microinverter's output connector until it clicks into place.



### AC Side Electrical Installation (Multi-Microinverter System)

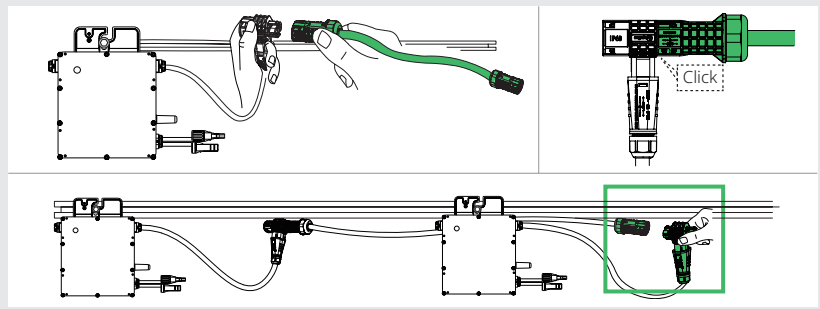
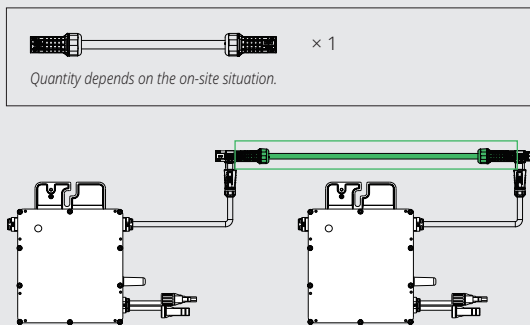
#### 1 Connect the AC Trunk Connector

- Connect the HMS Trunk Connector to the microinverter.
- Cover the unused port on the HMS Trunk Connector (located at the beginning of the AC Trunk) with an HMS Sealing Cap. Listen for a click as the sealing cap engages.



#### 2 Connect Adjacent Microinverters

Use the HMS Connection Cable to connect all microinverters on the AC Trunk one by one. Listen for a click as they engage.



#### ● Obstacle Scenario

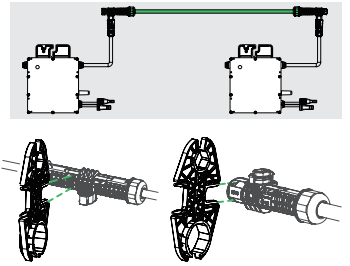
If you need to space microinverters farther apart due to an obstacle, Hoymiles offers two solutions:



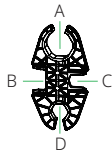
- Using an HMS Extension Connector to connect two HMS Connection Cables into a longer one.



- **Using a longer HMS Connection Cable:** Hoymiles offers cable lengths including 1.1 m, 2.0 m, 2.3 m, 3.0 m, and 4.6 m. If you require a different length, contact Hoymiles sales.



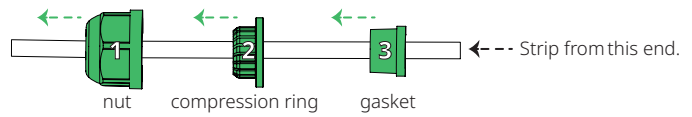
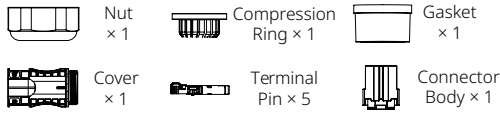
\* To disconnect the HMS Extension Connector from the AC Trunk, you must use an HMS Disconnect Tool.



No.	Functions
A	Tighten/Loosen nuts in the AC Trunk
B	Remove microinverters from the AC Trunk
C	Disassemble connectors on the AC Trunk
D	Tighten/Loosen the HMS Field Connector's nuts

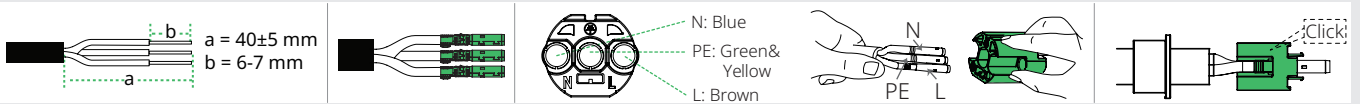
### 3 Make the AC End Cable

a. Separate the HMS Cable Terminal Connector into six parts and slide them over the AC cable in the correct order.

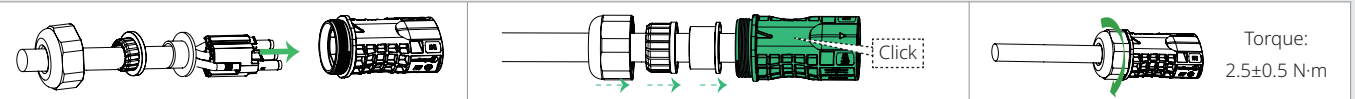


**Notice:** Two terminal pin sizes are available: one for 2.5 mm<sup>2</sup> cables and the other for 4 mm<sup>2</sup> or 6 mm<sup>2</sup> cables. Choose the correct terminal pin size matching the cable size to ensure a reliable and secure connection. Using the wrong size may result in potential issues or connection failures.

b. Strip the cable, crimp it, and insert the crimped cable into the connector body.



c. Insert the connector body into the cover, then slide the gasket, compression ring, and nut over the cable assembly. Tighten the nut to 2.5 ± 0.5 N·m.



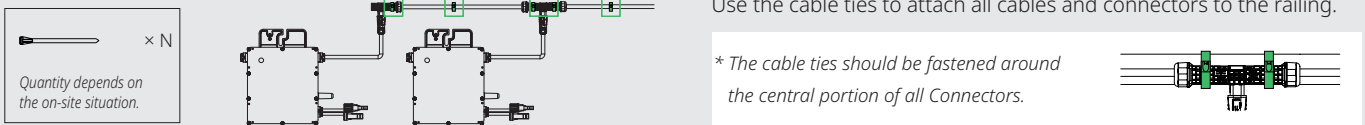
### 4 Connect the AC End Cable

Connect the AC End Cable to the last HMS Trunk Connector in the AC Trunk. Listen for a click as they engage.



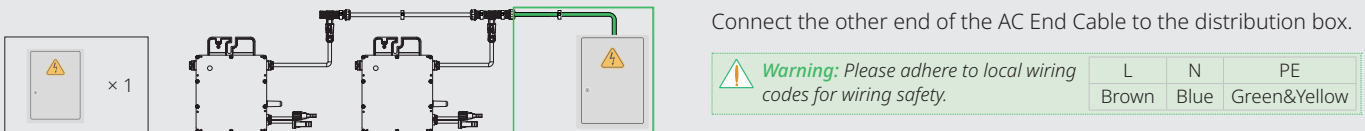
### 5 Manage the AC Trunk

Use the cable ties to attach all cables and connectors to the railing.



### 6 Connect to the distribution box

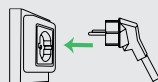
Connect the other end of the AC End Cable to the distribution box.



## Start-up

### 1 Energize the system

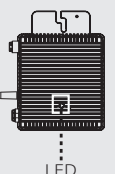
**For single-microinverter system:** Connect the other end of the HMS Plug and Play Cable/AC End Cable to the socket. Wait five minutes for the system to start producing power.



**For multi-microinverter system:** Turn **ON** the utility-grid AC circuit breaker. Wait five minutes for the system to start producing power.

### 2 Check the LED Status

LED	Indicate
Five green flashes (0.3s gap)	Start-up Success
Fast green flashing (1s gap)	Producing Power
Red flashing (1s gap)	AC Grid Fault

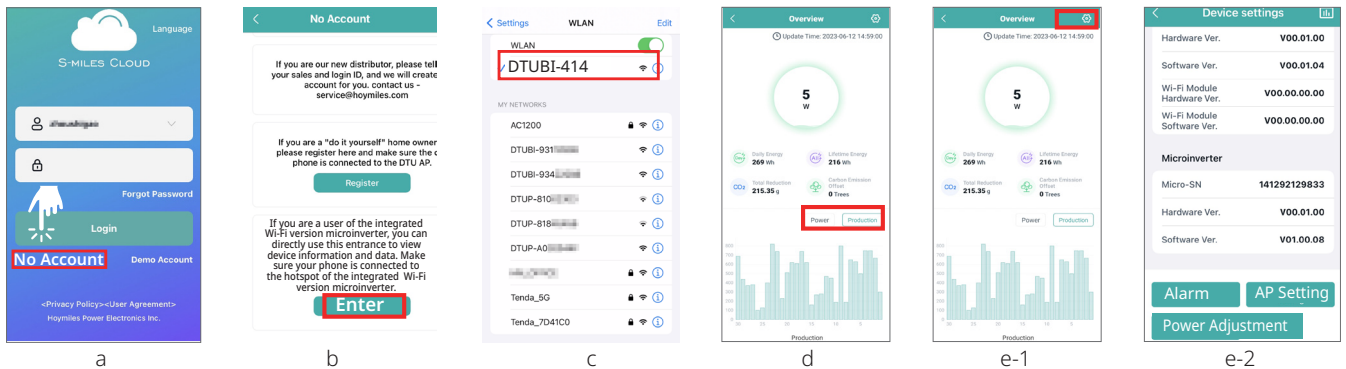


# Monitoring Settings

- Warning:**
- The screenshots provided here are for reference only. The actual screens may vary.
  - The HMS-500W series microinverter supports production data monitoring via both Direct Connection and Remote Connection.
    - Direct Connection** requires no account login but provides data access only for the connected microinverter.
    - Remote Connection** necessitates an account login and grants monitoring access to the entire system after you create a power plant.
  - The router's Wi-Fi name can only contain **letters** and **Arabic numerals** and the router should support 2.4 GHz band.

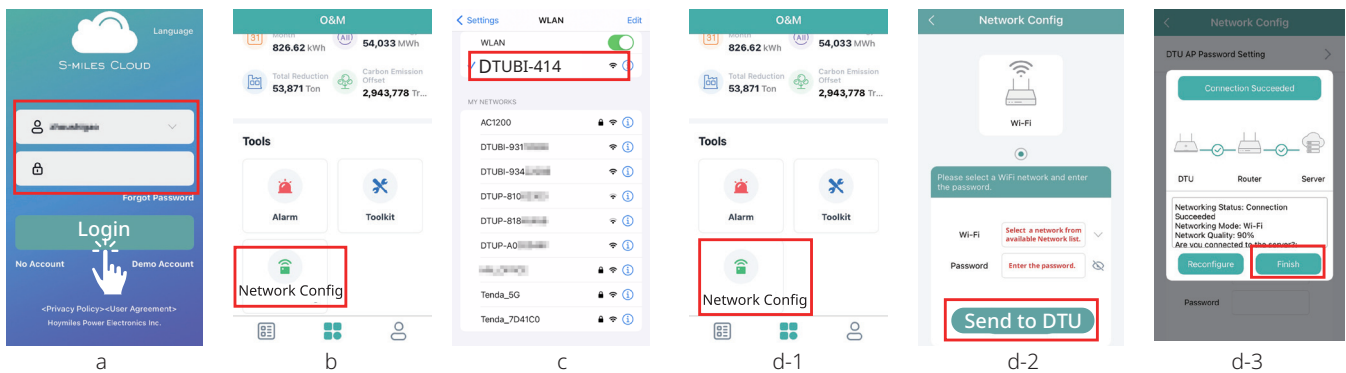
## Direct Connection

- Open the S-Miles Installer app, and tap the **No Account** button.
- On the **No Account** screen, tap the **Enter** Button. This will take you to the **WLAN** screen.
- On the **WLAN** screen, select the microinverter's Wi-Fi from the list and enter its AP password. (The Wi-Fi name of the microinverter consists of DTUBI and the SN, and the default AP password is printed on a non-removable label affixed to the microinverter's silver-colored cover.)
- On the microinverter's homepage, click the **Power** or **Production** button to see the microinverter's performance.
- On the microinverter's homepage, click the **Setting** icon to move to the **Device Setting** screen.

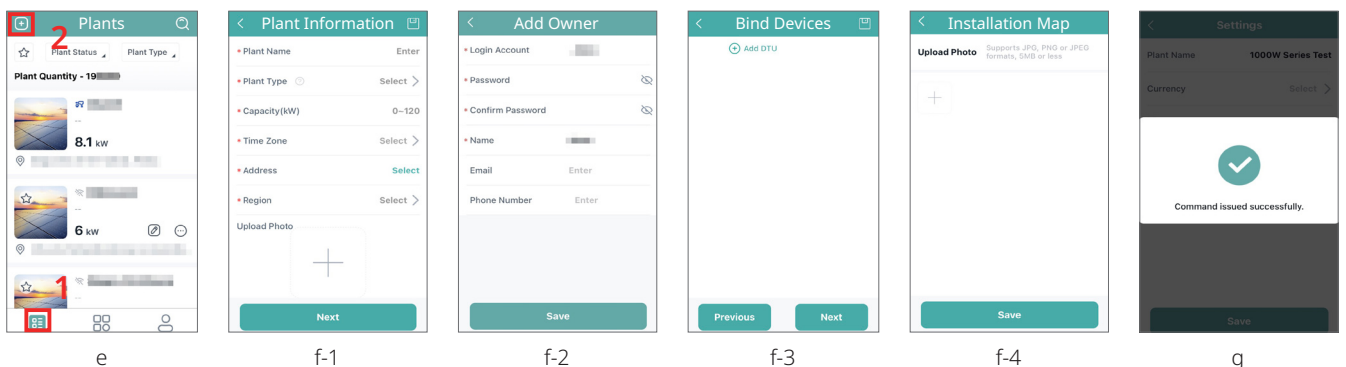


## Remote Connection

- Open and log in to the S-Miles Installer app using your credentials. This will take you to the **Home** screen.
- On the **Home** screen, tap the **O&M > Network Config** icon. This will take you to the **WLAN** screen.
- On the **WLAN** screen, select the microinverter's Wi-Fi and enter its AP password. (The network name of the microinverter consists of DTUBI and the SN, and the default password is printed on a non-removable label affixed to the microinverter's silver-colored cover.)
- Back to the **O&M** screen, click the **Network Config** icon again, and follow the prompts to configure the network connection.



- Navigate to the **Plants** screen and tap the **Add Plant** icon.
- Follow the prompts to fill in the required information.
- Tap the **Save** button to finalize the power plant creation.



**Note:** Consult the *Microinverter User Manual* and *S-Miles Cloud Guide* for comprehensive instructions on configuring your monitoring system.