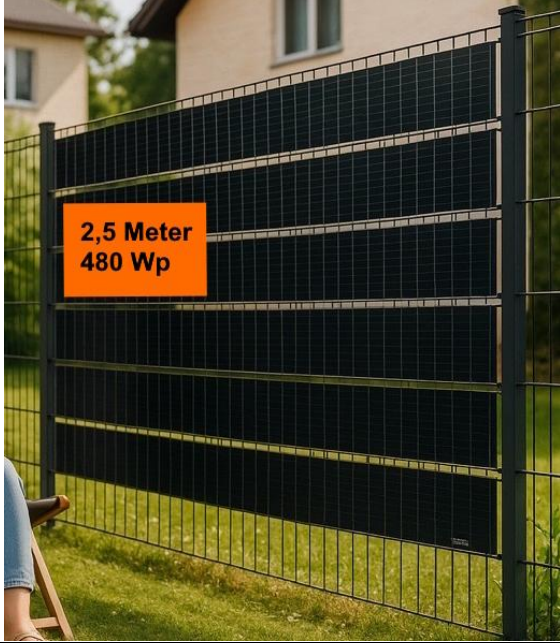


Technaxx® * User Manual

Starter BiDo Flexi Solar Fence TX-356

Extension BiDo Flexi solar fence TX-357

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

BiDo = Bifacial Double rod mat	
 A photograph of the Starter TX-356 solar fence unit. It is a black, rectangular solar panel with a grid of silver rods. An orange label on the left side reads "2,5 Meter 480 Wp". A black cable and a black power box are visible at the bottom left.	 A photograph of the Extension TX-357 solar fence unit. It is a black, rectangular solar panel with a grid of silver rods. An orange label on the left side reads "2,5 Meter 480 Wp".
Starter TX-356	Extension TX-357

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 are subject to change without notice - please be sure to use the latest manual available on the manufacturer's website.

Table of contents

Important information for getting started	3	Weaving.....	12
Explanation of the pictograms used	3	Cabling of the modules	13
Note	3	Connection to the microinverter (starter).....	13
Safety instructions	3	Connection to the microinverter (starter & extension)	13
Precautions during installation.....	6	Installation of the microinverter	14
Qualified staff	6	Connecting the microinverter (house network/socket).....	14
Disclaimer	6	First commissioning.....	14
Special features TX-356.....	7	WiFi configuration.....	15
Special features TX-357.....	7	Download the app.....	15
Product details	7	website	16
Contents of the TX-356 package: ...	7	LED status.....	16
Contents of the TX-357 package: ...	7	Troubleshooting and fixing.....	17
Product overview	8	Technical specifications	18
PV micro inverter 800W HMS-800W-2T	8	Inverter	18
Solar module 80W.....	8	Attachment.....	19
Preparation	9	Determination of the line reserve ..	19
Requirements for the operation of a photovoltaic system.....	9	Load capacity of copper cables.....	20
Assembly	9	Determination of the line reserve ..	21
General information.....	9	Support	22
Selection of the fence element	10	Care and maintenance	22
Wind load	10	Declaration of conformity.....	22
Double rod mesh fence	11	Disposal	22
Braid pattern.....	11		

Important information for getting started



ATTENTION (for CH, status 08-2024)

Installations over 600W may only be carried out by specialist electrical companies. In addition, the grid operator must be notified in writing! Therefore, contact a specialist electrical company if your installation exceeds 600W!

Due to the power output, this PV system is subject to the installation obligation in accordance with the Ordinance on Low-Voltage Electrical Installations (NIV) and may only be installed by persons or companies that are in possession of an installation permit in accordance with Art. 9 or 14 NIV.

(for DE, status 08-2024)

Installations over 800W may only be carried out by specialist electrical companies. In addition, a corresponding written notification must be submitted to the grid operator! Therefore, contact a specialist electrical company if your installation exceeds 800W!

Explanation of the pictograms used



Read the instructions for use.



warning



Caution, risk of electric shock.



Caution, hot surface

Note

- Use the product only for the purposes for which it is intended.
- Do not damage the product. The following may cause damage to the product: incorrect voltage, accidents (including liquid or moisture), improper use or misuse of the product, faulty or improper installation, electrical problems, including power surges or lightning damage, insect infestation, tampering with or alteration of the product by unauthorized service personnel, exposure to unusually corrosive materials, insertion of foreign objects into the device, or use with unauthorized accessories.
- and follow all warnings, precautions and safety instructions in the user manual.

Safety instructions

- Read the instruction manual carefully. It contains important information about the use, safety, and maintenance of the device. Keep the instruction manual in a safe place and pass it on to subsequent users if necessary.

- Before installing or using the solar balcony power plant, please read all instructions and warnings in the technical documentation, on the microinverter and on the solar modules.
- The device may only be used as intended and in compliance with these instructions for use.
- Please follow the safety instructions when using the device.
- Before use, check the device, its power cable, and accessories for damage. Do not use the device if it shows any visible damage.
- Operate the device only with household power sources. Check that the mains voltage indicated on the rating plate matches that of your electrical system.
- Carry out all electrical installations in accordance with local regulations (including VDE).
- When installing and operating the plug-in photovoltaic system, national legal regulations and the grid operator's connection conditions must be observed. In particular DIN VDE V 0100-551-1 (VDE V 0100-551-1), VDE AR-N 4105:2018-11, DIN VDE 0100-712, DIN VDE 0100-410 and DIN VDE V 0628-1 (VDE V 0628-1).
- Please note the information on determining the line reserve at the end of this manual.
- Please note that the microinverter case acts as a heat sink and can reach temperatures of 80 degrees Celsius. To reduce the risk of burns, do not touch the microinverter case.
- Do not crush or bend the power cord, do not pull it over sharp edges or hot surfaces, and do not use the power cord for carrying.
- If the power cord of this appliance is damaged, it must be replaced by the manufacturer, its service agent or a similarly qualified person in order to avoid a hazard.
- This device is intended for household or similar use only. It may not be used for commercial purposes!
- Make sure that the device is properly secured during operation and that no one can trip over cables.
- Never use the device after it has malfunctioned, for example if it has been dropped into water or damaged in any other way.
- The manufacturer assumes no liability for improper use resulting from failure to follow the instructions for use.
- Modifications or changes to the product impair product safety. Caution! Risk of injury!
- All modifications and repairs to the device or accessories may only be carried out by the manufacturer or by persons expressly authorized by the manufacturer.
- Make sure that the product is operated from an easily accessible power source so that you can quickly disconnect the device from the power supply in an emergency.
- Never open the product without authorization. Never attempt to repair it yourself!
- Handle the product with care. It may be damaged by shocks, impacts, or falls, even from small heights.
- Keep the product away from extreme heat.
- Never immerse the product in water or other liquids.
- Technical changes and errors excepted!



Danger!

- Under no circumstances should you attempt to interfere with or tamper with the microinverter or any other part of the device.
- Risk of damage due to improper modifications!
- Keep all contacts dry and clean!



Caution: Risk of electric shock!

- When operating this equipment, certain parts of the equipment carry dangerous voltage that can cause serious injury or death. Therefore, follow the instructions below to minimize the risk of injury.
- Only disconnect the plug connection when the power is off!
- Before carrying out visual inspections and maintenance work, check that the power supply has been switched off and secured against being switched on again.



Caution, hot surface!

- The surface of the microinverter can become very hot. Touching the surface may cause burns.
- Mount the microinverter so that accidental contact is not possible.
- Do not touch hot surfaces. Wait until the surface has cooled sufficiently before working on the microinverter.

Intended Use

The microinverter can be connected to the public power grid via a Wieland socket (recommended), a fixed connection, or a Schuko/Type 13 socket. The microinverter is not intended for mobile use. Modifications to the microinverter are generally prohibited. If changes are made to the installation location or the resulting new conditions, you should consult a qualified electrician.

Assembly, installation and electrical connection



Danger!

- All work, including transport, installation, commissioning and maintenance, must be carried out by qualified and trained personnel.
- Do not connect the microinverter to the operator's grid until you have completed the installation and have received confirmation/approval from the electricity grid operator.
- If you mount the microinverters at high altitudes, you avoid potential fall risks.
- Do not insert any electrically conductive parts into the plugs and sockets! The tools must be dry.

Precautions during installation

- The installation must be carried out disconnected from the grid and with shaded and/or insulated solar modules.
- Install the microinverter and all DC connections in a suitable location, such as under the solar panel, to avoid direct UV/sunlight exposure, rain, snow accumulation, etc. In all cases, adequate air circulation for cooling must be ensured.
- Install the microinverter at least 2 cm from the nearest surface. Otherwise, the microinverter may overheat.
- Do not install the device in locations where gases or flammable materials may be present.

Qualified staff

For safety reasons, "qualified personnel" in this manual means that this person is familiar with safety requirements, cooling systems, and EMC, and is authorized to power, ground, and connect equipment, systems, and circuits in accordance with established safety procedures. The microinverter, accessories, and connected systems may only be commissioned and operated by qualified personnel.

Disclaimer

● Technaxx Germany is under no circumstances liable/responsible for direct, indirect, incidental, special, consequential damages to property or life, or improper storage, arising from or in connection with the use or misuse of its products. ● Depending on the environment in which the product is used, error messages may appear. ● Improper installation, assembly, or preparatory work, such as foundations, must be verified for safety reasons and comply with applicable regulations. Technaxx is not responsible for any resulting consequential damages.

Special features TX-356

- incl. inverter 800W & WiFi and connection cable 5m
- Generate electricity with your fence
- Dual function – privacy screen & green electricity
- Easy to install – thread into fence, grid or railing
- Bifacial Monocrystalline solar modules 80 Wp
- For 2.5m wide double wire mesh fences
- For one fence element, minimum height 1.5m
- 480 Wp power per fence element
- Real-time data and alarms via S-Miles app
- Data collection for energy generation
- Suitable for feeding power into the 230V household network
- Ideal for covering the base load during the day in your home
- MPP tracking for optimal feed-in

Special features TX-357

- As an extension to the starter set 480W
- Generate electricity with your fence
- Dual function - privacy screen & green electricity
- Easy to install – thread into fence, grid or railing
- Bifacial Monocrystalline solar modules 80 Wp
- For 2.5m wide double wire mesh fences
- For one fence element, minimum height 1.5m
- 480 Wp power per fence element

Product details

Contents of the TX-356 package:

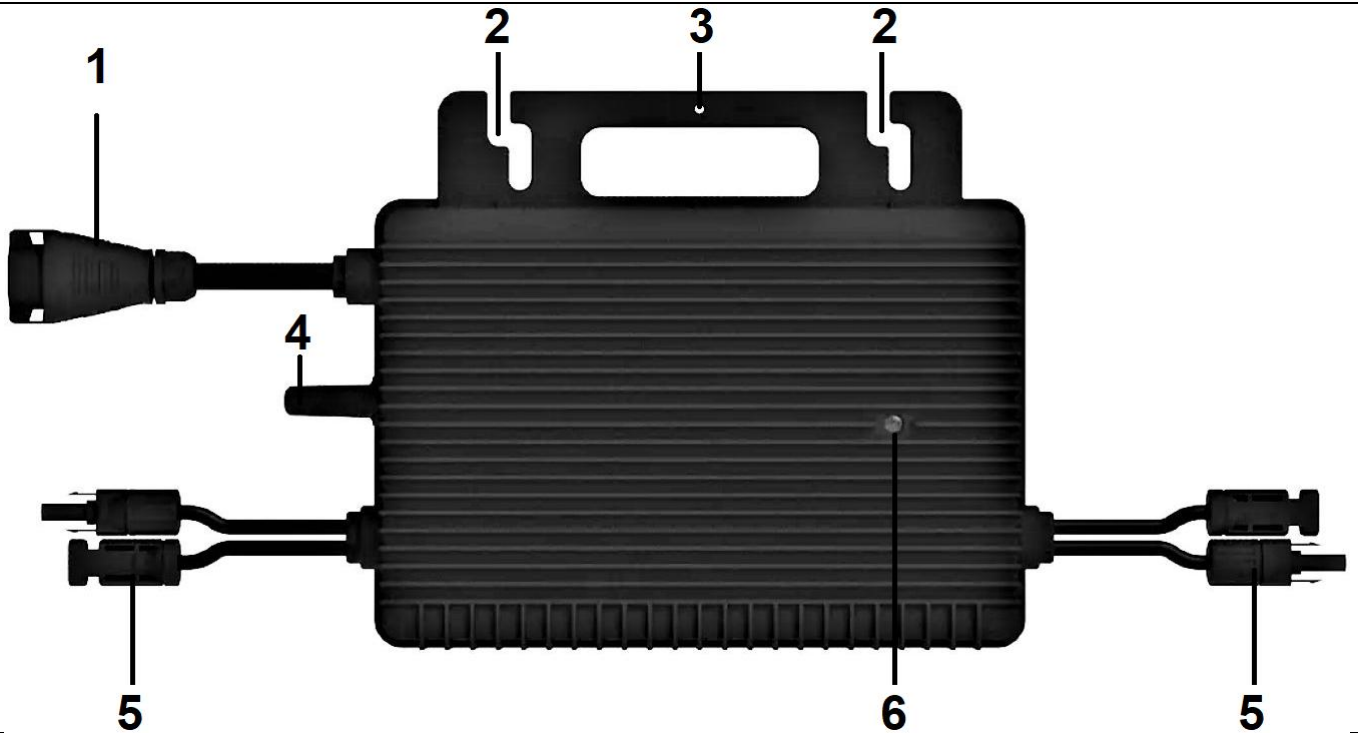
1x PV microinverter	2x 1.5m MC4 extension cables
1x connection cable	2x MC4 sealing caps (set)
6x solar module 80W	2x metal cable ties
	1x instruction manual

Contents of the TX-357 package:

6x solar module 80W	2x 2.5m MC4 extension cables
	1x instruction manual

Product overview

PV micro inverter 800W HMS-800W-2T

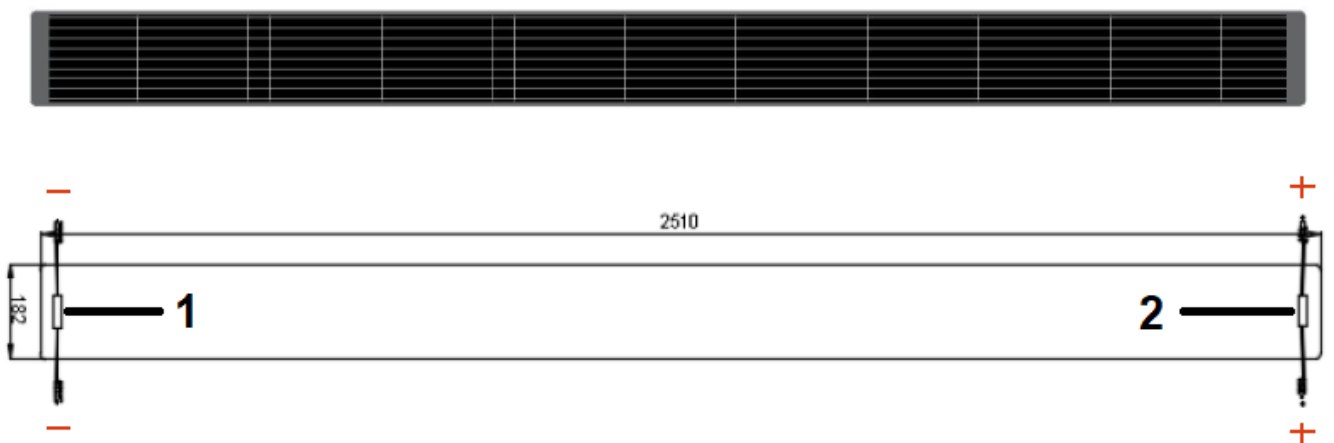


1	AC connection to socket (BC05)	4	Antenna (WiFi)
2	Mounting hole	5	DC inputs solar module (MC4)
3	Grounding connection	6	LED display

On the back of the inverter you will find:

- Serial number of the inverter (e.g.: 141292xxxxxx)
- Serial number of the DTU (e.g.: 414392xxxxxx)
- Initial password of the DTU WLAN (e.g.: K6jw39Bz)

Solar module 80W



1	Minus Junction box with 2x 10cm MC4 connection cables	2	Plus Junction box with 2x 10cm MC4 connection cables
---	---	---	--

Preparation

Requirements for the operation of a photovoltaic system

- Permission from the owner or homeowners association if you are not the owner
- Wieland socket (recommendation), fixed connection or Schuko/Type 13 socket
- RCD in the fuse box (standard nowadays)
- Socket, protected outdoors
- Electricity meter with backflow preventer or bidirectional meter



DANGER!

The following requirements must be met to operate a photovoltaic system.

- **(Only AT)** You must register your photovoltaic system in writing with your responsible grid operator. You must register your photovoltaic system in writing with the grid operator two weeks before commissioning. If the grid operator does not object within these two weeks, the balcony power plant may be put into operation.
- **(DE only)** Reporting to the responsible grid operator is no longer necessary. BKW now only needs to be registered with the Market Data Register (MaStR) using a simplified procedure.
- You must have ensured that a suitable and sufficiently dimensioned feed-in connection is already available.
- Meter replacement required: A bidirectional meter must be installed, or a meter that meets your electricity provider's requirements. Simple electricity meters are often insufficient. (Temporarily, older Ferraris meters are also permitted, which can run backward when solar power is fed into the public grid—until the meter operator replaces them with a digital bidirectional meter or smart meter. As of August 2024.)
- If necessary, the consent of the landlord, owner or homeowners association may be required.
- If you are unsure, please check local conditions or contact your network operator for information.

Assembly

Please note the following instructions for installation.

In general, it is possible to attach or weave the modules onto various types of mesh, fences, or railings. Since this can vary greatly, only the attachment to a double-rod mesh fence is described below.

General information

- Before you start installation, check the solar modules, the inverter and all cables for any visual damage.
- Do not stand or step on the module.
- Place the solar module on a clean, flat and soft surface.
- Please note the model and serial numbers of the components [inverter, solar module(s)] and keep them for your records. We will need these numbers for clear identification in case of a defect.

Tip: It is best to take a photo of the serial numbers of the modules and one of the back of the inverter.

Selection of the fence element

The optimal position of the fence element would be an east-west orientation with little or no shading during the day.

The orientation (east, south, west) and the geographical location influence the yield of the balcony power plant.

Yield with east-west orientation (example):

Balcony power plant performance	Average maximum electricity yield / year	Average maximum electricity yield per day
480 watts	up to 480 kWh	up to 1.33 kWh
960 watts	Up to 960 kWh	Up to 2.66 kWh

Furthermore, you should ensure that an outdoor power outlet or power strip is available for connecting the microinverter at a maximum distance of 5m.

Wind load

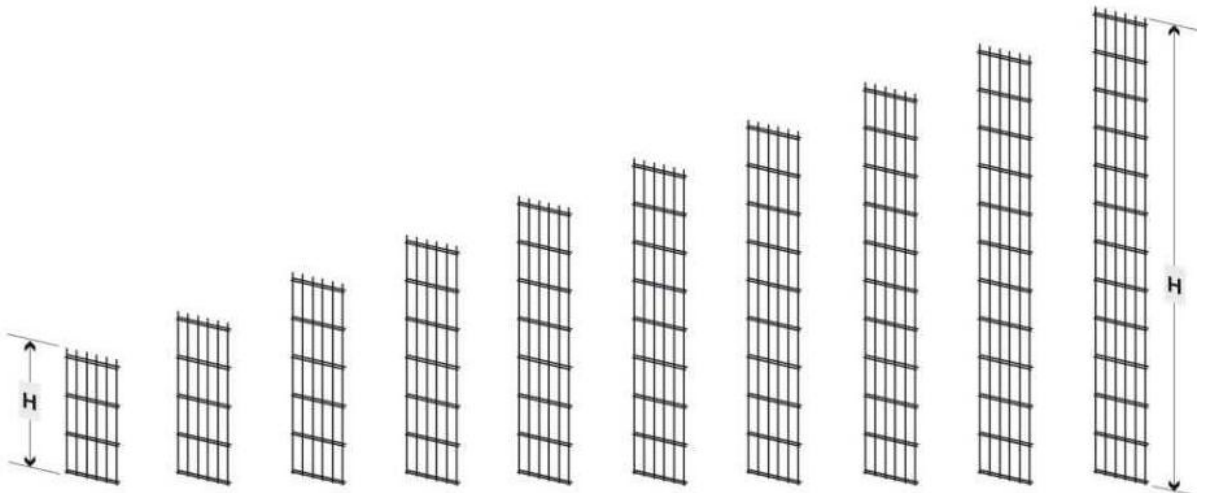
Increased wind load due to privacy screens

- Function as a sail: Privacy strips that are woven into the double rod mats increase the surface area exposed to the wind.
 - Increased load: The wind pressure on the fence increases, which leads to increased load on the posts and attachment points.
 - Need for sturdy posts: To withstand the increased wind load, double wire mesh fences with privacy strips should be provided with sturdy posts, preferably embedded in concrete.
 - Foundation: A stable foundation is also important to securely anchor the posts and give the fence additional stability.
- Impact on fence construction: Depending on the wind zone and height of the fence, different construction and stability are required to withstand the loads.

Double rod mesh fence

For installation or retrofitting on a double wire mesh fence, the following must be observed for each fence element:

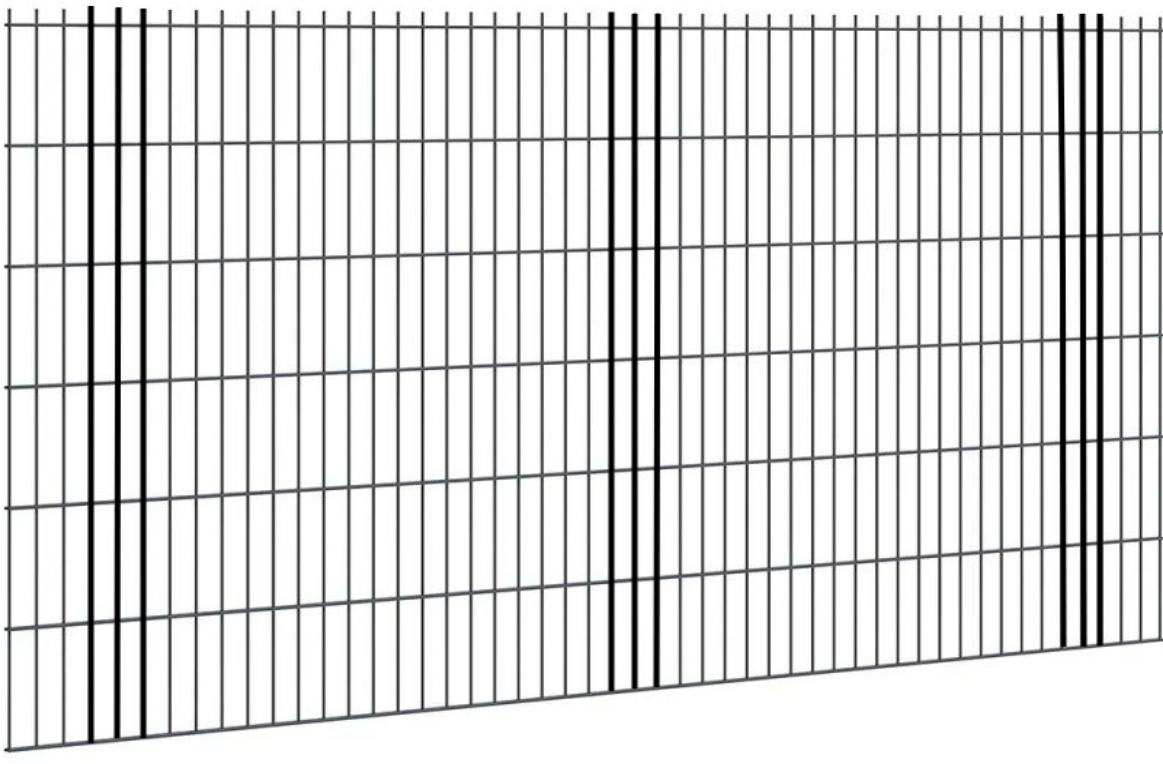
- Minimum length: 2.5 m
- Minimum height: 1.2 m or 6 compartments
- Row height: 0.19 m
- Wire thickness: 6/5/6 or 8/6/8



Height (H)	630	830	1030	1230	1430	1630	1830	2030	2230	2430
Number of rows	3	4	5	6	7	8	9	10	11	12
use	No	No	No	Yes*	Yes	Yes	Yes	Yes	Yes	Yes

*Inverter cannot be mounted in the compartment under the last module on the fence!

Braid pattern

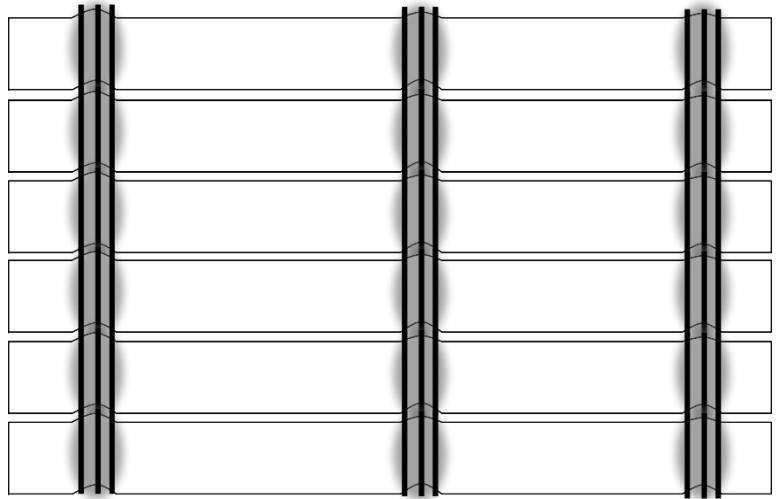
Rows														
1														
2														
3														
4														
5														
6														
Bars	3	3	18				3	18				3	3	
Distances between the watching bars														

Weaving

Danger:

- Be careful when weaving the modules.
- Make sure to bend the modules in wide radii to avoid possible breakage or damage to the solar cells.
- Avoid pulling past bars to protect the fence and module.

Important: To achieve the best results and the best power yield, it is important that the modules are covered by as few rods as possible!



1. When weaving in, make sure that all modules are aligned in the same direction. That all **positive** connections are on one side of the fence panel and that the same side is always facing forward.
2. It is best to start weaving the module in the top row and then work your way down.
3. To weave in the solar modules, count the rods as shown in the weaving pattern: **3-3 -18- 3 -18- 3 -3**.
This means that when you look at the fence, the first three bars are covered by the module, the next **three** are visible again. The following 18 bars are again invisible , and so on , see image.
4. It's best to use two people to braid it. Start in the middle and thread the two ends through from back to front.
5. Now make sure that both ends of the solar module are the same length, so that minimal adjustments are required later. This will prevent possible scratches and damage to the module and fence.
6. Now count 18 bars to the right or left and weave the module behind the 3 bars.
7. You can try to push the module into the post or clamp it underneath on the left and right sides of the post .
Repeat steps 1-7 for each module.

To expand, proceed in the same way.

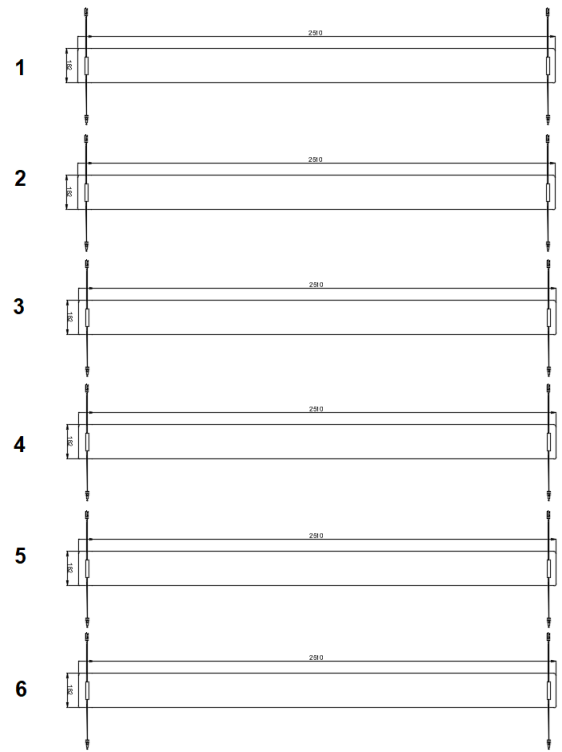
Cabling of the modules

1. After weaving or during weaving, connect the modules to each other on each side.
2. Connect the lower MC4 connector of the upper module to the upper MC4 connector of the module below. Press the MC4 connectors together until they click into place. Repeat this process until all connectors are connected, except for the top and bottom connectors on each string.
3. You will then have one strand on each side of the fence panel.

To expand, proceed in the same way.

4. On the top module, you have an open cable end on the left and right. Use the sealing caps to seal these ends to prevent water from entering the open MC4 connectors.

5. On the bottom module, you now also have an open cable end on the left and right. Connect one of the 1.5m MC4 extension cables here. The red one to the positive side, the black one to the negative side.



Connection to the microinverter (starter)

Connect the bottom solar module to the microinverter to one of the two DC inputs (MC4 connectors) of the microinverter.

The microinverter is connected to the solar panels via MC4 extension cables. The 800W microinverter has two pairs of MC4 connectors for two fence panels. Simply connect the microinverter's MC4 connectors to the matching counterparts on the extension cable. Push the connector pairs together until you hear a "click."

Important: One pair of MC4 connectors remains open. Use the sealing caps to seal these connectors. This prevents water from entering the open MC4 connectors.

Note: After connecting the MC4 cables, the red LED flashes continuously and repeats this until the connection cable is connected to the socket (see chapter LED status).

Connection to the microinverter (starter & extension)

To connect the extension to the microinverter, first disconnect the 1.5m MC4 extension cables from the modules and the microinverter.

The inverter should now be installed on the posts between the modules.

Connect the one 2.5m MC4 extension cable from the extension set to the MC4 connector of the lowest module, on the far left and far right, and lead it back to the middle to the inverter.

Connect the MC4 connectors of the left fence panel on one side of the microinverter and the MC4 connectors of the right fence panel to the free pair of MC4 connectors on the microinverter.

If the MC4 connectors on the modules are too short, you can also use the 1.5m MC4

extension cables to connect them.

Mount the sealing caps on the open MC4 connectors of the two upper modules of the two fence elements.

Installation of the microinverter

To mount the inverter you will need the two metal cable ties.

The installation is intended to be centered under the last module or as low down on the fence element as possible.

Thread the metal cable ties through the microinverter handle and through the fence. Secure the cable ties and pull them tight.

Alternatively, you can also mount the inverter on one of the posts on the left or right. To do this, the two MC4 extension cables must be connected and routed from one side to the other. The microinverter is then connected directly to the lowest module and via the two interlocking MC4 extension cables.

Connecting the microinverter (house network/socket)

Note: Before installing the microinverter, write down the WiFi password and serial numbers or take a photo of the back of the microinverter!

On the AC side, all that's left to do is connect the device using the included power cable. The connection to the power grid is made using a suitable power cable. The cable must be a flexible, UV- and ozone-resistant, medium-duty sheathed cable. For example, type H05RN-F. Use only 3-core cables that are also approved for outdoor installation and have a conductor cross-section appropriate for the current (preferably 1.5 mm²).

According to VDE, a Wieland plug connection is recommended. A Schuko/Type 13 plug connection with a Schuko/Type 13 socket is also possible.



CAUTION!

Observe all local regulations and restrictions during installation.



A maximum of 1x 800W can be connected to an EU / 50Hz / 230V system with a 10A circuit breaker.

Fasten the connecting cables to the mounting rail using UV-stable cable ties so that the cables are protected from rain and sun and, in particular, the plug connections cannot lie in a puddle of water.

Note : Other connectors/systems are possible, provided they are suitable for outdoor use and the current strengths.

First commissioning

After the mechanical and electrical installation of the photovoltaic system, you can put it into operation. Sufficient sunlight is required for this. The solar modules must generate a starting voltage of at least 22V.

Initial state:

1. The microinverter is connected to the solar modules.
2. The microinverter is connected to the house network via a Wieland plug (recommended) or a Schuko/Type 13 plug.
3. The cables are installed in a way that protects them from rain and sunlight.
4. The supply line (fuse box → garden/outdoor socket) is connected to the house

network via a fuse.

Proceed as follows:

1. Plug the Schuko/Type 13 plug of the inverter's connection cable into the designated socket.
2. The device's LED should flash green after you turn on the fuse. See the LED Status section for more information.
3. If there is sufficient sunlight, the microinverter will begin feeding into the grid (grid synchronization) within 2 minutes. The status LED indicates basic operation. You can check the feed-in power using a suitable wall-mounted energy meter* (*must be waterproof for outdoor use!).
4. If you have a feed-in meter installed, you can also use it to check the current feed-in power or energy.
5. Or configure the microinverter's Wi-Fi and integrate it into the app, see Wi-Fi Configuration.

Note: When AC power is applied but the microinverter is not started, a power meter can measure approximately 0.2 W of power for each microinverter. This power is reactive power, not consumption from the home grid.

WiFi configuration

1. The microinverter should already be installed and connected to the home's electrical system. It is plugged into an electrical outlet and receives power from the solar panels.
2. The maximum communication distance between the microinverter and router is 20 m in open space. Walls, roofs, or other obstacles in between will affect the signal and reduce the communication distance in actual installations.

Download the app

To download the **S-Miles Installer** app, search for "S-Miles Installer" in the App Store or Google Play Store or scan the QR code below .

!!!Important!!! Do NOT use S-Miles Home or S-Miles Enduser

[iOS 14.0 or higher; Android 12.0 or higher (07-2025)]



1. To register, click on "No Account", select "DIY" and click "Register".

Note: If DIY registration cannot be selected, check whether the app is allowed to

access your location. DIY registration is not available in some countries.

2. Fill out the registration form with the required information. Then tap the "Register" button.

3. To connect the microinverter to the WiFi router, connect your smartphone to the microinverter's AP (WiFi=DTUBI- xxxxxxxx). Use the WiFi password located on the back of the inverter. You can find it written on the "Initial Password" sticker.

Go to the O&M page (bottom center icon ). Click Network Configuration and the app will connect to the DTU.

Configure your microinverter's WiFi.

4. Back on the main page, press "+" to create a new facility.

Note: Enter 0.48 (0Point48) for the capacity!

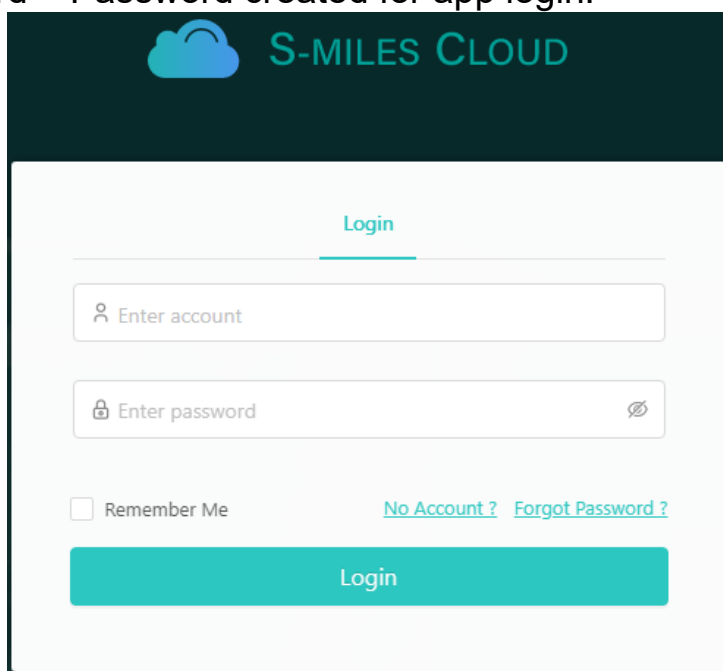
Follow the instructions in the app to create an attachment. Follow the app to enter the required information.

Note: It takes up to 30 minutes for the first values to be displayed in the APP.

website

You can view the inverter's operating data on the computer web page by accessing the S-Miles cloud (Hoymiles Monitoring Platform) at <https://global.hoymiles.com/> . To do this, use the login details you created when registering the S-Miles Installer app.

- Enter account = login account, username created by the app.
- Enter password = Password created for app login.



LED status

The LED on each microinverter indicates its current status. All microinverters draw their power from the DC connection/solar module.

LED status when connecting to the 230V mains

The green LED will flash quickly a few times. This process typically takes up to 2 minutes, during which the following LED states may occur:

Flashes red quickly (1s):	No AC connection (not connected to the house network)	→no grid feed-in
Flashing green slowly (3s):	AC connection & DC connection	→no grid feed-in

	voltage lower 22V	
Flashes green quickly (1s):	AC connection & DC connection voltage over 22V	→Grid feed-in
No LED flashing/LED off:	No DC connection/solar modules connected	→no grid feed-in

Status after connecting to the 230V mains

A rapidly flashing green LED indicates normal status and active grid feed-in. If the LED is still flashing red after 3 minutes, this indicates an error related to a low solar module voltage (below 22V) or a missing AC voltage.

The microinverter cannot start feeding (or re-feeding) into the grid until the cause of the error has been eliminated. The cause of this error could be a faulty solar panel connection/AC connection, or the connected grid exceeding/falling below the voltage/frequency range of the microinverter. If the LED indicates no function or remains off, the most common cause is that there is no connection to the solar panel or the solar panel voltage is well below the starting voltage.

Troubleshooting and fixing

Maintenance and troubleshooting on the microinverter may only be performed by qualified personnel. Modifications to the microinverter are generally prohibited. The microinverter is encapsulated; the electronics cannot be repaired. The microinverter draws its power from the DC side. To restart the microinverter, the solar modules must be disconnected from the microinverter. The startup process usually takes place within 2 minutes. To troubleshoot, perform the following steps in the order given:

1. Check that all fuses are switched on.
2. Check all connecting cables for external damage.
3. Check all AC side connections for damage or connection errors.
4. Measure at the connection points. The applied mains voltage must not exceed or fall below the AC voltage range of 180-275V.
5. Restart the microinverter by disconnecting and reconnecting the DC power supply/solar panels. A normal startup should be indicated by a green LED (see LED status).



CAUTION!

- Never disconnect the DC cables while the microinverter is generating power.
6. Use a suitable multimeter to measure the voltage between the solar module and the microinverter. The required starting voltage of the microinverter is above DC22V.
 7. Check the MC4 connectors of the microinverter and the solar panel(s). Damaged DC connections must be replaced.
 8. If necessary, check with your grid operator whether the grid frequency matches the frequency range of the microinverter.



CAUTION!

Do not attempt to repair the microinverter.

If the above steps do not solve the problem, contact our support or a trusted electrician.



The microinverter's AC connector cannot be replaced or repaired. If the cable is damaged, the device should be discarded.



Unless otherwise specified, maintenance work must be performed with the unit disconnected from the mains (power switch open) and solar modules covered or insulated.



Do not use rags or corrosive products for cleaning, as these could damage parts of the device or cause electrostatic charges.

Avoid makeshift repairs. All repairs should be performed using only genuine spare parts.



Each microinverter should be protected by a fuse, but a central disconnect device is not required unless required by national standards or by the relevant grid operator.

Technical specifications

For the technical specifications of the solar module, please refer to the enclosed data sheet.

Inverter

Model	HMS-800W-2T
DC input	
Recommended panel power (W)	320-540 (per panel)
Max. number of panels	2
Connecting the panel	MC4
MPPT voltage range (V)	16-60
Starting voltage (V)	22
Operating voltage range (V)	22-60
Max. input voltage (V)	60
Max. input current (A)	2x 14
Max. input short-circuit current (A)	2x 25

AC output	
Rated output power (VA)	800
Rated output current (A)	3.63 at 220V 3.48 at 230V 3.33 at 240V
Nominal output voltage/range (V)	220/180-275 230/180-275 240/180-275
Rated frequency/Rated frequency range (Hz)	45-55 (below 50Hz @ 220V & 230V)
Power factor	>0.99 Standard 0.8 leading.....0.8 lagging
Harmonic distortion of the output current	≤ 3%

Efficiency, safety and protection	
CEC weighted efficiency	96.70%
MPPT nominal efficiency	99.80%
Nighttime power consumption (mW)	<50

Mechanical data	
Ambient temperature range (°C)	-40~+65
Storage temperature range (°C)	-40~+85
Dimensions (WxHxD) mm	261×180×35.1
Weight (kg)	3.2
Protection class	Outdoor (IP67)
cooling	Natural air circulation - no fans
Length of AC output cable (cm)	50

Characteristics		
communication		Built-in Wi-Fi
Frequency band		2.4GHz
Radiated transmission power max.		69.2mW
topology		Galvanically isolated RF transformer
surveillance		Toolkit or S-Miles Cloud
conformity	VDE-AR-N 4105:2018, EN50549-1:2019, VFR2019, IEC/EN 62109-1/-2, IEC/EN 61000-3-2/-3, IEC/EN-61000-6-1/-2/-3/-4	
App "S-Miles Installer"	iOS 14.0 or later; Android 12.0 or later/EN, DE, FR, ES, NL, PL, PO, IT, CZ (07-2025)	

Attachment

Determination of the line reserve

The PI Photovoltaik Institute Berlin, in cooperation with the German Solar Energy Society (DGS) and the Berlin University of Applied Sciences (HTW), have shown in a study that it is possible for any household with automatic circuit breakers to feed in up to 3.6 amps (approx. 800W, equivalent to 2 solar modules) using plug-in solar devices without any safety concerns and without having to make any changes to the household's electrical system. However, deviations from the applicable standard for line loads may occur. We have described how to comply with the requirements of the standard and test the line in this appendix. When mini solar systems feed into the existing final circuit, the current load on individual cable sections may exceed the designed standard size. To prevent overloading of the lines in the household, they are protected by a circuit breaker (LSS). This switches off automatically as soon as an overload occurs. As a rule, several sockets and consumers are protected by a common line protection device. Thanks to the additional power of the mini solar system, the currents from the public grid and the mini solar system can now be added together. However, these currents are not detected by the circuit breaker, so an overload could theoretically occur. You can determine whether the existing line is sufficiently dimensioned with your circuit breaker using the following formula:

I_z indicates the current carrying capacity of the line, which should be greater than the sum of the rated current of the protective device (circuit breaker in amperes) and the power generation system (power in amperes). Both **I_z** and **I_g** can be found in the following table for the example application case listed below.

$$I_z = I_n + I_g$$

I_z permissible current carrying capacity of the cable

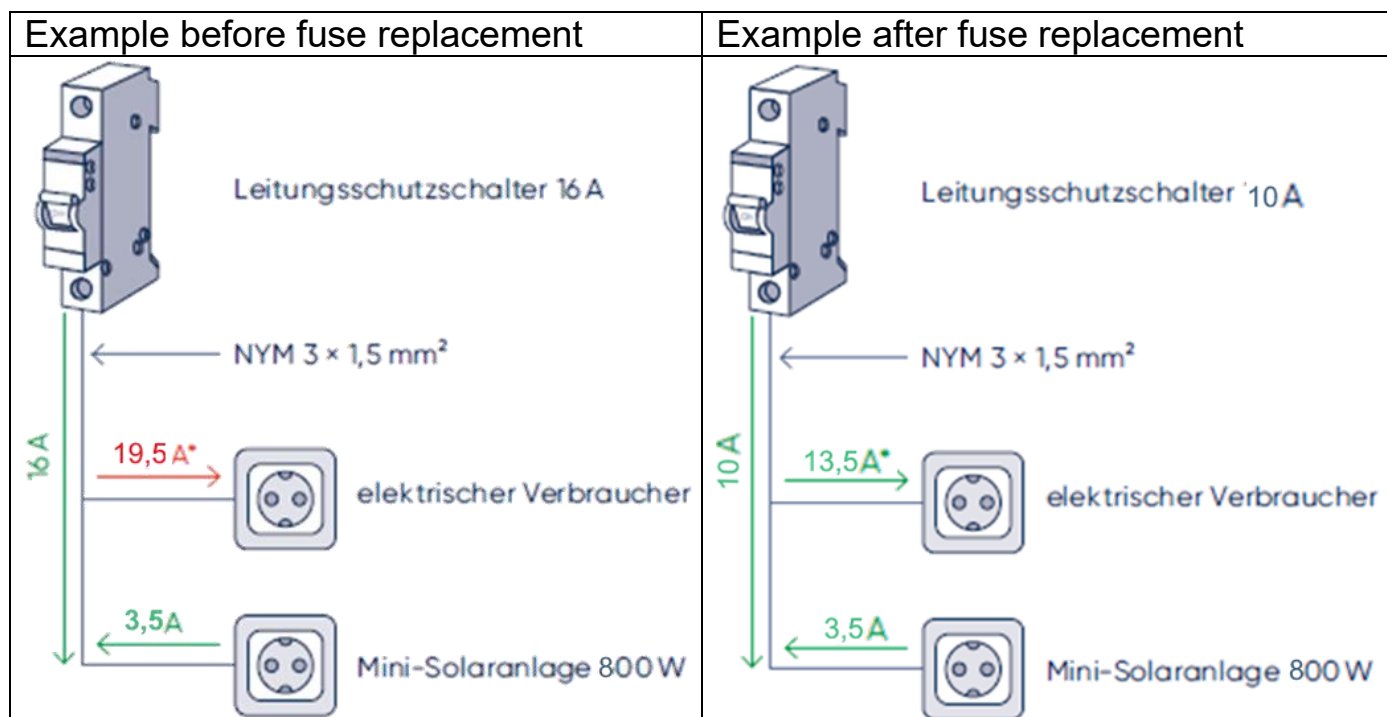
I_n Rated current of the protective device (circuit breaker)

I_g Rated current of the power generation plant

Load capacity of copper cables

Load capacity of copper cables and wires for fixed installations in buildings with a nominal cross-section of 1.5 mm ² ; at an ambient temperature of 25°C, with 2 loaded cores*				
Installation type	On thermally insulated walls	In electrical installation conduits	On walls	In the air
Current carrying capacity I_z the conductor of the final circuit in amperes	16.5	17.5	21	23
Maximum rated current I_g the power generation plant with 16A circuit breaker	0.5	1.5	5	7
Maximum rated current I_g the power generation plant with 13A circuit breaker	3.5	4.5	8	10
Photovoltaic system	a solar module	two solar modules	a solar module	two solar modules
max. current load in amperes	1.75	3.5	1.75	3.5

* The example in the table is based on two loaded copper cables with a nominal cross-section of 1.5mm² , which reflects the cable in a typical German household. For larger cross-sections or a different cable type, the permissible current carrying capacity differs, so these must be considered separately, in accordance with DIN VDE 0298-4.



* max. permissible line load is 16.5A

Determination of the line reserve

If the cable is a copper cable with a wire cross-section of $3 \times 1,5 \text{ mm}^2$, then the cable is designed for a continuous load of 16.5 A (in thermally insulated walls at 25°C). The free capacity is the difference between the cable's 16.5 A and the 16 A circuit breaker's current. The free capacity in thermally insulated walls is therefore 0.5 A. If the solar output exceeds the current of 0.5 A, the circuit breaker should be replaced with a smaller one to comply with the requirements of the DIN VDE 2948-4 standard. By replacing the fuse with a smaller 10 A fuse, an additional 10 A can now be drawn from the mains, resulting in free capacity for the power cable with a difference of 3.5 A. The output of the mini solar system could therefore be up to 805 W. In the example (right half of the image), the power of the mini solar system is 3.5A/800W, which complies with the permissible load.

Further safety information

- Only connect the mini solar system to a permanently connected power outlet, never to a multiple socket.
- If you still have older screw fuses installed, you must replace them from 16A to the next smaller fuse.

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

In the event of anomalies and accidents, please contact: **gpsr@technaxx.de**

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.

Declaration of conformity



Technaxx Deutschland GmbH & Co. KG hereby declares that the radio equipment type TX-356 / TX-357 Prod . ID.: 5353 / 5354 complies with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: www.technaxx.de/reseller

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,
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Starter BiDo Flexi Solar Fence TX-356
Extension BiDo Flexi solar fence TX-357