



Accessories for SMA Inverters
Fan Retrofit Kit FANKIT01-10
Installation Manual

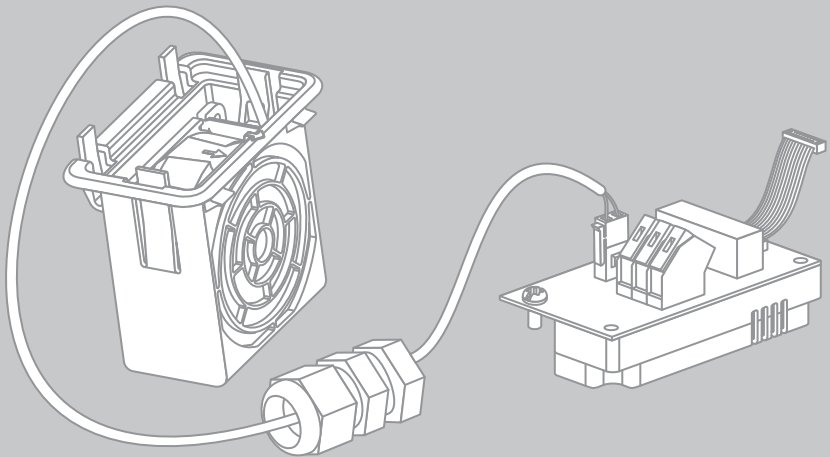


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1 Information on this Document

Validity

This manual is valid for the fan retrofit kit of type "FANKIT01-10".

Target Group









This document is for skilled persons. Only qualified personnel with the appropriate skills are allowed to perform the tasks described in this manual (see Section 2.2 "Qualifications of Skilled Persons", page 7).

Additional Information

For further information, see www.SMA-Solar.com:

Document title	Document type
SUNNY BOY 2500TL Single Tracker SUNNY BOY 3000TL Single Tracker	Installation manual
SUNNY BOY 3000TL/3600TL/4000TL/5000TL	Installation manual
Multi-Function Relay and OptiTrac Global Peak	Technical description

Symbols

Symbol	Explanation
	Indicates a hazardous situation which, if not avoided, will result in death or serious injury
	Indicates a hazardous situation which, if not avoided, could result in death or serious injury
	Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury
	Indicates a situation which, if not avoided, can result in property damage
	Information that is important for a specific topic or objective, but is not safety-relevant
	Indicates a requirement for meeting a specific goal
	Desired result
	A problem that might occur

Typographies

Typography	Usage	Example
"light"	<ul style="list-style-type: none">• Display messages• Parameter• Connections• Slots	<ul style="list-style-type: none">• The inverter switches to "Balanced" mode.
bold	<ul style="list-style-type: none">• Elements to be selected• Elements to be entered	<ul style="list-style-type: none">• Set the Fan Test parameter to 1.

2 Safety

2.1 Intended Use

The fan retrofit kit consists of a fan and a controller assembly for the fan. The fan provides the inverters with additional cooling during high ambient temperatures. The controller assembly controls the fan.

The fan retrofit kit may only be used with the following inverters:

- SB 2500TLST-21
- SB 3000TLST-21
- SB 3000TL-21
- SB 3600TL-21
- SB 4000TL-21
- SB 5000TL-21
- WB 3000TL-21
- WB 3600TL-21
- WB 4000TL-21
- WB 5000TL-21

Alternative uses not expressly recommended by SMA Solar Technology AG are not permitted.

For safety reasons, it is not permitted to modify the product or install components that are not explicitly recommended or distributed by SMA Solar Technology AG for this product.

The enclosed documentation is an integral part of this product.

- Read and observe the documentation.
- Keep the documentation in a convenient place for future reference.

Only use the fan retrofit kit in accordance with the specifications provided in the enclosed documentation. Any other use may result in personal injury or property damage. Also observe the relevant inverter manual.

2.2 Qualifications of Skilled Persons

The work described in this document must only be performed by skilled persons. Skilled persons must have the following qualifications:

- Knowledge of how an inverter works and is operated
- Training in how to deal with the dangers and risks associated with installing and using electrical devices and plants
- Training in the installation and commissioning of electrical devices and plants
- Knowledge of all applicable standards and directives
- Knowledge of and adherence to this document and all safety precautions

2.3 Safety Precautions

Electric Shock

High voltages that can cause fatal electric shocks are present in the live components of the inverter.

- Prior to performing any work on the inverter, disconnect the inverter from any voltage sources (see inverter installation manual).

Electrostatic Discharge

By touching electronic components, you can damage or even destroy the inverter through electrostatic discharge.

- Earth yourself before touching any components.

3 Scope of Delivery

Check the scope of delivery for completeness and any externally visible damage. Contact your specialist dealer if the scope of delivery is incomplete or damaged.

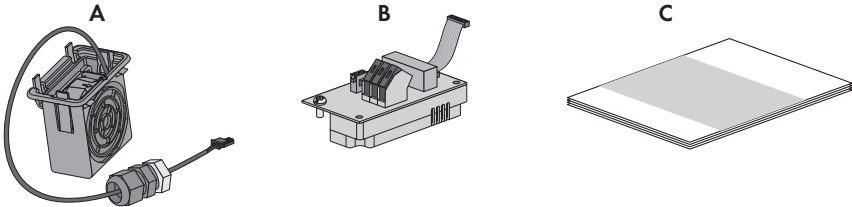


Figure 1: Components included in scope of delivery

Item	Quantity	Description
A	1	Fan with fan enclosure and cable gland
B	1	Controller assembly
C	1	Installation manual

4 Product Description

4.1 Fan Retrofit Kit

The fan retrofit kit consists of a fan and a controller assembly for the fan. The fan provides the inverters with additional cooling during high ambient temperatures. The controller assembly controls the fan.

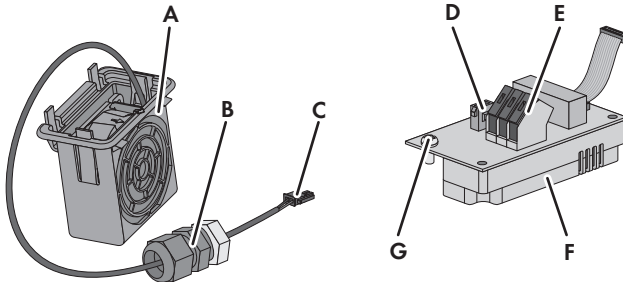



Figure 2: Structure of the fan retrofit kit

Item	Description
A	Fan with fan enclosure
B	Cable gland with nut
C	Plug
D	Fan connection
E	Multi-function relay terminals
F	Controller assembly
G	Screw

4.2 Controller Assembly

The controller assembly controls the fan. A multi-function relay is placed on the controller assembly. The multi-function relay is for switching on and off a fault indicator or another external load based on parameters and measured values of the inverter (for further information regarding the use of the multi-function relay, see the Technical Description "Multi-Function Relay and OptiTrac Global Peak" and installation manual of the inverter available at www.SMA-Solar.com).

Symbol on Product

Symbol	Designation	Explanation
	Warning regarding dangerous voltage	The product operates at high voltages. All work may only be performed by skilled persons in accordance with this manual.

5 Installation

5.1 Installation Area Overview

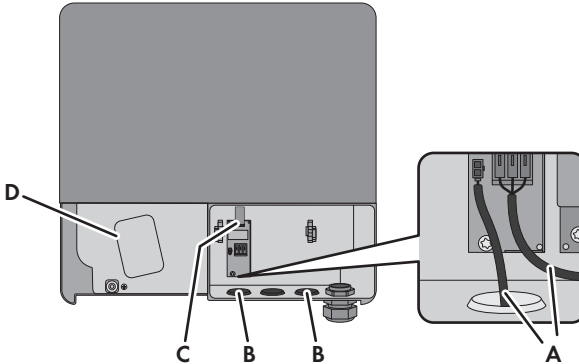


Figure 3: Installation area in the inverter with the lower enclosure lid open and the display flipped up

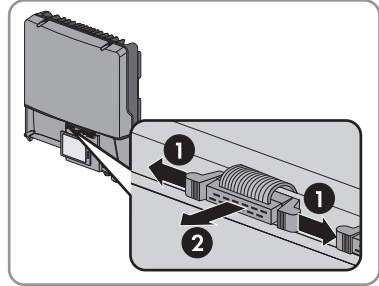
Item	Description
A	Cable routes
B	Enclosure openings for the connection of the fan retrofit kit
C	Installation location for the controller assembly
D	Enclosure opening for the fan along with the fan enclosure

5.2 Removing the Multi-Function Relay

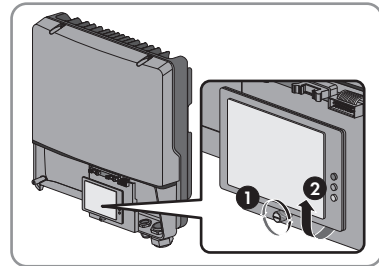
If a multi-function relay is pre-installed, the installation area of the controller assembly is blocked. Before installing the fan retrofit kit, the multi-function relay must be removed according to the following procedure.

1. Disconnect the inverter from voltage sources and open it (see inverter installation manual).
2. If the multi-function relay is assigned, disconnect the supply voltage to the multi-function relay and ensure that the device cannot be reconnected.

3. Press the locking levers of the left-hand socket on the display outwards and remove the ribbon cable plug.

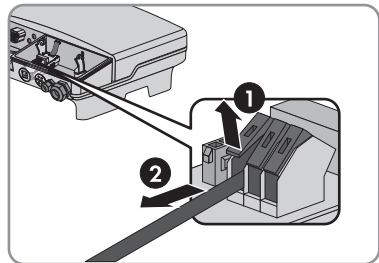


4. Loosen the screw on the display and flip the display up until it clicks into place.



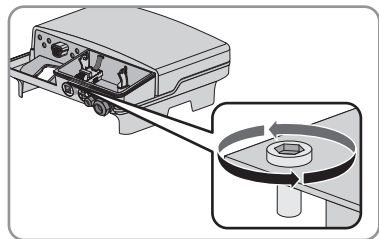
5. If the terminals are assigned, remove the connection cable from the inverter:

- Flip up the terminals and pull out the insulated wire. Hint: Note down the order of the connected insulated wires. The connection to the multi-function relay on the controller assembly will be easier this way.



- Remove the connection cable from the inverter through the cable gland. To do this, slightly loosen the swivel nut.

6. Loosen the screw on the pre-installed multi-function relay using an Allen key AF 3.



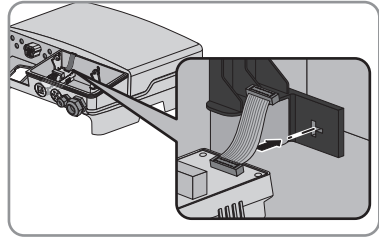
7. Remove the multi-function relay from the inverter.

5.3 Installing the Fan Retrofit Kit in the Inverter

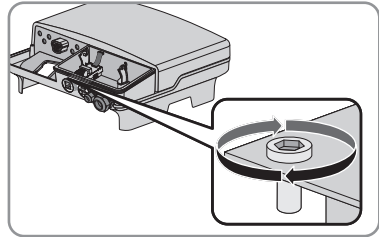
Requirements:

- The inverter must be disconnected from the power supply and the lower enclosure lid must be opened (see inverter installation manual).
- The multi-function relay must be removed and the display flipped up (see Section 5.2 "Removing the Multifunction Relay", page 12).

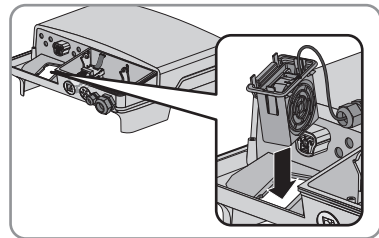
1. Place the controller assembly in the inverter and push the ribbon cable upwards behind the display. The key of the controller assembly must fit into the cut-out of the display retainer.



2. Fasten the screw of the controller assembly with an Allen key AF 3.



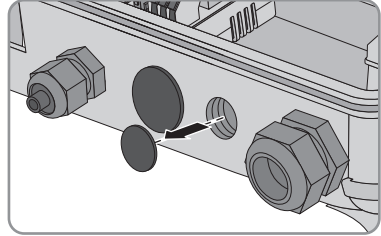
3. Remove the cover of the enclosure opening for fan enclosures.
4. Insert the fan with fan enclosure in the enclosure opening. The arrow on the fan enclosure must face the display.



5. Route the locking tabs on the right-hand side of the fan enclosure underneath the enclosure wall and press the fan with fan enclosure in the enclosure opening.
 - The left-hand locking tabs lock into place.

6 Connecting the Fan Retrofit Kit

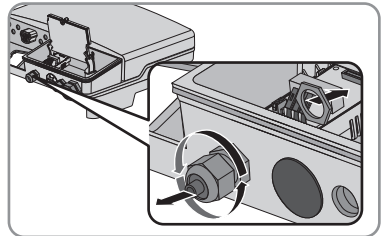
1. Remove the filler-plug from the right-hand enclosure opening.



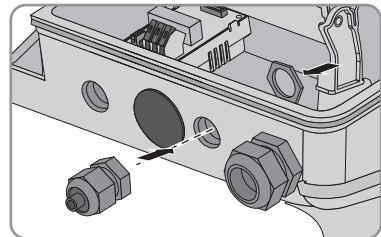
i Storing the filler-plug

Store the filler-plug in a safe place. The filler-plug is needed again if the fan retrofit kit is removed (see Section 7.1 "Disassembling the Fan Retrofit Kit", page 18).

2. Unscrew the cable gland from the left-hand enclosure opening. To do this, loosen the inner counter nut.

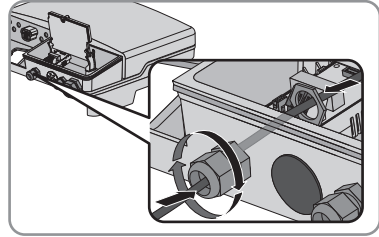


3. Insert the cable gland in the right-hand enclosure opening and fasten it along with the counter nut from inside.



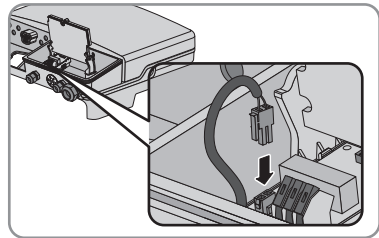
4. After the swivel nut with sealing plug is unscrewed, screw the swivel nut with sealing plug on the cable gland.
5. Fasten the swivel nut hand-tight.
6. Unscrew the counter nut from the provided cable gland of the fan cable.
7. Insert the fan cable through the left-hand enclosure opening into the inverter from outside.

8. Insert the cable gland of the fan cable in the enclosure opening and fasten it to the inside of the enclosure using the counter nut.



9. After the swivel nut is unscrewed, screw the swivel nut on the cable gland.
10. Fasten the swivel nut hand-tight.
11. Ensure that the fan cable is securely attached.

12. Insert the fan plug in the fan connection of the controller assembly.

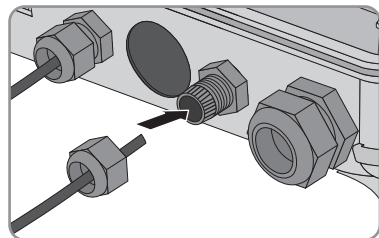


13. If the multi-function relay is to be used on the controller assembly, connect the multi-function relay via the right-hand cable gland.
 - Remove the sealing plug from the right-hand cable gland. For that, unscrew the swivel nut.

i Storing the sealing plug

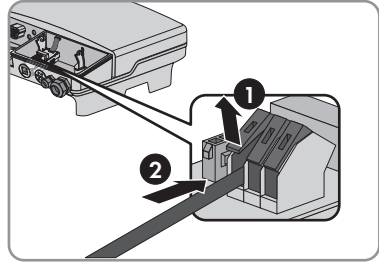
Store the sealing plug in a safe place. The sealing plug is needed again if the fan retrofit kit is removed.

- Insert the connection cable through the right-hand cable gland into the inverter. In doing so, fasten the swivel nut only hand-tight on the cable gland.

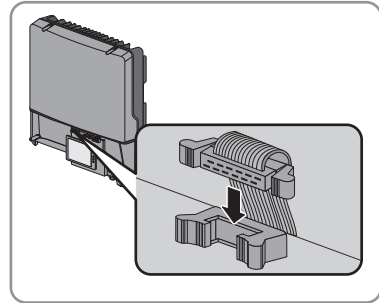


- Ensure that the connection cable is securely positioned.

- Flip up the terminals and insert the insulated wires.



14. Fold down the display and fasten the screw hand-tight.
15. Insert the ribbon cable in the left-hand socket on the display until it clicks into place.

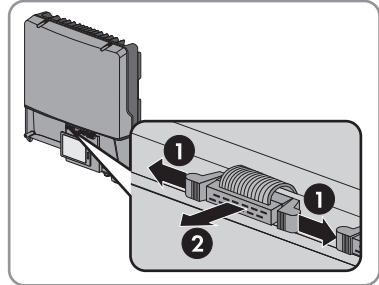


16. Close the inverter (see inverter installation manual).

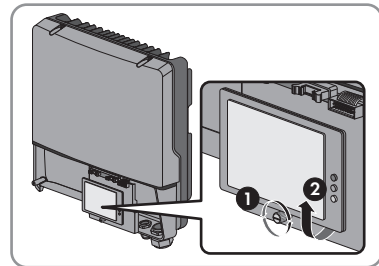
7 Disassembling

7.1 Disassembling the Fan Retrofit Kit

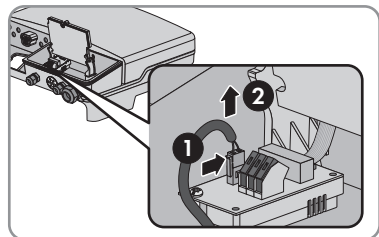
1. Disconnect the inverter from voltage sources and open it (see inverter installation manual).
2. If the multifunction relay is assigned, disconnect the supply voltage to the multi-function relay and ensure that the device cannot be reconnected.
3. Wait for the fan to stop rotating.
4. Press the locking levers of the left-hand socket on the display outwards and remove the ribbon cable plug.



5. Loosen the screw on the display and flip the display up until it clicks into place.

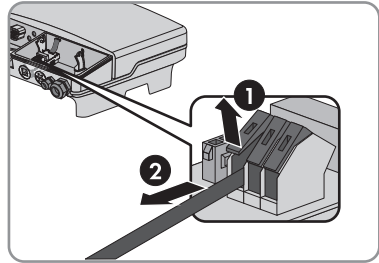


6. Release and remove the fan plug.



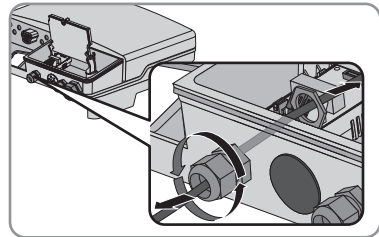
7. If the terminals are assigned, remove the connection cable from the inverter:

- Flip up the terminals and pull out the insulated wires. Hint: Note down the order of the connected insulated wires to make it easier to reconnect them.



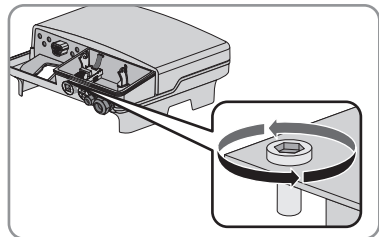
- Remove the connection cable from the inverter through the cable gland. Unscrew the swivel nut to do so.
- Insert the sealing plug in the right-hand cable gland and screw the swivel nut hand-tight onto the cable gland (see Section 6 "Connecting the Fan Retrofit Kit", page 15).

8. Loosen the cable gland of the fan cable. To do this, loosen the inner counter nut.



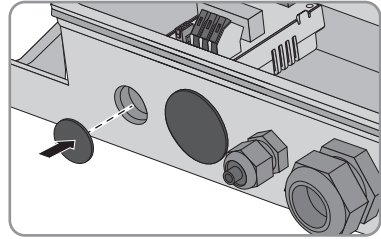
9. Remove the fan cable with the cable gland and nut from the inverter.

10. Loosen the screw on the controller assembly using an Allen key AF 3.

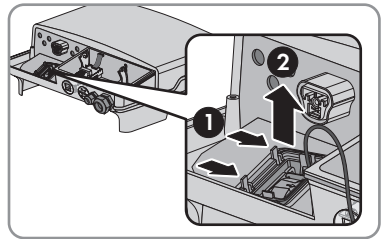


11. Remove the controller assembly from the inverter.

12. Place the filler-plug in the left-hand enclosure opening.



13. Fold down the display and fasten the screw hand-tight.
14. Push both locking tabs of the fan enclosure to the fan and remove the fan with fan enclosure.



15. Close the inverter (see inverter installation manual).

7.2 Disposing of the Fan Retrofit Kit

- Dispose of the fan retrofit kit in accordance with the applicable disposal regulations for electronic waste.

8 Technical Data

8.1 Fan

General data

Width x height x depth	60 mm x 60 mm x 25.4 mm
Noise emission (typical)	≤ 29 dB(A)
Maximum operating altitude	3,000 m
Volumetric flow rate	≥ 40 m ³ /h

Electrical parameters

Input voltage	0 V ... 15 V
Nominal DC current	≤ 0.2 A

8.2 Multi-Function Relay Connection

Maximum switching voltage

AC	240 V
DC	30 V

Maximum switching current

AC	1.0 A
DC	1.0 A

Climatic conditions

Temperature range	- 25°C ... +60°C
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9 Contact

If you have technical problems concerning our products, contact the SMA Service Line. We require the following information in order to provide you with the necessary assistance:

- Device type of the fan retrofit kit
- Device type and serial number of the inverter
- Detailed description of the problem

SMA Solar Technology AG

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34266 Niestetal, Germany

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SMA Service Line

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