



Windy Boy 1100
Windy Boy 1700
Inverter for Wind Energy Power Plants



Revision History

Document number	Changes	Author
WB11_17-11:SE4005	First issue	Welzel

Explanation of Symbols used in this Document

This symbol indicates information that is essential for a trouble-free and safe operation of the product. Please read these sections carefully in order to avoid any damages of the equipment and for optimal personal protection.



This symbol indicates information that is required for the optimal operation of the product. Read these sections carefully in order to ensure an optimal operation of the product and all its features.



This symbol indicates an example.



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SMA Technologie AG

Hannoversche Strasse 1-5

34266 Niestetal

Germany

Tel. (+49) 5 61 95 22 – 0

Fax (+49) 5 61 95 22 – 100

www.SMA.de

E-Mail: info@SMA.de

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1 Foreword

The installation of the Windy Boy may only be done by qualified technicians. The installer must be approved by the utility company. Please read the installation guide carefully before you begin with the installation. The installation of utility interactive power sources must be compliant with all applicable regulations of the utility company and with all applicable regulations and standards.



This installation manual is intended solely for qualified electricians. Its aim is to help install and set up SMA Windy Boy inverters quickly and correctly.

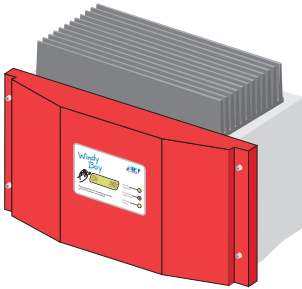
For detailed technical information and instructions on how to use the device, please refer to the operating instructions.

The Windy Boy is externally identical to the Sunny Boy inverter for photovoltaic systems. For this reason, it can also be used as a PV inverter. Please download the Sunny Boy instruction manuals from www.SMA.de and contact the SMA hotline if you intend to use the inverter in this manner.

If you require further information, please call the SMA hotline on the following number:

+49 (0)561 95 22 - 499

2 Safety information



Work on the Windy Boy with the cover removed must be carried out by a qualified electrician! Before working on the Windy Boy with the cover removed, the AC and DC voltage **MUST be disconnected from the Windy Boy.**



The Windy Boy must be disconnected from the mains grid and precautions must be taken to prevent the grid being reconnected. The connection to the DC voltage must also be removed.

After isolating the AC and DC voltage you must wait approx. 30 minutes for the capacitors in the Windy Boy to discharge. Only then is it safe to open the unit by removing the cover. You must also make sure that no voltage is present in the device.

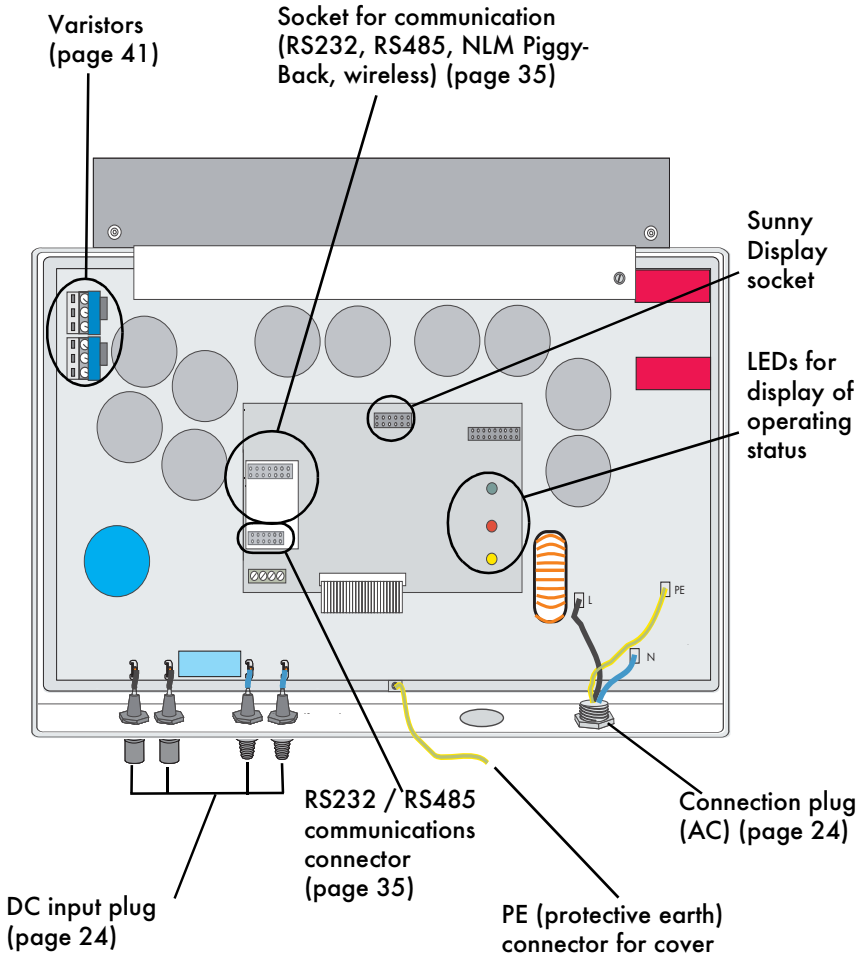
The Windy Boy is equipped with an independent mains disconnection device, the "SMA grid guard". It ensures that the Windy Boy complies with the VDEW (Verband der Elektrizitätswirtschaft – German Electricity Industry Association) regulations for the connection and parallel operation of electrical power units to the low-voltage grid of the electricity supply company and with DIN VDE 0126 (4.99), which forms a part of these regulations.



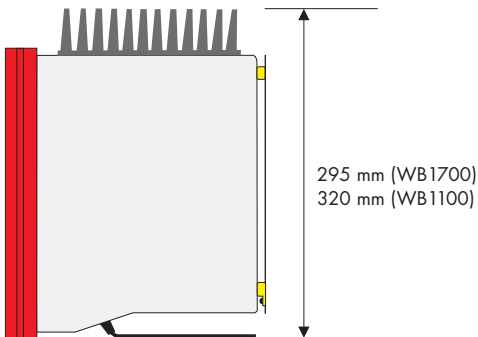
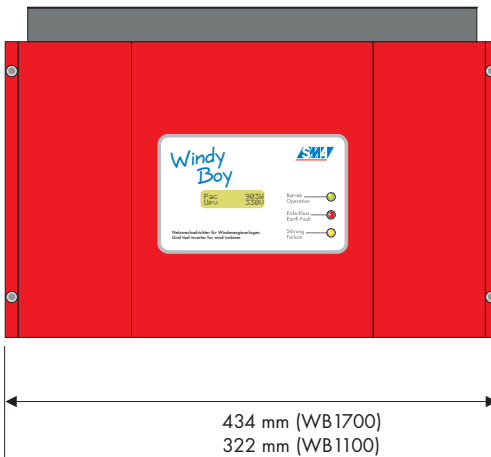
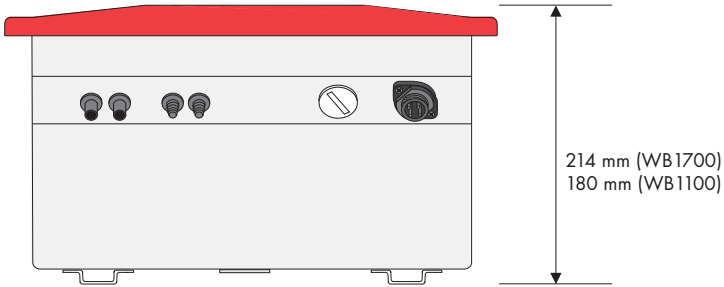
3 Overview

3.1 Unit description

The following diagram gives a schematic overview of the various components and connection points inside the Windy Boy with the cover removed:



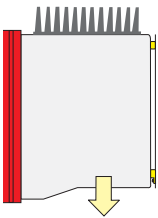
3.2 External dimensions



4 Installation requirements

Please check that all of the conditions listed below are met before installing and commissioning the Windy Boy.

4.1 Installation site requirements



21/25 kg

The Windy Boy 1100 weighs 21 kg and the Windy Boy 1700 weighs 25 kg. Please take this weight into account when choosing the installation site and method of installation.

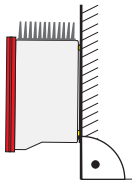
The ambient temperature must not be outside the range of -25 °C to +60 °C.



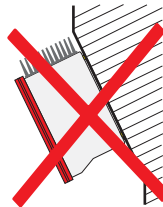
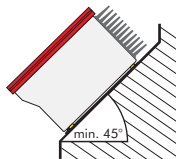
The Windy Boy should be installed in a place where it is not exposed to direct sunlight. An increased ambient temperature can reduce the yield of the system.

The Windy Boy is designed to be mounted on a vertical wall. For an optimum energy yield and the most convenient operation, vertical installation at eye-level is preferable. In case it is absolutely necessary to tilt the Windy Boy to the back the maximum angle is 45 °. If installing the unit outdoors, make sure that it is not slanted forwards.

It is not recommended to install the Windy Boy lying on the back side with the lid facing upwards.



Mount the Windy Boy in a vertical position or with a slight angle to the back.



Do not mount the Windy Boy with an angle to the front or on the back.

When choosing the installation site, be sure to note the following:



Unintentionally pulling out the DC plug connector under load can damage the plug and result in bodily injury or death! Install the Windy Boy in such a way that it is not possible (e.g. for children) to unintentionally unplug the DC plug connector.



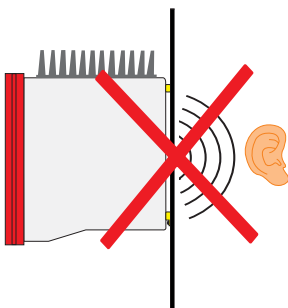
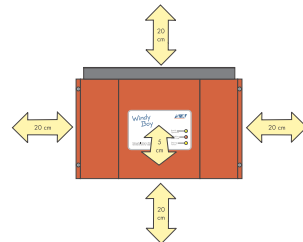
Individual components in the Windy Boy can reach a temperature of more than 60 °C. Ensure the unit is sufficiently far away from combustible materials.



Do not install the Windy Boy in potentially explosive areas!

When choosing the installation site, ensure there is enough space for heat to dissipate. Under normal conditions, the following recommended values for the space to be kept clear around the Windy Boy should be followed:

	Minimum clearance
Sides	20 cm
Top	20 cm
Underneath	20 cm
In front	5 cm



The unit should not be mounted on plasterboard walls, wooden boarding or similar as otherwise audible vibrations are likely to result.

We recommend securing the unit to a solid surface. The Windy Boy 1100 / 1700 can make noises when in use that may be irritating in a domestic setting.

4.2 DC input prerequisites

Your Windy Boy is equipped with Multi-Contact (3 mm) DC plug connectors as standard. Depending on your order preferences, the Windy Boy can be equipped with other connector systems instead, such as Multi-Contact (4 mm) or Tyco connectors.

The device has four DC plug connectors for connecting an upstream rectifier / overvoltage protection unit of the wind turbine, but only two of these need to be used. The connecting cables must also be fitted with the same type of plug connector. A pre-plugged set for connecting loose cables to the appropriate DC connector system of the Windy Boy is available as an optional accessory. The SMA order codes for the various connectors are as follows:

- Multi-Contact 3 mm: "SWR-MC"
- Multi-Contact 4 mm: "MC-SET"
- Tyco: "TYCO-SET"

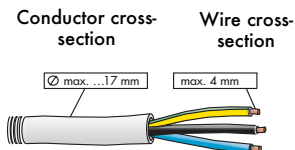
Limit values for DC input	
Max. voltage	400 V (DC)

Please make sure that the input voltage never exceeds 400 V. Higher input voltages will damage the Windy Boy and lead to loss of any and all warranty rights!

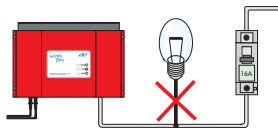


4.3 Low voltage grid 230 V (AC)

The Windy Boy must have a three-conductor connection to the mains grid (live (L), neutral (N), protective earth (PE)).



The grid connection terminals on the AC connection socket included in the accessories kit can take wires with a cross-section of up to 4mm. The accessories kit also contains a PG13.5 AC connection socket for connecting cables with a cross-section between 9 mm and 13.5 mm, while the PG16 connection socket is used for cables with cross-sections from 13.5 mm up to a maximum of 17 mm. Detailed instructions can be found on pages 22 and 24.



We recommend using a 16 A line circuit breaker to protect the power circuit. No loads should be connected to this power circuit.



Rating for a line circuit breaker

Various factors should be taken into account when selecting line circuit breakers. These include, for example:

- The type of cable used (conductor material and insulation),
- Ambient temperatures affect the cables (higher temperatures result in a reduced maximum current load),
- Method of routing the cable (reduces the maximum current load),
- Bundling cables together (reduces the maximum current load)
- Loop impedance [Z] (in the event of a body contact this limits the current that can flow and therefore determines the response behavior of the circuit breaker)
- Adequate separation between the circuit breakers to avoid excessive heating (automatic circuit breakers trip earlier when they are warmer)
- Selectivity
- Protection class of the connected load (VDE 0100, part 410, protection against electric shock¹)



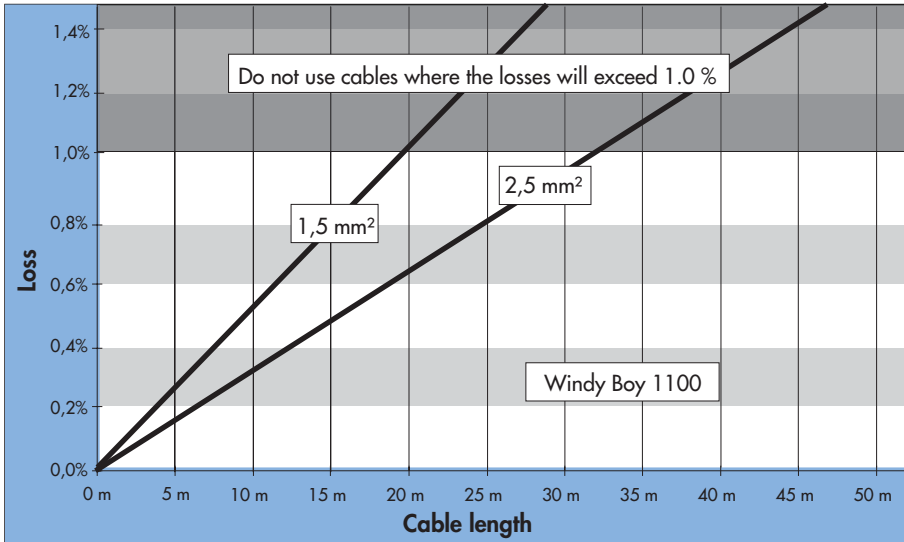
The following standards have to be complied with:

- *DIN VDE 0298-4¹ ("Types of cable installation and conducting capacity")*
- *DIN VDE 0100 Part 430¹ ("Protection measures for protection of cables and conductors in terms of overcurrent") and/or the international standard IEC 364-4-43:1977 and IEC 364-4-473:1977*
- *VDE 0100 Part 410¹ ("Protection against electric shock") and/or the international standard IEC 60364-4-41:1992*

1. The standards mentioned above are to be only used as a guideline for your installation. They apply for installations in Germany. Please note that other standards will apply for different countries throughout the world.

The mains grid impedance at the AC input of the Windy Boy must be less than 1 Ohm or the protective equipment may not work properly. In addition, we recommend dimensioning the conductor cross-section so that line losses do not exceed 1% at the nominal power. Line losses depending on the cable length and cross-section are shown in the graph below:

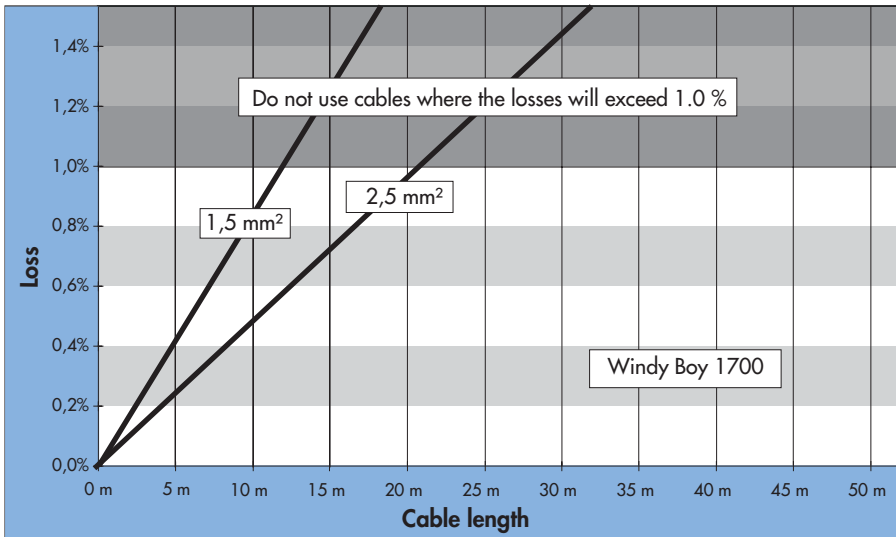
Cable losses of the Windy Boy 1100



The maximum cable lengths for the different cable cross-sections are as follows:

Cable cross-section	1.5 mm ²	2.5 mm ²
Max. length	19 m	31,7 m

Cable losses of the Windy Boy 1700



The maximum cable lengths for the different cable cross-sections are as follows:

Cable cross-section	1.5 mm ²	2.5 mm ²
Max. length	12,4 m	20,6 m

The Windy Boy is designed for operation on 230 V grids and works at grid voltages from 198 V to 260 V and frequencies from 49.8 Hz to 50.2 Hz, or from 59.8 to 60.2 Hz.

AC output limit values, at 50 Hz

	AC output limit values, at 50 Hz
Voltage range	198 V ... 260 V
Frequency range	49.8 Hz ... 50.2 Hz
Voltage range programmable between	180 V ... 265 V
Frequency range programmable between	45.5 Hz ... 54.5 Hz

AC output limit values, at 60 Hz

	AC output limit values, at 60 Hz
Voltage range	198 V ... 260 V
Frequency range	59.8 Hz ... 60.2 Hz
Voltage range programmable between	180 V ... 265 V
Frequency range programmable between	55.5 Hz ... 64.5 Hz

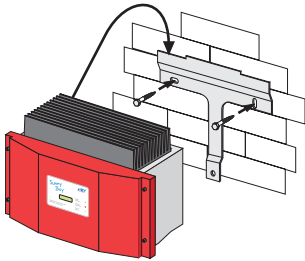
4.4 Stand-alone mains grid



When providing electricity using Sunny Island systems: Please configure the Windy Boy according to the Sunny Island instruction manual.

5 Installation

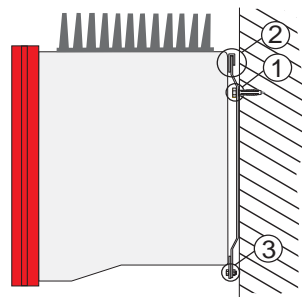
5.1 Mounting the unit



To make the job easier, we recommend you use the supplied wall bracket to mount the Windy Boy. For vertical installation on solid concrete or block walls, for example, you can fit the bracket using 8 mm x 50 mm hexagon bolts to DIN 571 standard, stainless steel type, and with wall plugs type SX8.

When selecting the mounting materials, be sure to take into account the weight of the Windy Boy (Windy Boy 1100: 21 kg, Windy Boy 1700: 25 kg).

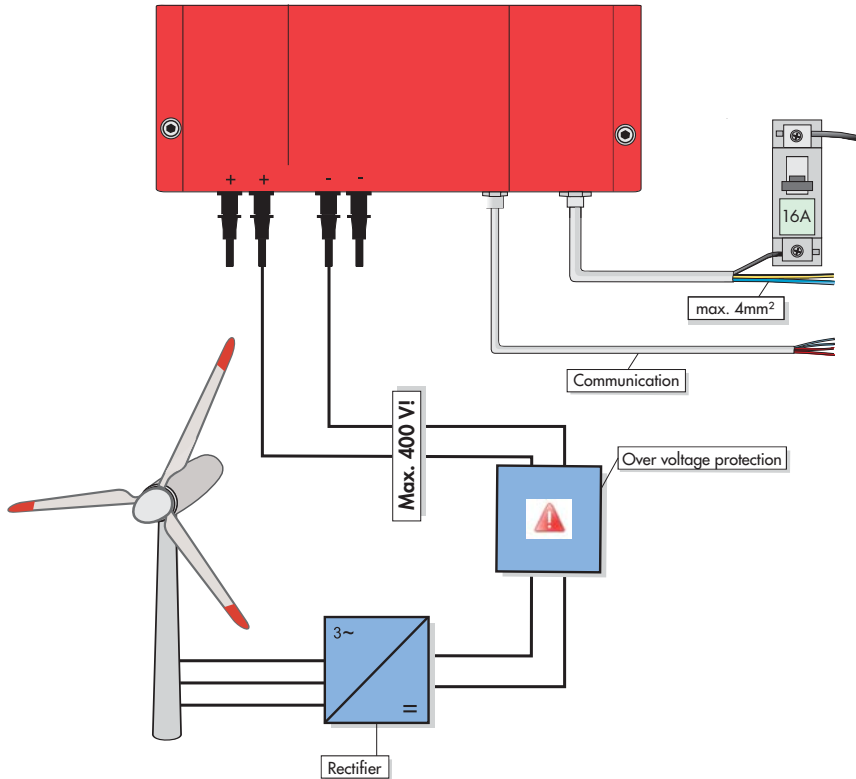
1. Fit the wall bracket (1). To mark the positions to drill the holes, you can use the wall bracket as a drilling template.
2. Now hang the Windy Boy onto the wall bracket (2) using its upper mounting plate so that it cannot be moved sideways.
3. Secure the Windy Boy against being raised by screwing the supplied M6x10 bolt into the middle threaded hole at the bottom of the bracket (3).



4. Make sure that the Windy Boy is positioned securely on the bracket.

5.2 Electrical installation

The complete wiring for a Windy Boy is shown schematically in the following diagram:



Make sure that the input voltage never exceeds 400 V. Higher input voltages will damage the Windy Boy and will lead to the loss of any and all warranty rights.

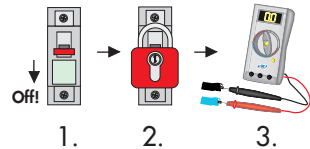
Connecting the AC output

Before you connect the mains cable to the AC connection socket, make sure that no voltage is present at the cable.



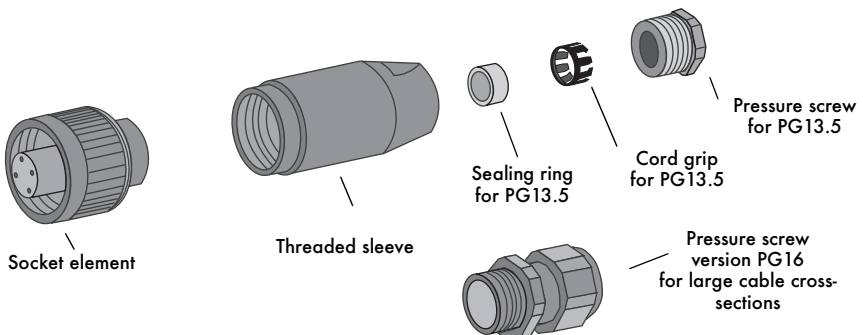
To connect the AC output, proceed as follows:

1. Isolate the grid connection (switch the line circuit breaker to its "off" position), make sure it cannot be switched back on, and test to make sure no voltage is present.



You must make sure that no voltage is present at the AC output before opening the Windy Boy!

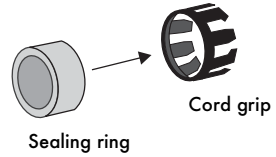
2. The AC input has a connector system using round pins that are suitable for a range of different cable diameters. Both PG13.5 and PG16 feed-throughs are provided. Check to see which size best fits your AC output cable.
3. Now take the AC connection socket parts from the accessories kit and connect up the cable, with shielding and insulation stripped, as described on the following pages:



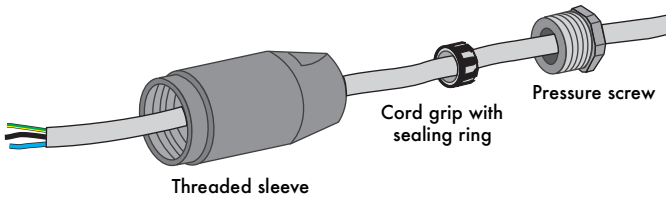
Connecting the AC plug with PG13.5

To connect a cable with a maximum diameter of 13.5 mm, proceed as follows:

1. Press the sealing ring into the cord grip.

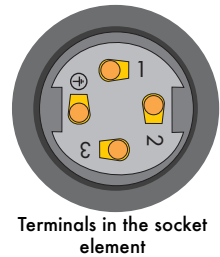


2. Now slide the pressure screw over the cable first of all, followed by the cord grip with the sealing ring in it. Now slide the threaded sleeve over the cable.

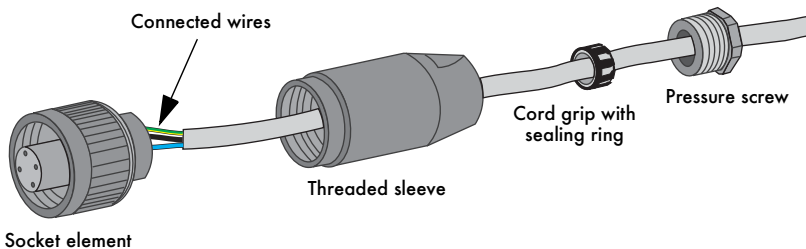


3. Now connect the individual conductors to the socket element in sequence.

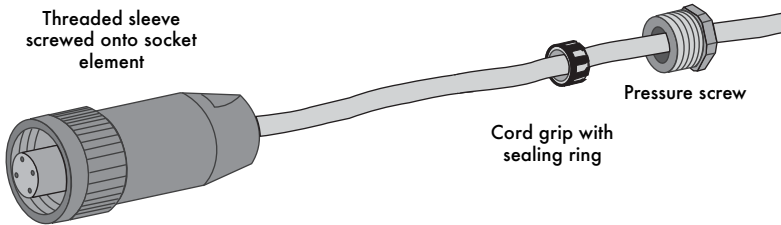
- Protective earth PE (green/yellow) to the screw terminal with the earth sign. Make sure that the PE earth wire is longer than the N and L connected wires.
- Neutral conductor N (blue) to screw terminal 1.
- Live L (brown or black) to screw terminal 2.
- Terminal 3 remains unused.



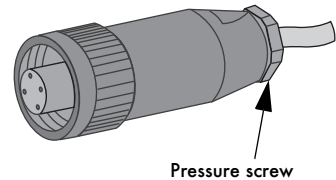
4. Make sure the wires are securely connected.



5. Now screw the threaded sleeve onto the socket element and tighten it.



6. Now screw the pressure screw into the threaded sleeve and tighten it. The cord grip with the sealing ring is pressed into the threaded sleeve and can no longer be seen.



The AC connecting socket is now fully assembled.

If you are not going to immediately connect the Windy Boy, close off the socket element using the cap supplied in the accessories kit.

If the Windy Boy is already installed, you can now connect the fully assembled AC connection socket to the flange plug on the Windy Boy. To do this, remove the transparent protective cap from the flange plug on the Windy Boy. Firmly tighten the threaded ring on the AC connecting socket to the flange plug to seal the connection and secure it.

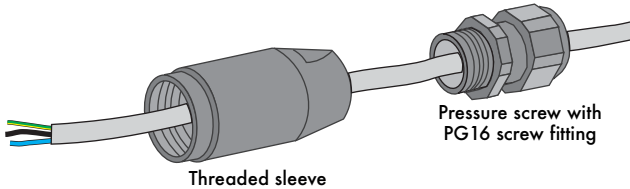
Do not switch the line circuit breaker on yet! The Windy Boy may only be connected to the AC grid once the DC cables are connected and the device is securely closed.



Connecting the AC plug with PG16

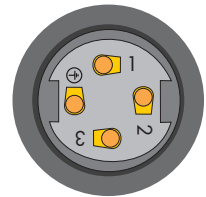
To connect a cable with a diameter between 13.5 mm and 16 mm , proceed as follows:

1. First of all, slide the pressure screw with the PG16 screw fitting onto the cable. Now slide the threaded sleeve over the cable.



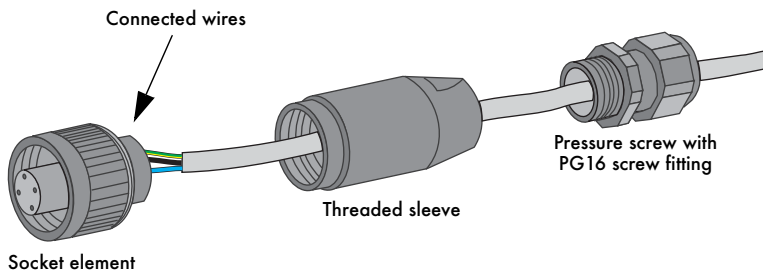
2. Now connect the individual conductors to the socket element in sequence.

- Protective earth PE (green/yellow) to the screw terminal with the earth sign. Make sure that the PE earth wire is longer than the N and L connected wires.
- Neutral conductor N (blue) to screw terminal 1.
- Live L (brown or black) to screw terminal 2.
- Terminal 3 remains unused.



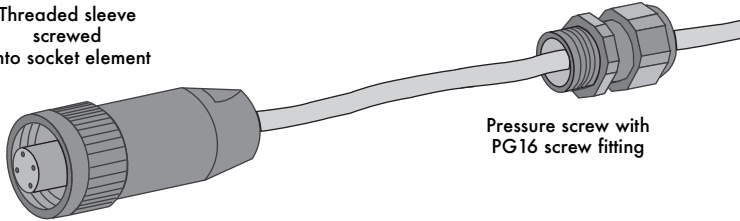
Terminals in the socket element

3. Make sure the wires are securely connected.



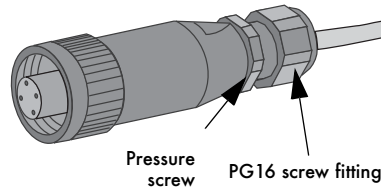
- Now screw the threaded sleeve onto the socket element and tighten it.

Threaded sleeve
screwed
onto socket element



Pressure screw with
PG16 screw fitting

- Now screw the pressure screw into the threaded sleeve and tighten it.
- Firmly tighten the screw fitting against the seal and in order to fasten the cable.



Pressure
screw

PG16 screw fitting

The AC connecting socket is now fully assembled.

If you are not going to immediately connect the Windy Boy, close off the socket element using the cap supplied in the accessories kit.

If the Windy Boy is already installed, you can now connect the fully assembled AC connection socket to the flange plug on the Windy Boy. To do this, remove the protective cap from the flange plug on the Windy Boy. Firmly tighten the threaded ring on the AC connecting socket to the flange plug to seal the connection and secure it.

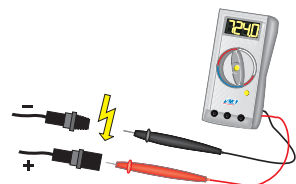
Do not switch the line circuit breaker on yet! The Windy Boy may only be connected to the AC grid once the DC input cables are connected and the device is securely closed.



DC connection

To connect up the input, follow these steps:

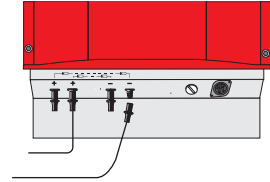
- Check that the DC connectors have the right polarity and do not exceed the maximum input voltage of 400 V (DC), see also chapter 4.2 "DC input prerequisites" (Page 17).



Caution! Life-threatening high voltages may be present.



2. Connect the DC connector of the generator to the Windy Boy. Make sure that the polarity is correct!
3. Close the unnecessary DC input sockets with the caps included in the delivery.



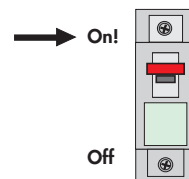
5.3 Startup

You can start up the Windy Boy when:

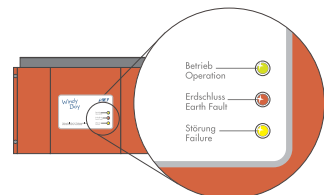
- the AC (mains) cable is connected correctly,
- the DC cables are fully connected and the unused DC plug connectors on the bottom of the enclosure are closed using the protective caps,
- the cover is securely screwed shut,
- you are sure that the input voltage cannot exceed 400 V, and
- the DC input voltage is sufficient for supplying the onboard electronics.

How to start up the inverter

1. First of all, switch the line circuit breaker to the "on" position.



2. Now look at the LED display and consult the following table to check whether the Windy Boy is in a sensible, fault-free operating status. Once the inverter is in a fault-free operating status, startup has successfully completed.



Green	Red	Yellow	Status
Illuminates continuously	Is not illuminated	Is not illuminated	OK (working mode)
	Illuminates continuously	Is not illuminated	Fault
		Illuminates continuously	OK (initialization)
Flashes quickly (3 x per second)	Is not illuminated	Is not illuminated	OK (stop)
	Illuminates continuously	Is not illuminated	Fault
Flashes slowly (1 x per second)	Is not illuminated	Is not illuminated	OK (waiting, grid monitoring)
	Illuminates continuously	Is not illuminated	Fault
Briefly goes out (approx. 1 x per second)	Is not illuminated	Is not illuminated	OK (derating)
	Illuminates continuously	Is not illuminated	Fault
Is not illuminated	Is not illuminated	Is not illuminated	OK (Standby)
		Illuminating/ flashing	Fault
	Illuminates continuously	Is not illuminated	Fault
		Illuminating/ flashing	Fault

For a detailed description of the fault messages and their causes, refer to the Windy Boy 1100 / 1700 operating instructions.

6 Opening and closing the Windy Boy

If you need to open the device for whatever reason, please pay attention to chapter 2 "Safety information" (Page 11).



6.1 Opening the Windy Boy

Caution: Follow the sequence below under all circumstances.



1. Disconnect the AC connection.
2. Disconnect the DC connection.
- 3. Wait 30 minutes! (This is necessary for the discharge of internal voltages.)**
4. Remove the four screws from the cover and pull the cover forward smoothly. Loosen the locking on the PE connectors on the cover when you remove them.

6.2 Closing the Windy Boy

Caution: You must always, without exception, follow the sequence described below!



1. Reconnect the earth wire (PE) to the cover. Now secure the cover of the Windy Boy by evenly tightening the four screws.
2. Connect the DC plug connectors. Make sure that the polarity of the DC input plugs is correct. Close the unnecessary DC input sockets with the caps included in the delivery.
3. Reconnect the Windy Boy to the mains grid. This activates the Windy Boy.
4. Now check whether the LED display on the Windy Boy indicates that the device is functioning correctly.

7 Communication

Please obtain the necessary information for retrofitting with communications modules from the instructions delivered together with each module.

The connection of the RS232 and RS485 data communication cables proceeds as follows:

Based on the order code on the delivery note, you can check if the Windy Boy has already been equipped with a communications interface at the factory:

"-0xx" without interface

"-1xx" or "-6xx" NLM modem (mains grid communication)

"-2xx" or "-7xx" RS232 interface

"-4xx" or "-8xx" RS485 interface

For packaging reasons, the Windy Boy cannot be factory fitted with a wireless piggy-back.

7.1 Mains grid communication

To allow communication over the mains grid cables, the following conditions must be satisfied:

- The Windy Boy must be equipped with the "NLM Piggy-Back" (see chapter 3.1 "Unit description" (Page 13)).
- The Windy Boy can be retrofitted for mains grid communications. The SMA order code is "NLMPB-NR".

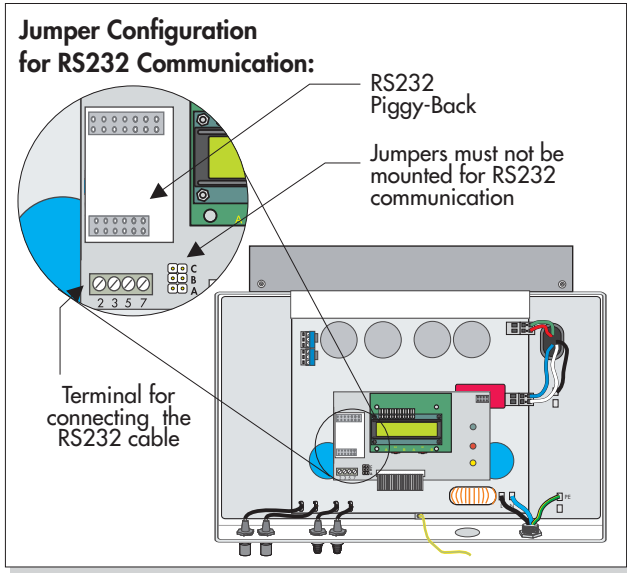
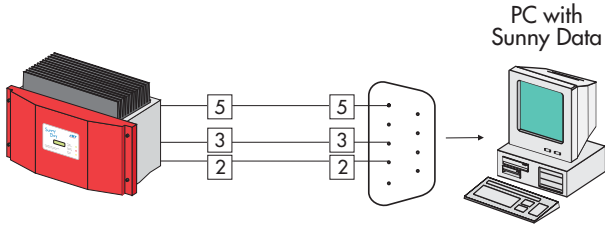
7.2 RS232 communication

RS232 is a communications standard for communicating with a single Windy Boy over a maximum distance of 15 m. For RS232 communication, the following conditions must be satisfied:

- The Windy Boy must be equipped with a cable feed-through on the lower side of the case, between the DC inputs and the opening for the AC cables.
- The Windy Boy must be equipped with an RS232 Piggy-Back.
- A completely shielded cable with a minimum of three conductors, e.g. LiYCY, 0.25 mm², and a maximum length of 15 m must be used.

The Windy Boy can be retrofitted for RS232 communications. The SMA order code for RS232 is "232PB-NR". When upgrading with an RS232 interface, the feed-through provided must be installed in the Windy Boy, next to the mains cable feed-through. The cable to be fed into the Windy Boy is clamped using the screw terminals on the communications connector (see chapter 3.1 "Unit description" (Page 13)) and the other end is connected to a serial interface on a PC in the usual manner. The pin connections for a normal PC connections are shown in the following table:

Terminal	Signal	D-SUB 9 plug	D-SUB 25 plug
Case	Shielding	Case	Case
2	RxD (Windy Boy output)	2	3
3	TxD (Windy Boy input)	3	2
5	GND	5	7



7.3 RS485 communication

RS485 is a standard for communicating with up to 50 inverters over a total distance of up to 1200 m. For RS485 communication, the following conditions must be satisfied:

- All Windy Boys must be equipped on the lower side of the case with the cable feed-through provided.
- All the Windy Boys must be equipped with an RS485 Piggy-Back. You require a RS485 / RS232 converter in order to connect a PC. SMA recommends the i-7520 converter, which can be purchased from SMA. The SMA order code is "RSU485".
- A completely shielded cable (e.g. LiYCY), having a minimum of one set of twisted-pair conductors, each with an impedance of 100 Ohms, must be used.
- The first and last Windy Boy in the RS485 chain must be equipped with a termination resistor.
- The SMA order code for RS485 is "485PB-NR".



At present, the Sunny Boy Control and the Sunny Boy Control Plus can communicate with up to 10 different models and a total of up to 50 SMA inverters.

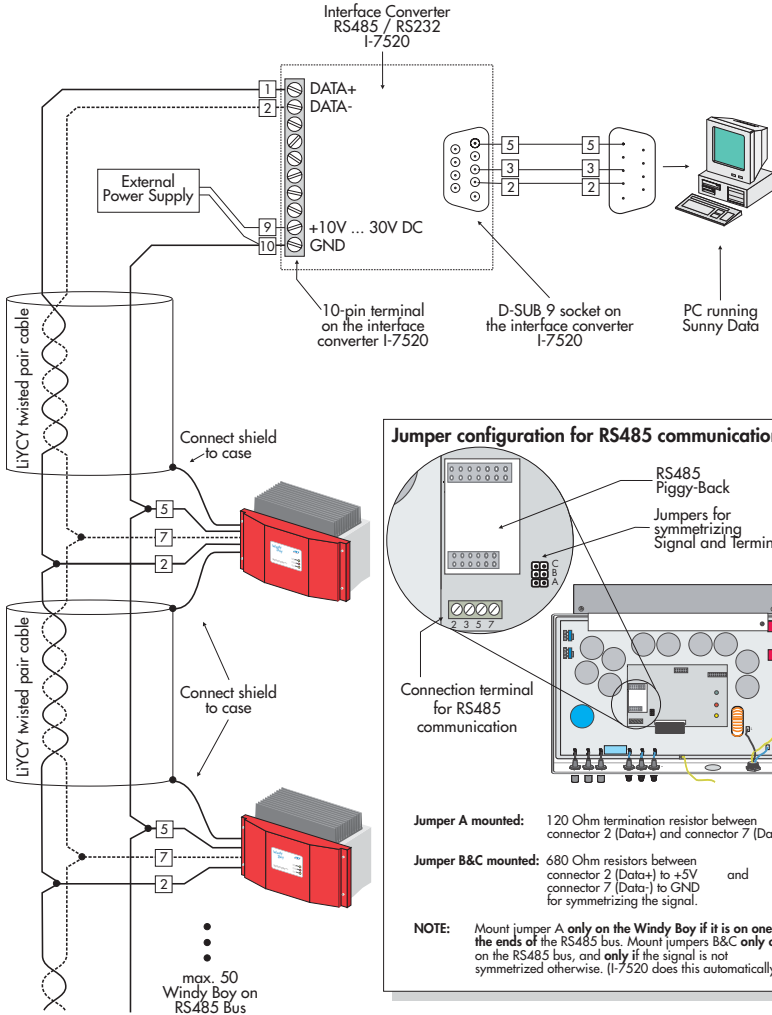
Begin with the last SMA inverter in the communications chain (e.g. the inverter at the end of the RS485 cable).

1. On the Windy Boy 1100 / 1700, remove the screw fitting (PG dummy plug) from the second feed-through hole in the case, next to the AC connection plug.
2. Mount the PG screw fitting, with two perforated cable feed-throughs, provided in the RS485 kit in the now open hole in the case.
3. On the last inverter, please only open one of the two perforated cable feed-throughs, since the RS485 communications bus ends at this device and only one cable will be fed into the device.
4. Feed the cables through the feed-throughs in the inverter and strip the cables about 1 cm from the feed-through. Tighten the screw fitting firmly.
5. Please insulate the individual conductors using the silicon tubes provided in the accessories kit. Please insulate the shield conductor separately. Please clamp the shield conductor onto the PE (protective earth) screw terminal of the inverter's case.
6. Connect each conductor of one of the twisted pair cables to terminals 2 and 7. Take note of which conductor is connected to which terminal.
7. Connect one (or both) of the conductors of the second twisted pair cable to terminal 5. Take note of which conductor you have used.

8. If no further inverters must be connected, proceed to step 12.
9. Now connect the next inverter.
10. Connect the conductors of the cable to the next inverter, using the same terminals as you noted when connecting the first inverter. This applies to the cable conductors coming from the final inverter and also to those leading to the next inverter. Be especially careful here. Finding cabling mistakes can be very time consuming.
11. Repeat steps 9 and 10 for every SMA inverter that is to be connected to the system.
12. For subsequent connection of a PC, or a Sunny Boy Control with an interface converter, the cable ends should be labelled as follows:

Terminal	D-SUB 9 plug	Conductor labelling	Your conductor label
Case	Case	Shield	
2	3	Data +	
7	8	Data -	
5	5	GND	

The connection of one or more Windy Boys to a Sunny Boy Control using RS485 is described in detail in the Sunny Boy Control user manual.



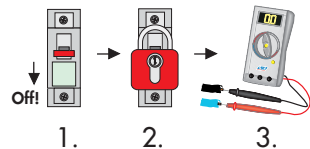
SMA recommends the i-7520 interface converter for connecting between an RS485 bus and a PC. An alternative possibility is to use an i-7561 (RS485/USB). The cabling is identical to that used in the i-7520, apart from the fact that the connection to the PC occurs via USB.

8 Replacing the varistors

The Windy Boy is a complex high-technology device. As a result, the possibilities for fixing faults on site are limited to just a few items. Please do not attempt any other repairs than those described here, but instead use the 24-hour replacement service (the Windy Boy 1100 / 1700 is made ready for shipping within 24 hours and then given to a shipping company) and the repair service of **SMA Technologie AG**.

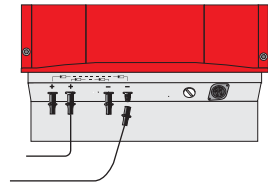
If the red LED on the status display illuminates continuously during operation, you should first of all make sure that there is no earth leakage in the wind generator. If both green LEDs illuminate continuously, proceed as follows:

1. Disconnect the Windy Boy from the low voltage grid (switch the line circuit breaker to its "off" position or pull out the AC plug). Make sure the grid cannot be inadvertently reconnected.



You must make sure that no voltage is present at the AC output before opening the Windy Boy!

2. Loosen the DC plug connectors on the DC inputs!

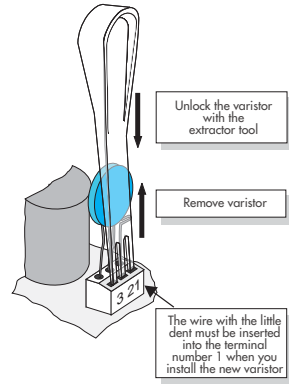


Remove the DC inputs from the Windy Boy

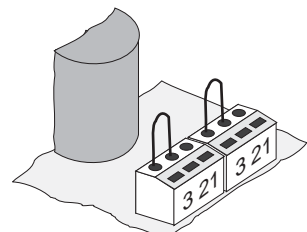
3. Remove the screws securing the cover and remove the cover from the Windy Boy. Disconnect the PE connection from the cover. Make sure that no voltage is present.

Using a continuity tester, check all the varistors to see if there is a conducting connection between connectors 2 and 3. If not, then the respective varistor is not working.

- Replace the varistor concerned with a new one as shown in the drawing to the right. Ensure the varistor is installed the right way round! If you did not receive a special tool for operating the terminal clamps with your replacement varistors, please contact SMA. As an alternative, the terminal contacts can be operated using a suitable screwdriver. Since the failure of one varistor is generally due to factors that affect all varistors in a similar way (temperature, age, inductive overvoltages), it is highly recommended that you replace both varistors, not just the one that is obviously defective. The varistors are specially manufactured for use in the Windy Boy and are not commercially available. They must be bent ordered directly from **SMA** Technologie AG (SMA order code: "SB-TV3").



- If no replacement varistors are locally available, the Windy Boy can temporarily run without them. To do this, remove the varistors you identified as being faulty and in their place, bridge the terminals 2 and 3 with a length of wire.



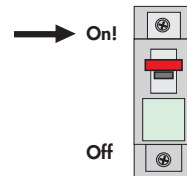
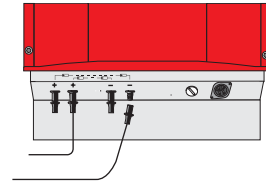
As a temporary solution, a defective varistor can be replaced with a wire bridge.

The input modified in this way is no longer protected against overvoltages! Replacement varistors should be obtained as soon as possible. The Windy Boy should not be operated without varistors in systems having a high risk of overvoltages!



- Reconnect the PE connection to the cover and close the Windy Boy.

7. Connect the DC plug connector.
8. Close the unnecessary DC input sockets with the caps included in the delivery.
9. Switch the line circuit breaker to the "on" position.
10. Now check whether the LED display on the Windy Boy indicates that the device is functioning correctly.



If no earth leakage and no defective varistor were found, there is probably a fault in the Windy Boy. In this case, contact the SMA hotline to discuss further steps.

9 Contact

If you have any questions or technical problems concerning the Windy Boy, please contact our hotline. Please have the following information available when you contact SMA:

- Inverter type
- Type of wind turbine and AC/DC converter
- Type of overvoltage protection
- Communication
- Serial number of the Windy Boy



Address:

SMA Technologie AG
Hannoversche Strasse 1 - 5
34266 Niestetal
Germany

Tel.:+49 (0)561 95 22 - 499
Fax:+49 (0)561 95 22 - 4699
hotline@SMA.de
www.SMA.de

Sales

SMA Solar Technology

www.SMA.de

Rosendahl Industrievertretungen

Adolf-Dembach-Strasse 1

47829 Krefeld

Germany

Tel. +49 2151 45678 90

Fax +49 2151 45678 99



SMA Solar Technology China

International Metro Center,
Building A, City Square No. Jia 3,
Shilipu Road, Changyang District
100025 Beijing, P.R. China
Tel. +86 10 65 58 78 15
www.SMA-CHINA.com

SMA America, Inc.

12438 Loma Rica Drive, Unit C
Grass Valley, CA 95945, USA
Tel. +1 530 273 4895
www.SMA-AMERICA.com

SMA Spain

Rosendahl Técnica Energética, S.L.
Decages S.A.
Balmes, 297, 1er, 2a
08006 Barcelona, Spain
Freecall +800 SUNNYBOY
Freecall +800 78669269

SMA Italy

Rosendahl Tecnologie Energetiche S.r.l.
Via Lorenzo Valla, 16
20141 Milano, Italy
Freecall +800 SUNNYBOY
Freecall +800 78669269

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