Sunny Breeze

Fan Kit

Installation and Users manual

Version 1.1

Alteration Review

Document Number	Version and Alteration Review (1)		Comments	Author
-	1.0	A	First Edition	ras
-	1.1	A		mrd

(1) A: Alterations due to faulty documents or improvement of the documentation

B: Alterations maintaining full or upward compatibility

C: Alterations limiting or excluding compatibility

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1 Introduction

Sunny Boy string inverters are designed to be used in the shade, outdoors, along a wall or on a pole where natural airflow across the heatsink is present. When the inverter is mounted in direct sun, indoors, or in an area where there is shade but no natural airflow across the heatsink, a fan is needed to provide a forced airflow. If the temperature of the heatsink approaches 158'F (70'C) the Inverter will go into a de-rate mode which lowers the output power fed to the utility grid. This will keep the heatsink temperature below 158'F (70'C) as required by the UL1741 listing.

The Sunny Breeze was designed to provide a forced airflow when the temperature of the heatsink exceeds approximately 122'F (50'C) by closing a thermal switch and energizing a small cooling fan.

2 Installation and design considerations for the Sunny Breeze

The Sunny Breeze will provide airflow where natural airflow across the heatsink is not possible or high ambient temperatures are present causing the inverter to go into de-rate mode. The Sunny Breeze is not designed to allow the connection of more than the maximum recommended input power. Running the Inverter with more than the maximum recommended input power for extended periods of time will shorten the life of the inverter by stressing the internal components, is a violation of the UL listing, and may void the warranty.

3 Installing Sunny Breeze

The Sunny Breeze attaches to the Sunny Boy heatsink by using a friction fit.
Simply place the rear of the unit with the temperature sensor inside the heatsink fins as in figure 3.1, line up the front of the unit to the heatsink fins as in figure 3.2 and press down firmly until the bottom of the fan is nearly against the heatsink. **(Be careful to avoid damage to the Temp Sensor located on the back of the Sunny Breeze.)**
The final installation on the heatsink should look similar to figure 3.3.

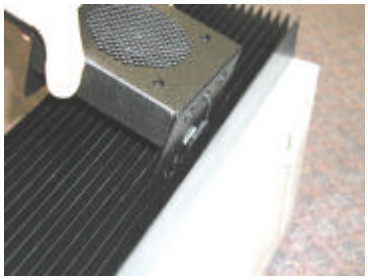
Figure 3.1

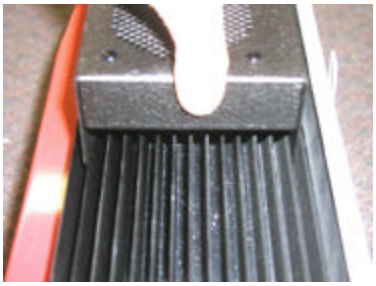
Figure 3.2

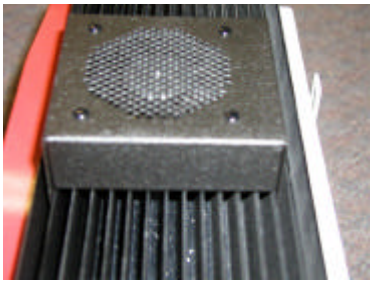
Figure 3.3

4 Connecting the power supply and daisy-chain cable to the Sunny Breeze

The Sunny Breeze uses a 120VAC to 9VDC wall adapter which is included in the Sunny Breeze kit.

Plug the wall adapter into one of the power jacks on the rear of the unit as shown in figure 4.1, then plug the wall transformer into a 120vac outlet.

Note: The Sunny Breeze fan will NOT start, unless the heatsink temperature is above 50c. Even then, it may take several seconds for the fan to start after installation.

If more than one inverter is used in the installation, use the empty power jack to connect up to three of the units together using the supplied Daisy-Chain cable and a single wall adapter as in figure 4.2.

Note: A maximum of 3 Sunny Breeze units can be connected together with one wall adapter. For additional Sunny Breeze units start a new chain using another wall adapter.

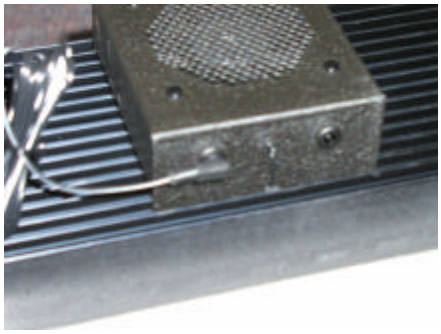

Figure 4.1 Sunny Breeze with wall adapter plugged in (Rear View)

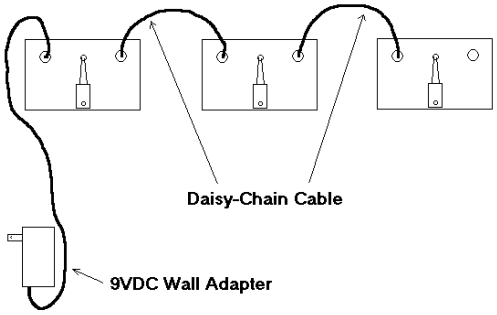

Figure 4.2 Daisy-Chain Example

5 Technical Data

Wall adapter input Voltage	120VAC
Wall adapter input Frequency	60Hz
Wall adapter output Voltage	9VDC
Fan Turn ON temperature	122'F (50'C)
Fan Turn OFF temperature	95'F (35'C)
Fan Assembly Size (LxWxH)	4.5 x 4.2 x 2.7 Inches (114 x 105 x 69 mm)
Fan Assembly installed Height above Heatsink	1.4 Inches (36 mm)
Fan Assembly Weight (*Without Wall Adapter*)	1 Lbs (0.45 Kg)

Specifications are subject to change without notice.

6 Product Warranty

Warranty

The warranty period is **12 months** from the end user's date of purchase, or;
18 months after the delivery date from SMA, and includes all defects caused by material or manufacturing faults
The guaranty period for warranty repairs or compensation deliveries ends 12 months after delivery, or until the expiration of the original warranty period for the delivered item , whichever is less.

Evidence

SMA will only render warranty services if the rejected device is sent back to SMA together with a copy of the receipt the distributor has issued for the end user..
In case of non-fulfillment SMA reserves the right to refuse warranty services.

Conditions

The device will be repaired at SMA's discretion in its facility without invoicing material and work, or a replacement compensation device will be delivered.
The rejected device is to be sent back to SMA in the original packing, or in a transport packing of equal quality.
The customer has to grant SMA the reasonable time and opportunity to repair the defects.