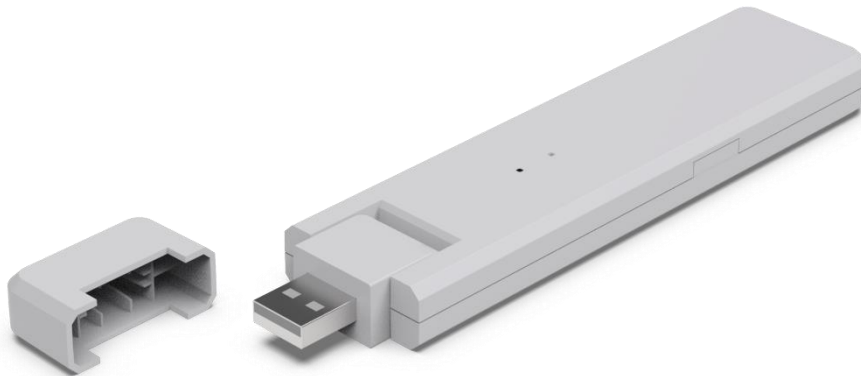


Technaxx® * User Manual

WiFi Stick TX-247

data logger for balcony power plants with Hoymiles inverter

Before using the appliance for the first time, please read the instructions for use and safety information carefully.



This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capacities, or by persons lacking in experience or knowledge, unless they are supervised or instructed on the use of this device by a person responsible for their safety. Children should be supervised to ensure they do not play with this device.

Keep this user manual for future reference or product sharing carefully. Do the same with the original accessories for this product. In case of warranty, please contact the dealer or the store where you bought this product.

Enjoy your product. * Share your experience and opinion on one of the well-known internet portals.

Specifications subject to change without notice - please make sure you are using the latest manual available on the manufacturer's website.

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Hints

● Only use the product for purposes due to its intended function ● Do not damage the product. Following cases may damage the product: Incorrect voltage, accidents (including liquid or moisture), misuse or abuse of the product, faulty or improper installation, mains supply problems including power spikes or lightning damage, infestation by insects, tampering or modification of the product by persons other than authorized service personnel, exposure to abnormally corrosive materials, insertion of foreign objects into the unit, used with accessories not preapproved. ● Refer to and heed all warnings, safety instructions and precautions in the user manual.

Safety instructions

- The product is intended for the transmission of data. It is intended for use by private individuals.
- Never touch the product with wet or damp hands.
- The product can only be operated with the voltage described on the interior panel.
- Do not place the product on an unstable surface. The unit could be damaged or persons could be injured. Any attachments should be made only in accordance with the manufacturer's instructions or obtained from the manufacturer.
- If you want to pull the plug out of the socket, always pull on the plug.

- Do not overload wall outlets, extension cords, or other wiring as this may result in fire or electric shock.
- Do not insert any objects into the openings of the unit, as current flows in some places and contact may cause fire or electric shock.
- Unplug from the power outlet for cleaning.
- Do not use liquid cleaners or cleaning sprays. The product may only be cleaned with a damp cloth.
- Do not connect any additional devices that are not recommended by the manufacturer.
- Do not use the product in direct sunlight or places where the temperature may exceed 55°C for a long time.

Warnings

- Do not disassemble the product, it may result in short-circuit or damage.
- Do not modify, repair or remove without professional guidance.
- Do not use corrosive or volatile liquid for cleaning.
- Do not drop or shake the device, it may break internal circuit boards or mechanics.
- Keep the device away from little children.
- The stick is neither waterproof nor dustproof. It is to be intended to use indoors only.

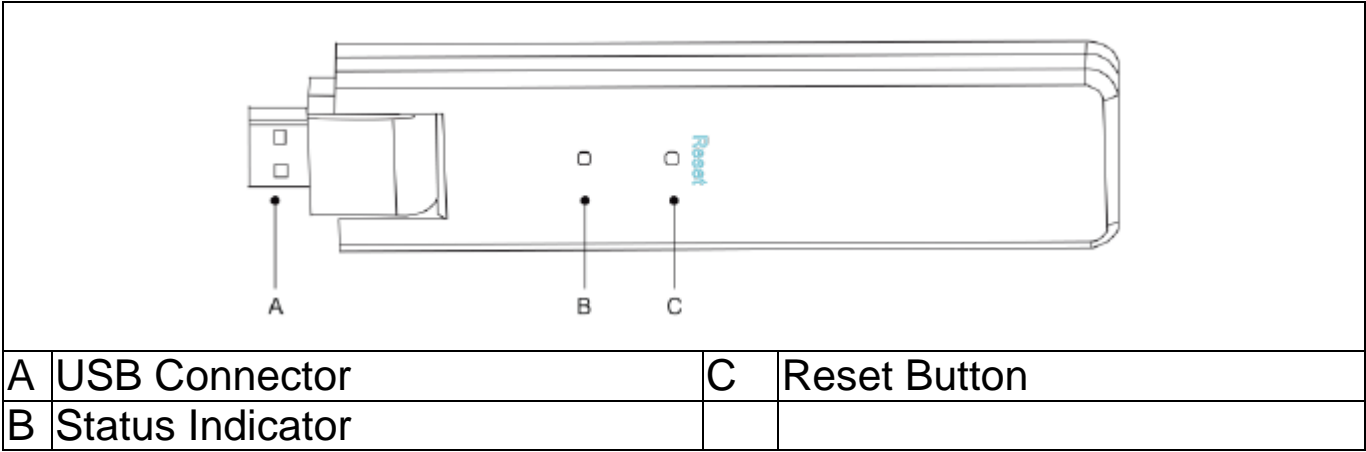
Disclaimer

- In no event shall Technaxx Deutschland be liable for any direct, indirect punitive, incidental, special consequential damage, to property or life, improper storage, whatsoever arising out of or connected with the use or misuse of their products.
- This device is NOT intended to be used for illegal surveillance purposes and shall not be used in any form as evidence for claim purpose.
- Error messages may appear depending on the environment it is used in.
- Technaxx Deutschland is not liable/responsible for non- recording of events, missing files, etc.

Features

- Data logger for balcony power plants with Hoymiles inverters, HM & MI series.
- Module level monitoring, with up to 4 solar modules (including data storage)
- Remote management of the system via the S-Miles Cloud - access via APP (Android + Apple) and web browser
- Real-time data and alarms on the S-Miles APP
- Data acquisition of energy production (15 minutes interval)
- Plug and Play - easy installation
- Maximum distance (open area and depending on installation environment): up to 150m
- Identical to Hoymiles DTU-WLite
- Direct connection via USB port (USB power adapter included)
- Accessory for TX-212, TX-220, TX-228, TX-241 and TX-203, TX-204, TX-242

Product overview



LED status & button description

Red Light	Description
Flashes every 1 second	DTU disconnected from WiFi
Flashes every 0.5 seconds	DTU disconnected from server
Blue Light	
Flashes every 1 second	No SN
Flashes every 0.5 seconds	Received data from server
Green Light	
Flashes every 0.5 seconds	The search SN is incomplete
Lights up constantly	Normal
Red&Green&Blue	
Each color flashes once every 1 second	Power on
Each color flashes twice every 1 second	Firmware upgrade

Button operation	
Press and hold the reset button for 5seconds	Reset

General about Microinverter System

The Microinverter

It converts the DC output of solar panels into grid-compliant AC power. It sends the output information of solar panels and the operation data of the microinverters to the WiFi Stick (DTU), which is the hardware basis of panel-level monitoring.

The WiFi Stick (DTU)

The DTU is a key component in the 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 (Hoymiles Monitoring Platform). The microinverter system operation data will be uploaded to the S-Miles Cloud (Hoymiles Monitoring Platform) via DTU.

The S-Miles Cloud (Hoymiles Monitoring Platform)

It collects the operation data and status of the microinverters in the system and provides panel-level monitoring for users.

Installation

System Capacity

The DTU can monitor up to two micro-inverters with a maximum of four solar modules. If the communication between the DTU and the microinverters suffers interference caused by installation conditions, the number of solar panels that the DTU can monitor may be reduced.

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 10 meters.
- The location should be 1.0 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.

Installation procedure

Preparation

1. Solar panels and Microinverter should be already installed and connected with the house grid.
2. Find best location for DTU.

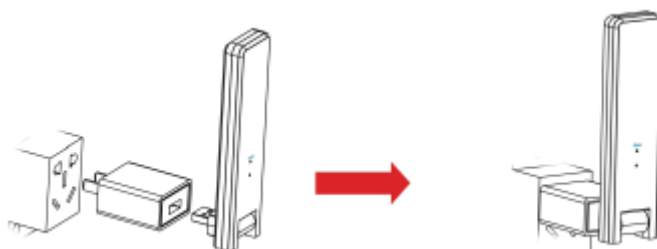
The maximum communication distance between DTU and microinverter is 150 m, maximum communication distance between DTU and router is 10m in open space. The walls, roofs, or other obstacles in between will affect the signal and reduce the communication distance in actual installations.

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

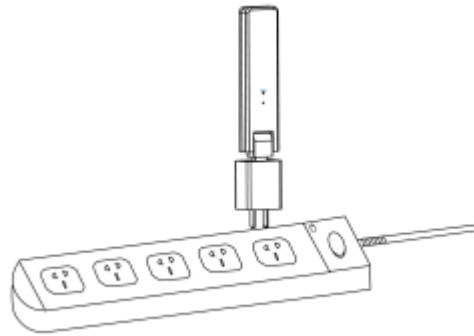
Material	Relative signal range reductions
Wood/Glass	0%-10%
Stone/Pressed cardboard	10%-40%
Reinforced concrete (reduction increases with the amount of reinforcement)	10%-90%
Metal	Up to 100%

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

3. Connect the DTU to the adapter and plug it into the wall socket, like below.



If using 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, like below.



4. Once the DTU powers on, the red, green and blue lights will flash in sequence for one second each for 30 seconds.

Get App

→ To download the App S-Miles Installer from the Appstore or the Playstore search for “S-Miles Installer” or scan the QR-code below.

[iOS 13.0 or above; Android 10.0 or above (03-2023)]

APP icon	iOS	Android

Registration

→ Open the S-Miles Installer App on your device.

→ Register Account.

1. On the login interface, click on “No Account” to enter registration page.

Note: Turn on your GPS, enable the location service for S-Miles Installer App.

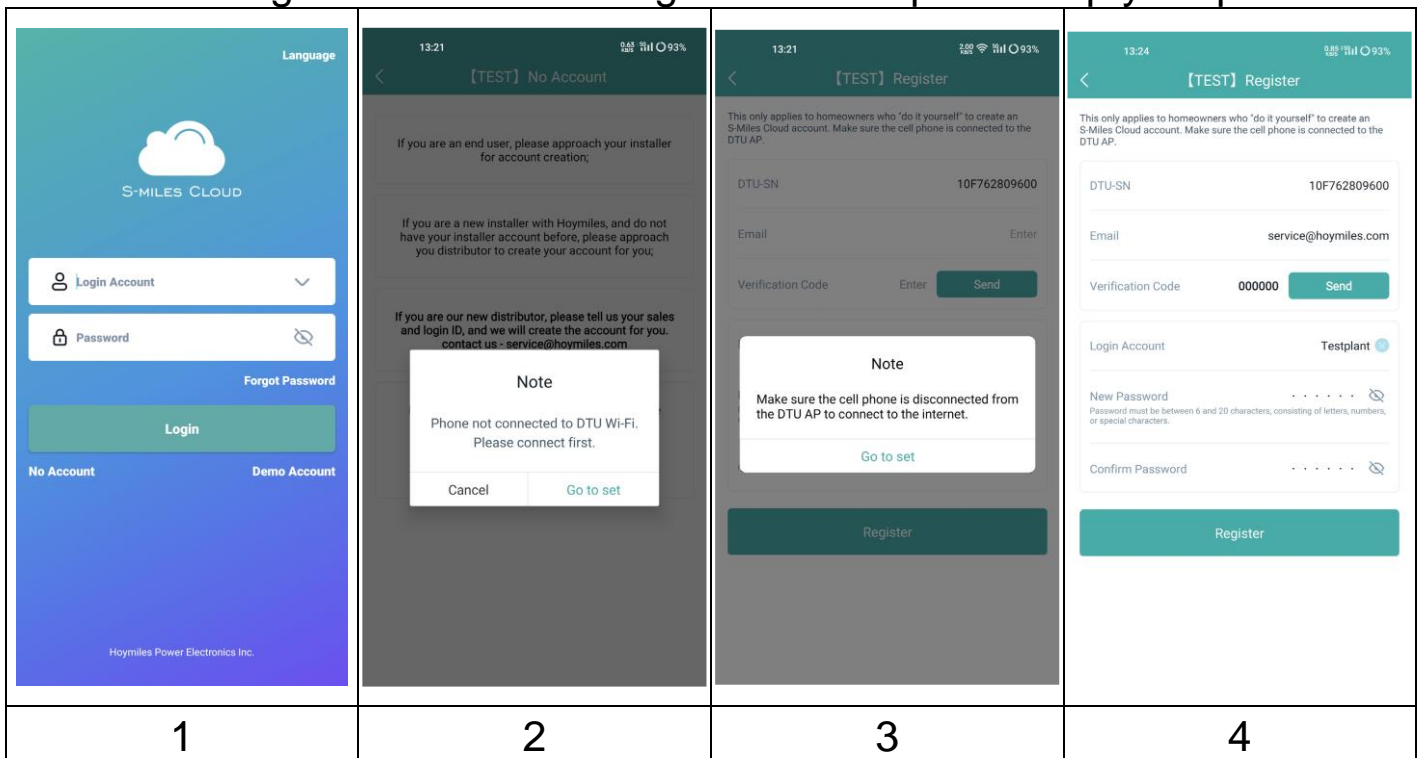
2. Click “Register” to go to the registration page. Click “Go to set” and you will be directed to the WiFi page of your Smartphone. Make sure you select the DTU (AP mode) wireless network (DTUL-XXXXXXX).

3. The DTU SN will be automatically filled in after you join the DTU network. Click “Go to set” and you will be automatically disconnected from the DTU.

4. Connect to your home network (or use your traffic data) and fill in the information required.

- Email: Enter your email address you want to bind with the account. Click on Send. Type in the verification code sent to your email and complete the account creation.
- Login Account = Username, needed for login. Freely selectable.
- New Password = Enter a password for the account. Length needs to be 6-20 characters and can include letters, numbers and special characters.
- Confirm Password = Repeat the password.

Click on Register to finish. Now go to next step to set up your plant.



Creating a plant

5. Log into your account that has just been created.

6. Click “+” on the upper left and complete the basic information of your solar balcony power plant.

- Plant Name: Enter a name for the plant. Freely selectable.
- Plant Type: Choose Residential Plant for solar balcony power plant
- Capacity (kW): Fill in e.g. 300W =0.3kW; 600W=0.6kW; 800W=0.8kW depending on the solar balcony power plant you own.
- Time Zone: Select the Time Zone for your Location. Best is to search for the capitol city of your country.
- Address: The Address is chosen by your GPS Location. To correct it zoom in by clicking on +/- and move the map.
- Region: First choose the country. If necessary choose the state and after that the district.
- Upload Photo: Not necessary. You can upload a photo of your solar balcony power plant if you want.

7. Add the DTU by typing in the DTU SN manually or scan the SN sticker on it.

8. Click on Add Micro to add your microinverter by typing in the microinverter SN manually or scan the SN sticker on it.

5	6	7	8

9. Complete the information of your solar panel array according to the actual installation situation.

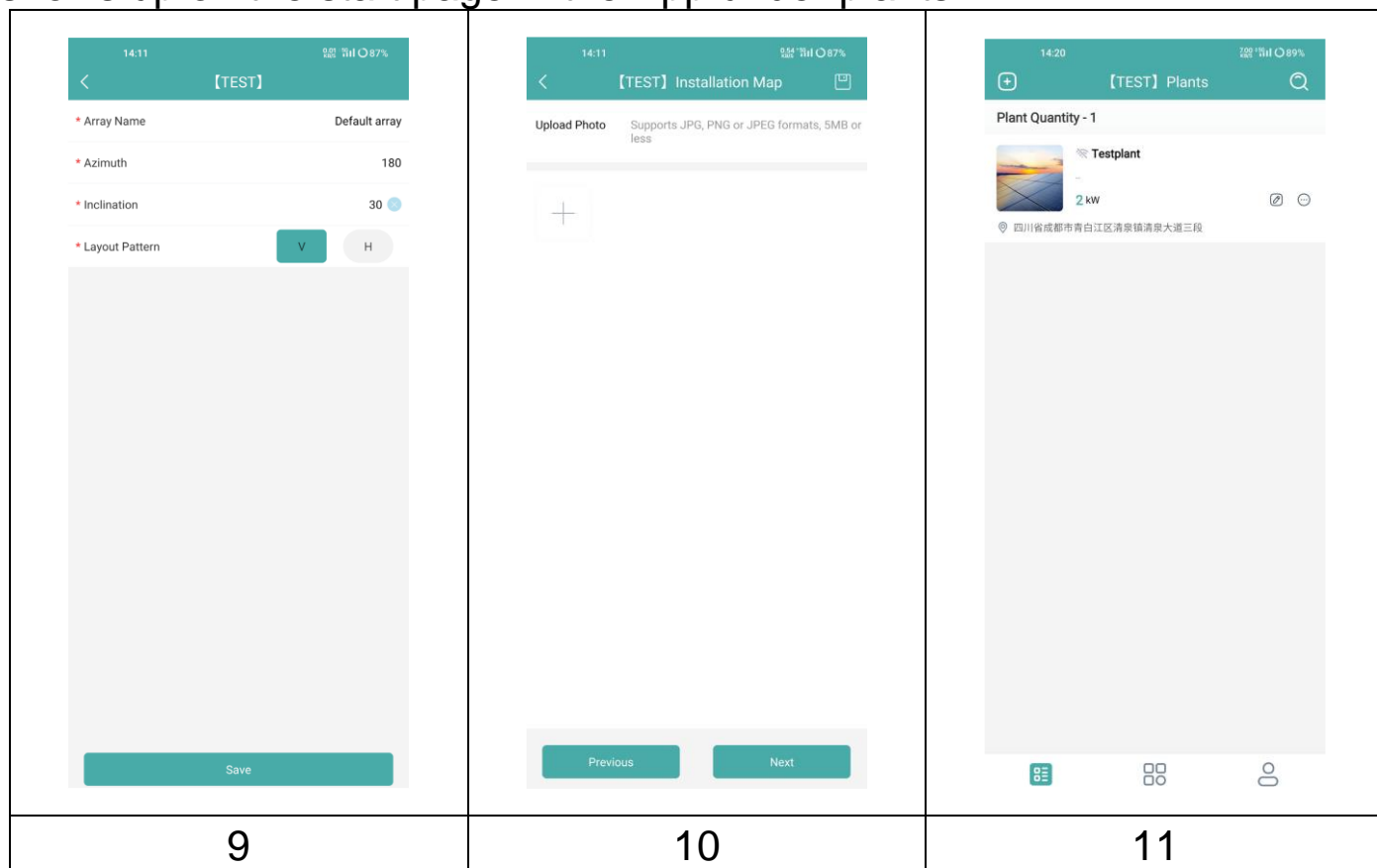
- Array Name: Enter a name for the array. Freely selectable.
- Azimuth: Enter the angle for the celestial direction of the panel. E.g.: East = 90°, South = 180°, West = 270°
- Inclination: Enter the angle for the inclination of the solar panel. E.g.: 30°, 35°, 40° 45° depending on the location the plant is set up.
- Layout Pattern: Select either the solar panel is mounted vertical (V) or horizontal (H).

10. Click “+” to complete the remaining information. By clicking on “+” you can add further photos of your plant. But it is not necessary.

In the last step you need to enter some settings for calculation.

- Plant Name: Was already given in the beginning, but could be changed here.
- Currency: Select the currency.
- Electricity Price per Unit: Enter the price you are currently paying for electricity. This is just for calculating the money the plant is saving you.
- Networking: Enable to sync your data with server.


11. Now your solar balcony power plant has been successfully set up. It shows up on the start page in the App under plants.



Connect DTU with Router

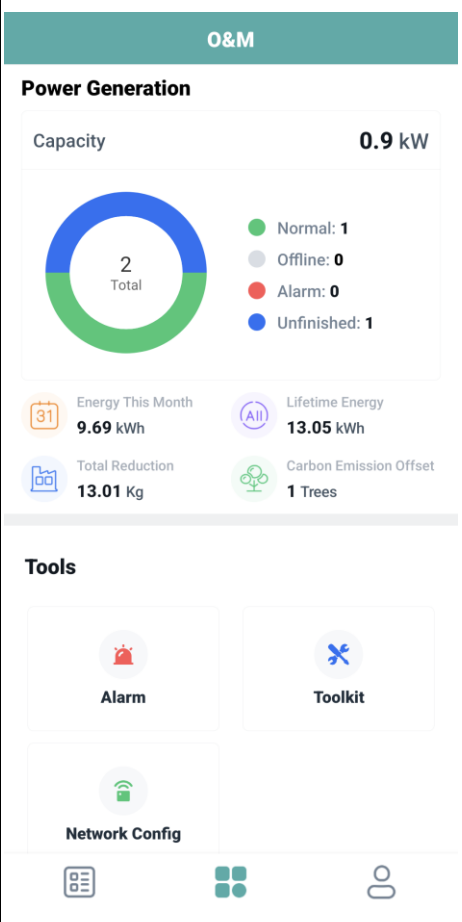
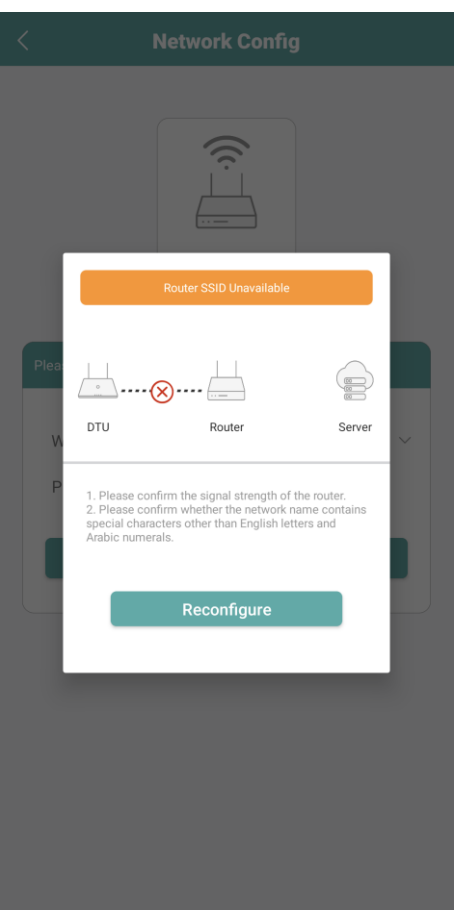
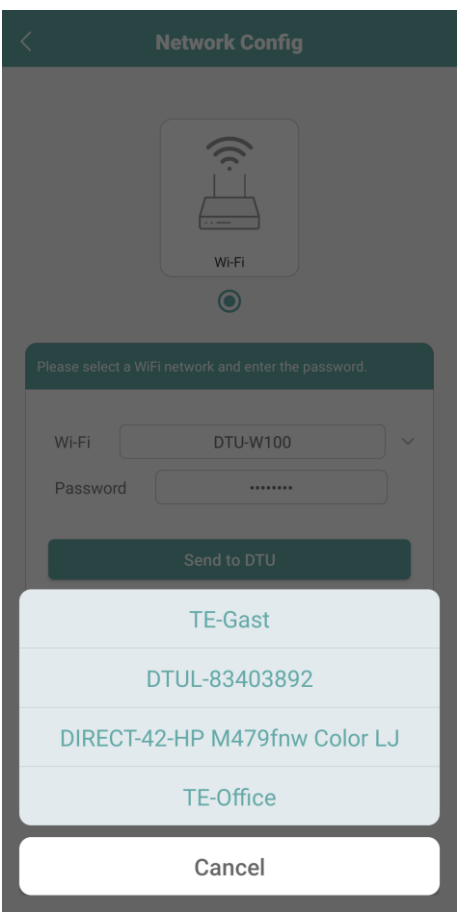
12. Connect your Smartphone with the WiFi of the DTU. Go to the WiFi settings of your Smartphone and choose DTU (AP mode) wireless network (DTUL-XXXXXXX).

13. Open the S-Miles Installer App

14. Go to O&M page (bottom middle icon ). Click on Network configuration and the App connects with DTU.

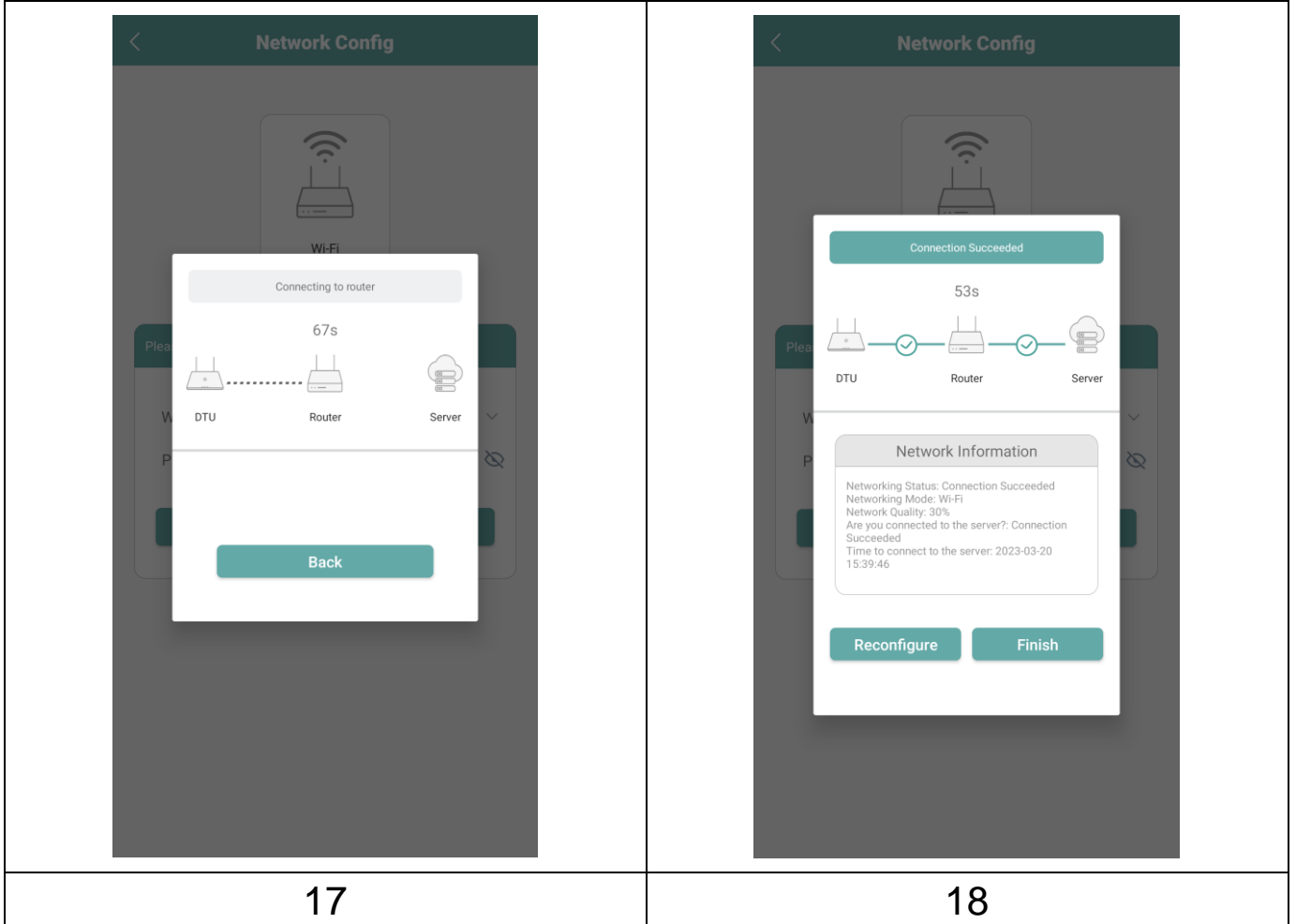
15. Click on Reconfigure to set the WiFi connection with the router.

16. Click on the WiFi name. Choose your WiFi network from the list and enter the WiFi password, click on Send to DTU.

 <p>O&M</p> <p>Power Generation</p> <p>Capacity 0.9 kW</p> <p>2 Total</p> <ul style="list-style-type: none">Normal: 1Offline: 0Alarm: 0Unfinished: 1 <p>Energy This Month 9.69 kWh</p> <p>Lifetime Energy 13.05 kWh</p> <p>Total Reduction 13.01 Kg</p> <p>Carbon Emission Offset 1 Trees</p> <p>Tools</p> <ul style="list-style-type: none">AlarmToolkitNetwork Config	 <p>Network Config</p> <p>Router SSID Unavailable</p> <p>DTU Router Server</p> <p>1. Please confirm the signal strength of the router. 2. Please confirm whether the network name contains special characters other than English letters and Arabic numerals.</p> <p>Reconfigure</p>	 <p>Network Config</p> <p>Wi-Fi</p> <p>Please select a WiFi network and enter the password.</p> <p>Wi-Fi DTU-W100</p> <p>Password</p> <p>Send to DTU</p> <ul style="list-style-type: none">TE-GastDTUL-83403892DIRECT-42-HP M479fnw Color LJTE-OfficeCancel
14	15	16

17. Wait until the connection between DTU and router is successful.
18. After the connection between router and Server is successful, too. Click on Finish.
19. Manually switch back to your home WiFi by opening the WiFi setting of your smartphone.

Note: It takes up to 30 minutes until the first values are shown in the App.



View Phone App

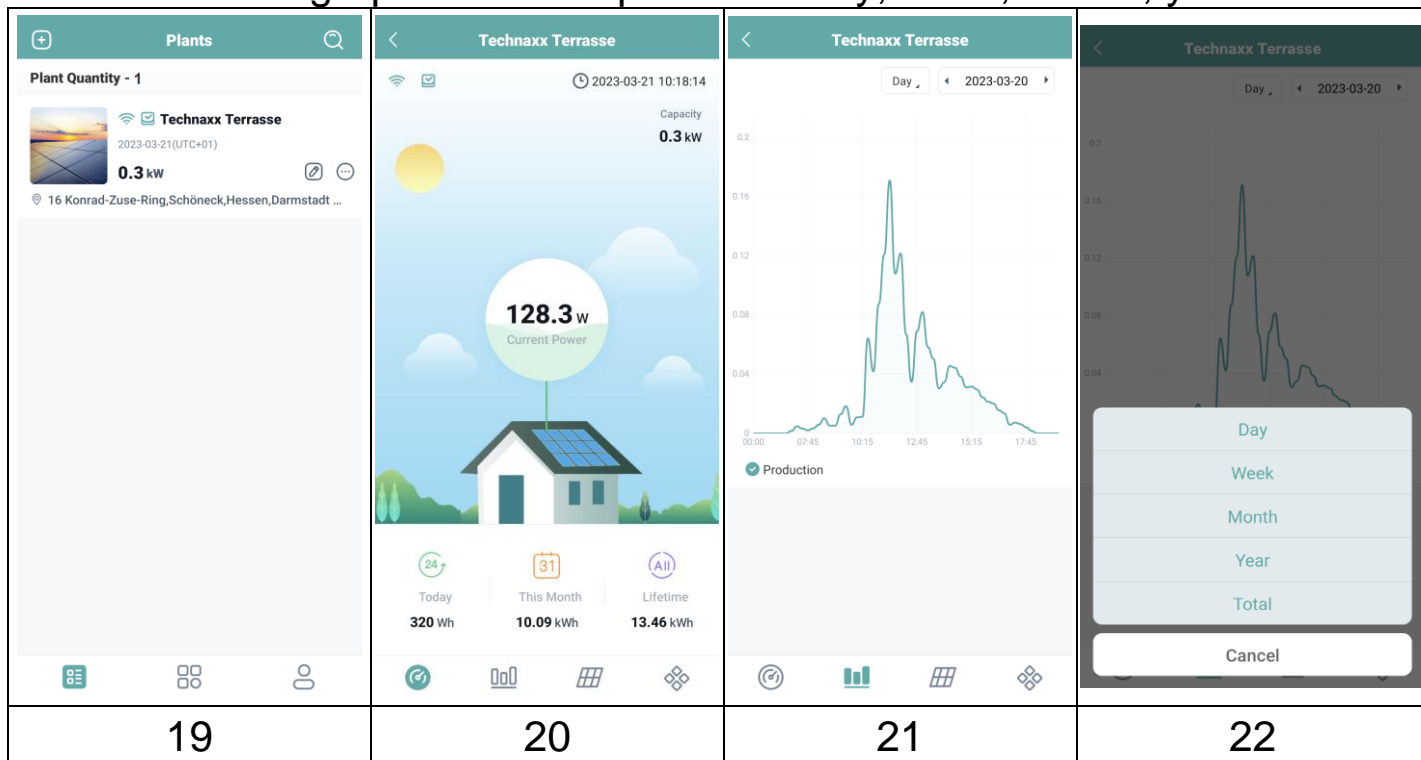
Log in with your account name and password, after which you will be able to view the operating details of your installed solar balcony power plant.

19. Overview of your added plant.

20. Detailed view of the current power, today, month and lifetime produced power.

21. Graph of the daily feed in power.


22. Choose the graph of feed in power for day, week, month, year or total.



	<p>Connected with Router, Server / Disconnected with Router, Server</p>
	<p>Connected microinverter / Disconnected microinverter</p>
	<p>Edit Plant: Change plant information, devices, layout design, installation map and settings of the solar balcony power plant.</p>
	<p>Networking command: Sync your data with server</p>

Delete App Account

To delete your created S-Miles account in the S-Miles Installer App:

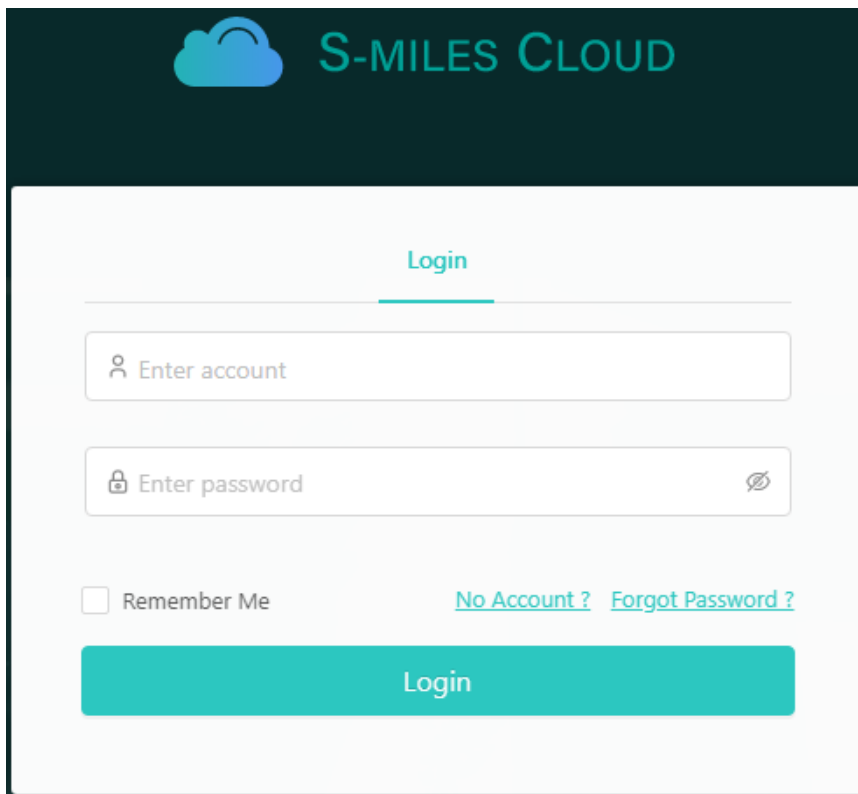
1. Go to Me 
2. Click on About Us
3. Click on User Agreement
4. The account deletion button is in the top right corner. Click on it to delete your account.
5. Confirm if you really want to delete your S-Miles Installer account.

Webpage

You can view the inverter's operating details on the computer web page by accessing the S-Miles Cloud (Hoymiles Monitoring Platform) at <https://world.hoymiles.com>.

Therefore use your login which you created via S-Miles Installer App registration.

- Enter Account = Login Account, Username created by App.
- Enter password = Password created for App login.



Reduce feed-in

It is possible to limit the power fed in via the web page. To do this, click on the tool key in the display image in the overview. Then select "Power Adjustment" and enter the corresponding percentage number. Example: To reduce an 800W micro inverter to 600W enter 75% and click on "Confirm".

Troubleshooting

Indicator	Status	Description	Solution
Red	LED flashes red every 1 second.	DTU without SN inside and disconnected from WiFi.	<ul style="list-style-type: none"> • Check if the distance between the router and the DTU is out of range (If it is, relocate the DTU). • Check if the distance between the router and the DTU is out of range (If it is, relocate the DTU). • Double-check if the house router's password has been correctly input during configuration.
	LED red light is on without flashing.	DTU with SN inside but no WiFi connection.	<ul style="list-style-type: none"> • Use another device to connect with the house router and make sure that there is an effective reception. • Try to connect with the hot spot from the phone to see if any data uploads successfully.
	LED flashes red every 0.5 seconds.	DTU disconnected from server	<ul style="list-style-type: none"> • Re-do configuration.
Blue	Light is on without flashing.	DTU has WiFi connection but without SN inside.	<ul style="list-style-type: none"> • Complete the site creation on the Installer App or S-Miles Cloud (Hoymiles Monitoring Platform). • Complete networking.
	LED flashes blue every 1 second.	No SN.	<ul style="list-style-type: none"> • Complete networking.
Green	LED flashes green every 0.5 seconds.	The search SN is incomplete	<ul style="list-style-type: none"> • Relocate the DTU to somewhere close to both the router and the microinverter.

Technical Specifications

Communication to Microinverter	
Communication method	2.4 GHz Proprietary RF (Nordic)
Frequency range	2.403-2.475 GHz
Max. radiated output power	-2.72 dBm/0.53 mW
Modulation Type	GFSK
Maximum distance (open space)	150 m
Maximum number of panels connected	4 panels
Communication to Cloud (S-Miles)	
Wi-Fi communication standard	Wi-Fi (802.11b/g/n)
Frequency range	2.412-2.472 GHz
Max. radiated output power	13.99 dBm/25.6 mW
Modulation Type	DSSS, OFDM
Maximum distance (open space)	10 m
Data upload time	Every 15 minutes
Power Supply (Adapter)	
Power supply	External adapter with USB port
Adapter input voltage/frequency	AC 100 to 240 V/50 or 60 Hz
Adapter output voltage/current	5 V/2 A
Power consumption	1.0 W (typical), 5 W (maximum)
Mechanical Data	
Ambient temperature range (°C)	-20 to 55
Dimensions (W × H × D mm)	143 × 33 × 12.5
Weight (kg)	0.043
Installation option	Direct plug-in (USB port)
Indicator light	LED
Microinverter Compatibility	
Microinverter model	HM series, MI series
Others	
Compliance	CE: 2014/53/EU (RE Directive)
App “S-Miles Installer”	iOS 13.0 or above; Android 10.0 or above / EN, DE, FR, ES, NL, PL, PO (04-2023) [IT,CZ]
Package contents	WiFi Stick TX-247, 1x USB power adapter, User Manual (short)

Support

Service phone No. for technical support: **01805 012643** (14 cent/minute from German fixed-line and 42 cent/minute from mobile networks). Free

Email: **support@technaxx.de**

The support hotline is available Mon-Fri from 9am to 1pm & 2pm to 5pm

If you have technical queries concerning our products, contact your system installer or distributor. If further support is required, contact Hoymiles' support at this link.

● www.hoymiles.com

● Hoymiles Technical Service Center: service@hoymiles.com

Care and maintenance

Clean the device only with a dry or slightly damp, lint-free cloth.

Do not use abrasive cleaners to clean the device.

This device is a high-precision optical instrument, so in order to avoid damage, please avoid the following practice:

● Use the device in ultra-high or ultra-low temperature.

● Keep it or use it in moist environment for long.

● Use it in rainfalls or in water.

● Deliver or use it in strongly shocking environment.

Declaration of Conformity



The EU Declaration of Conformity can be requested at the following address: www.technaxx.de/ (in the lower bar "Declaration of Conformity").

Disposal



Disposal of the packaging. Sort packaging materials by type upon disposal.

Dispose of cardboard and paperboard in the waste paper. Foils should be submitted for recyclables collection.



Disposing of old equipment (Applies in the European Union and other European countries with separate collection (collection of recyclable materials) Old equipment must not be disposed of with household waste! Every consumer is required by law to dispose of old devices that can no longer be used separately from household waste, e.g. at a collection point in his or her

municipality or district. This ensures that the old devices are properly recycled and that negative effects on the environment are avoided. For this reason, electrical devices are marked with the symbol shown here.

Made in China

Distributed by:
Technaxx Deutschland GmbH & Co. KG
Konrad-Zuse-Ring 16-18,
61137 Schöneck, Germany

WiFi Stick TX-247