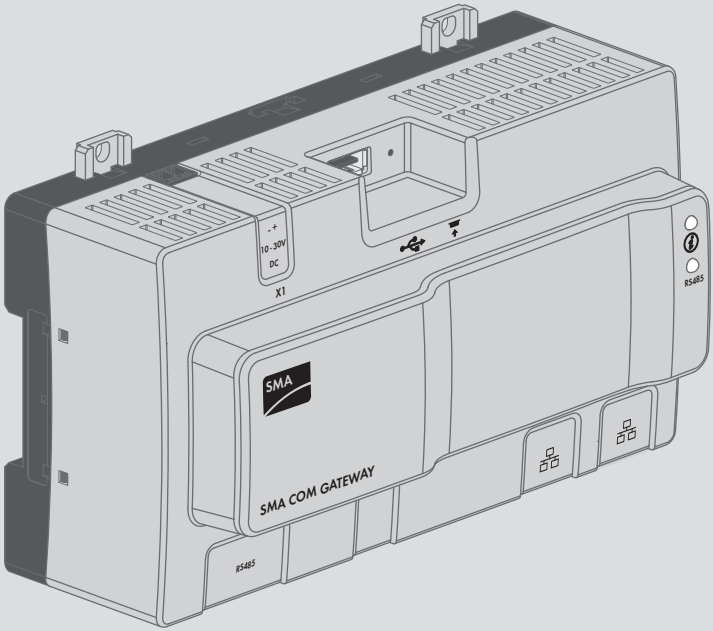
Installation Manual

SMA COM GATEWAY



ENGLISH

COMGW-10-IA-en-13 | Version 1.3

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Table of Contents

1 Information on this Document

1.1 Validity

This document is valid for:

- COMGW-10 (SMA Com Gateway) from firmware version 1.00.01

1.2 Target Group

The tasks described in this document must only be performed by qualified persons. Qualified persons must have the following skills:

- Training in the installation and configuration of IT systems
- Knowledge of how an inverter works and is operated
- Training in how to deal with the dangers and risks associated with installing, repairing and using electrical devices and installations
- Training in the installation and commissioning of electrical devices and installations
- Knowledge of all applicable laws, standards and directives
- Knowledge of and compliance with this document and all safety information

1.3 Content and Structure of this Document

This document describes the installation, commissioning and decommissioning of the product.

You will find the latest version of this document and further information on the product in PDF format at www.SMA-Solar.com.

Illustrations in this document are reduced to the essential information and may deviate from the real product.

1.4 Levels of warning messages

The following levels of warning messages may occur when handling the product.

⚠ DANGER
Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING
Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION
Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE
Indicates a situation which, if not avoided, can result in property damage.

1.5 Symbols in the Document

Symbol	Explanation
	Information that is important for a specific topic or goal, but is not safety-relevant
☐	Indicates a requirement for meeting a specific goal
☑	Desired result
✖	A problem that might occur
	Example

1.6 Typographies in the document

Typography	Use	Example
bold	• Messages • Terminals • Elements on a user interface • Elements to be selected • Elements to be entered	• Connect the insulated conductors to the terminals **X703:1** to **X703:6**. • Enter **10** in the field **Minutes**.
>	• Connects several elements to be selected	• Select **Settings > Date**.
[**Button**] [**Key**]	• Button or key to be selected or pressed	• Select [**Enter**].

1.7 Designation in the document

Complete designation	Designation in this document
SMA Com Gateway	SMA Com Gateway, product
SMA Speedwire fieldbus	SMA Speedwire network, Speedwire

1.8 Additional Information

Title and information content	Type of information
"PUBLIC CYBER SECURITY - Guidelines for a Secure PV System Communication"	Technical information
"RS485 Cabling Plan"	Installation Manual
"SMA CLUSTER CONTROLLER"	Installation Manual
"SMA CLUSTER CONTROLLER"	User Manual

Title and information content	Type of information
"SMA COM GATEWAY - Compatibility and Application Options"	Technical Information
"SMA DATA MANAGER M with SUNNY PORTAL powered by ennexOS"	Operating manual
"SMA SPEEDWIRE FIELDBUS"	Technical information

2 Safety

2.1 Intended Use

The SMA Com Gateway is a media and protocol converter that integrates PV systems and components connected with each other via RS485 into the SMA Speedwire network.

In connection with a SMA data logger, the SMA Com Gateway must be operated with Speedwire (e.g. SMA Data Manager M, SMA Cluster Controller). The system data of all detected RS485 devices is forwarded from SMA Com Gateway via Speedwire to the SMA data logger. At the same time, the SMA Com Gateway supports communication with up to 50 RS485 devices.

The USB interface of the SMA Com Gateway may only be used for firmware updates.

The product is designed for indoor use only.

All components must remain within their permitted operating ranges and their installation requirements at all times.

Use this product only in accordance with the information provided in the enclosed documentation and with the locally applicable laws, regulations, standards and directives. Any other application may cause personal injury or property damage.

Alterations to the product, e.g. changes or modifications, are only permitted with the express written permission of SMA Solar Technology AG. Unauthorized alterations will void guarantee and warranty claims and in most cases terminate the operating license. SMA Solar Technology AG shall not be held liable for any damage caused by such changes.

Any use of the product other than that described in the Intended Use section does not qualify as the intended use.

The enclosed documentation is an integral part of this product. Keep the documentation in a convenient place for future reference and observe all instructions contained therein.

This document does not replace and is not intended to replace any local, state, provincial, federal or national laws, regulations or codes applicable to the installation, electrical safety and use of the product. SMA Solar Technology AG assumes no responsibility for the compliance or non-compliance with such laws or codes in connection with the installation of the product.

The type label must remain permanently attached to the product.

2.2 IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS

This section contains safety information that must be observed at all times when working on or with the product.

The product has been designed and tested in accordance with international safety requirements. As with all electrical or electronical devices, there are residual risks despite careful construction. To prevent personal injury and property damage and to ensure long-term operation of the product, read this section carefully and observe all safety information at all times.

⚠ WARNING

Danger to life due to electric shock

Under fault conditions, when working on the power supply circuit there may be dangerous voltages present on the product.

- With permanently connected power supply units, ensure that there is a disconnection unit (e.g. circuit breaker) present outside of the power supply unit.
- With pluggable power supply units, ensure that the outlet for the power supply unit is close to the power supply unit.
- The disconnect unit and the outlet for the power supply unit must be freely accessible at all times.

⚠ WARNING

Danger to life due to electric shock from touching a damaged or open power supply unit

Lethal voltages are present in the conductive parts inside the power supply unit. Touching a damaged or open power supply unit can cause a lethal electric shock.

- Only use the power supply unit indoors and in a dry environment; keep it away from liquids.
- If the enclosure or the power supply unit cable is damaged, disconnect the connection point from voltage sources. Replace the power supply unit with a suitable new power supply unit.
- Never open the power supply unit.

⚠ WARNING

Danger of fire due to incorrect installation

- Have the product mounted, installed and commissioned only by qualified persons with the appropriate skills.
- Never open the product.

NOTICE

Damage to the product due to moisture

The product is not splash-proof. Moisture can penetrate the product and damage it.

- Only use the product in a dry, indoor environment.

NOTICE

Damage to the product due to condensation

If the product is moved from a cold environment to a warm environment, condensation may form in the product.

- When there is a large temperature difference, wait for the product to reach room temperature before connecting to the voltage supply.
- Make sure the product is dry.

3 Scope of Delivery

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

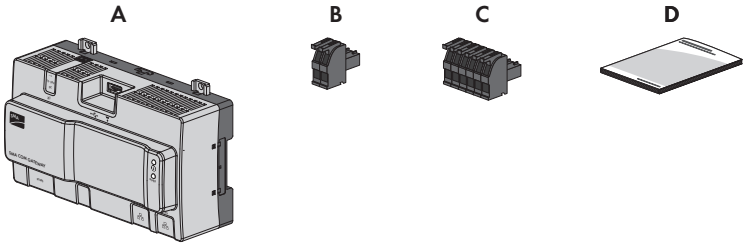


Figure 1: Components included in the scope of delivery

Position	Quantity	Designation
A	1	SMA Com Gateway
B	1	Two-pole plug
C	1	Six-pole plug
D	1	Quick Reference Guide

4 Product Overview

4.1 SMA Com Gateway

The SMA Com Gateway is a media and protocol converter that integrates PV systems and components connected with each other via RS485 into the SMA Speedwire network.

The main tasks of the SMA Com Gateway are:

- Communication with up to 50 participants of an RS485 bus
- Reading off, storing and making system data available to an SMA Data Logger
- Forwarding parameters from the SMA Data Logger to the connected RS485 devices
- Forwarding system control commands and system regulation commands to the connected RS485 devices

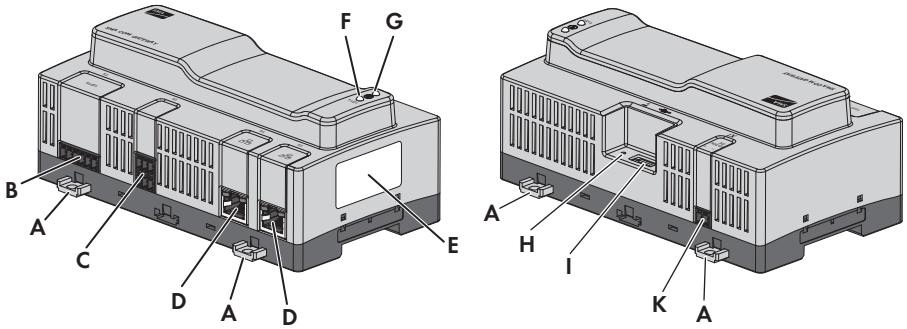


Figure 2: SMA Com Gateway design

Position	Designation
A	Press-out brackets for wall mounting
B	Port for connecting the RS485 devices
C	Reserved for future applications
D	Network ports with status LEDs for connecting to the network
E	Type label The type label clearly identifies the product. You will require the information on the type label to use the product safely and when seeking customer support from the SMA Service Line. You will find the following information on the type label: • Device type (Model) • Serial number (Serial No.) • Date of manufacture • Device-specific characteristics

Position	Designation
F	RS485 LED The RS485 LED, together with the system LED, indicates the operating state of the SMA Com Gateway (see Section 4.2 "LED Signals", page 13).
G	System LED The system LED, together with the RS485 LED, indicates the operating state of the SMA Com Gateway (see Section 4.2 "LED Signals", page 13).
H	Function button
I	USB port for updates
K	Jack for connecting the voltage supply

Symbols on the SMA Com Gateway and the Type Label

Symbol	Explanation
	USB
	Function button
	System LED
RS485	RS485 LED
	Speedwire
	The product is suitable for indoor installation.
	CE marking The product complies with the requirements of the applicable EU directives.
	FCC designation The product complies with the requirements of the applicable FCC standards.

Symbol	Explanation
CAN ICES-3 (A)/ NMB-3(A)	IC marking The product complies with the requirements of the applicable Canadian EMC standards.
	WEEE designation Do not dispose of the product together with the household waste but in accordance with the disposal regulations for electronic waste applicable at the installation site.

4.2 LED Signals

System- and RS485 LEDs

The LEDs indicate the operating state of the SMA Com Gateway.

System LED	RS485 LED	Explanation
Off	Off	No power supply or no boot up procedure.
Glowing orange	Glowing orange	Boot up procedure started.
Flashing orange	Off	Update procedure running.
Glowing red	Off	Boot up procedure running.
Glowing green	Flashing orange	Detection running.
Glowing green	Flashing orange and green in alternation	Detection running. At least one RS485 device has been detected.
Glowing green	Off	Normal operation. No data is being received from the RS485 devices.
		Function button has been pressed for longer than 15 seconds.
Glowing green	Flashing green	Normal operation. Data is being received from the RS485 devices.
Glowing green	Flashing red	There is a system configuration error (e.g. too many RS485 devices)
Flashing orange and green in alternation	Glowing orange	Function button has been pressed for less than 5 seconds.
Flashing orange and green in alternation	Glowing green	Function button has been pressed for between 5 and 10 seconds.

System LED	RS485 LED	Explanation
Flashing orange and green in alternation	Glowing red	Function button has been pressed for between 10 and 15 seconds.
Glowing red (for longer than 2 minutes)	Off	Error

Network port LEDs

The colors of the network port LEDs and what each color indicates are not standardized

The colors of the network port LEDs and what each color indicates are not standardized. The colors used by SMA Solar Technology AG for the Link LED and the Activity LED and what each color indicates may be different to those used in third-party products.

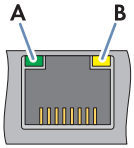


Figure 3: Network port LEDs

Position	Designation	Color	Explanation
A	Link LED	Green	Shows the network connection status.
B	Activity LED	Yellow	Shows network connection activity.

4.3 Function Button

Depending on how long it is activated for, the function button performs the following functions:

- 1 to 5 seconds: renewed detection of RS485 devices
- 5 to 10 seconds: restarts the SMA Com Gateway
- 10 to 15 seconds: resets the SMA Com Gateway to the default settings
- Longer than 15 seconds: no effect

The length of time the function button has been activated for is indicated via LED signals (see Section 4.2 "LED Signals", page 13).

5 Mounting

5.1 Requirements for Mounting

Requirements for the Mounting Location:

⚠ WARNING

Danger to life due to fire or explosion

Despite careful construction, electrical devices can cause fires.

- Do not mount the product in areas containing highly flammable materials or gases.
- Do not mount the product in potentially explosive atmospheres.

NOTICE

Damage due to dust and moisture ingress

Dust or moisture intrusion can damage the product and impair its functionality.

- The product is only suitable for indoor installation.
- The product may only be operated under the specified conditions.

☐ The mounting location must be suitable for the installation of the product.

☐ The mounting location must be suitable for the weight and dimensions of the product (see Section 10, page 31).

☐ The mounting location must be inaccessible to children.

☐ The support surface must be suitable for mounting, e.g. concrete, masonry.

☐ The mounting location should be freely and safely accessible at all times without the need for any auxiliary equipment (such as scaffolding or lifting platforms). Non-fulfillment of these criteria may restrict servicing.

☐ The mounting location should not be exposed to direct solar irradiation.

☐ All ambient conditions must be met (see Section 10, page 31).

☐ The labelling on the product must be readable after installation.

Recommended clearances:

☐ There must be a clearance of 50 mm above and below the SMA Com Gateway to other objects.

Permitted Mounting Position:

☐ The product may only be mounted in a horizontal position.

Dimensions for Wall Mounting:

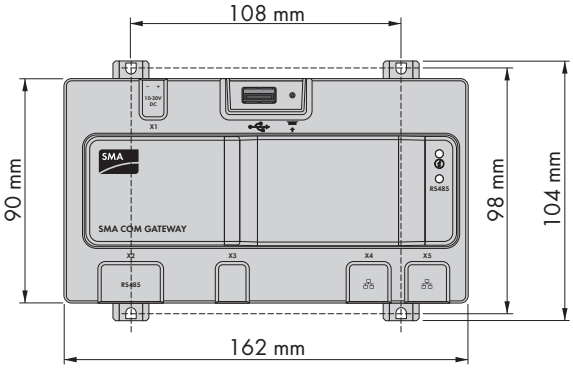


Figure 4: Dimensions for wall mounting

5.2 Mounting the SMA Com Gateway

There are two options for mounting the SMA Com Gateway:

- Mounting on a top-hat rail
- Mounting on a wall

Mounting the SMA Com Gateway on a Top-Hat Rail

Additionally required mounting material (not included in the scope of delivery):

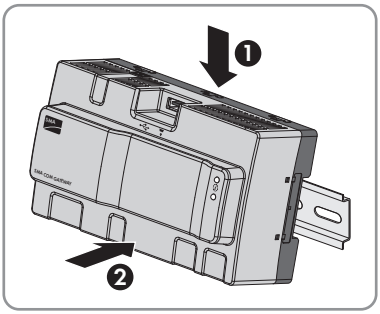
☐ Top-hat rail (TH 35-7.5)

Requirement:

☐ The top-hat rail must be securely mounted.

Procedure:

1. Place the SMA Com Gateway onto the top-hat rail from above and hook it in.



☑ The SMA Com Gateway snaps into place.

2. Ensure that the SMA Com Gateway is securely in place.

Mounting the SMA Com Gateway on a Wall

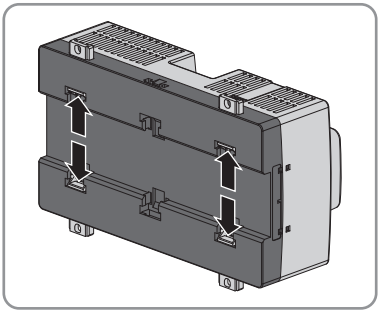
Additionally required mounting material (not included in the scope of delivery):

☐ 4 screws suitable for the support surface and the brackets. Do not use countersunk screws.

☐ Where necessary, 4 screw anchors suitable for the support surface and the screws.

Procedure:

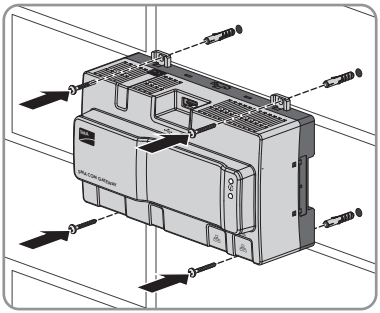
1. Press the four brackets on the rear side of the SMA Com Gateway outwards.



☑ The brackets snap into place.

2. Mark the drill holes using the brackets as a template.
3. Drill the holes and insert the screw anchors if necessary. Do not drill through the brackets.

4. Insert the screws through the brackets and tighten. Do not damage the brackets.



5. Ensure that the SMA Com Gateway is securely in place.

6 Connection

6.1 Overview of the Connection Area

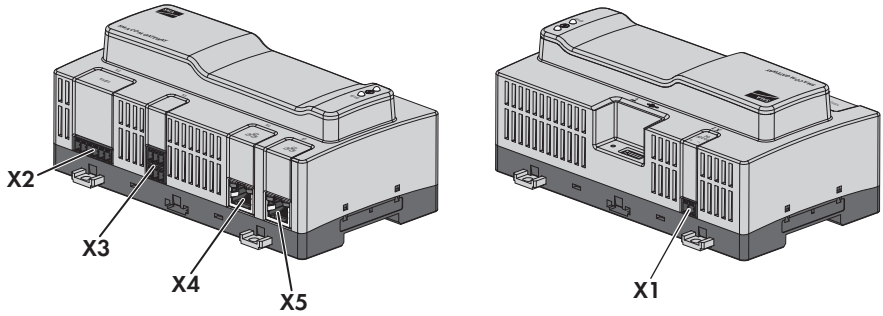


Figure 5: Overview of the connection area

Terminal	Explanation
X1	Jack for connecting the voltage supply.
X2	Port for connecting the RS485 devices.
X3	Reserved for future applications.
X4	Network port with status LEDs for connecting to the SMA Speedwire network.
X5	Network port with status LEDs for connecting to the SMA Speedwire network.

6.2 Connecting RS485 Devices

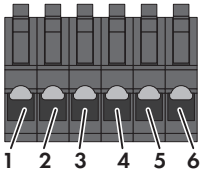
Renewed detection after a replacement or addition

If you replace or add RS485 devices, you must detect the RS485 devices again. To do this, press and hold the function button on the SMA Com Gateway using a sharp object (e.g. paperclip) for between 1 and 5 seconds.

Cable requirements:

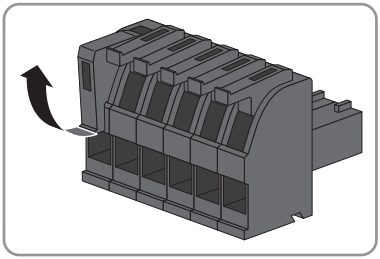
- ☐ Cross-section: at least 2 x 2 x 0.22 mm² or at least 2 x 2 x 24 AWG
- ☐ Shielded
- ☐ Twisted pair conductors
- ☐ UV resistant
- ☐ Maximum cable length across the entire RS485 bus: 1200 m

Plug assignment:

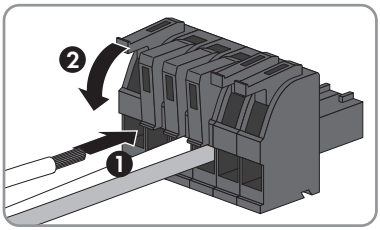
Plug	Position	Assignment
	1	Data+ (D+)
	2	Not assigned
	3	Ground (GND)
	4	Data- (D-)
	5	Line termination (optional)
	6	Line termination (optional)

Procedure:

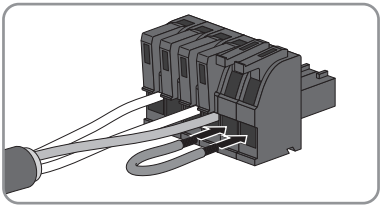
1. Dismantle 40 mm of the SMA Com Gateway end of the RS485 data cable.
2. Strip the shielding to the same length as the cable sheath.
3. Shorten unused insulated conductors flush with the cable sheath.
4. Strip off the conductor insulation by 6 mm.
5. Release the conductor entries on the supplied six-pole plug.



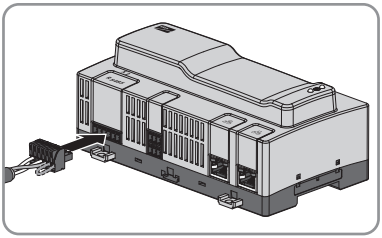
6. Connect the RS485 data cable conductors to the supplied six-pole plug. To do so, plug the conductors into the conductor entries and close the conductor entries. Observe the plug assignment.



7. If the SMA Com Gateway is at the end of the RS485 bus, install a jumper wire as a line terminator between pin **5** and pin **6** on the six-pole plug.



8. Plug the six-pole plug into the port **X2** on the SMA Com Gateway.



6.3 Connecting the SMA Data Logger

Interference in data transmission due to unshielded power cables

If unshielded power cables are used, they generate an electromagnetic field during operation which may induce interference in network cables during data transmission.

- When laying network cables, observe the following minimum clearances to unshielded energy cables:
  - For installation without separating strip: at least 200 mm
  - For installation with aluminum separating strip: at least 100 mm
  - For installation with steel separating strip: at least 50 mm

Additionally required material (not included in the scope of delivery):

☐ One network cable

Cable requirements:

The cable length and quality affect the quality of the signal. Observe the following cable requirements:

☐ Cable type: 100BaseTx, from Cat5 with shielding S-UTP, F-UTP or higher

☐ Plug type: RJ45 of Cat5, Cat5e, Cat6 or Cat6a. Cat7 plugs cannot be used.

☐ Maximum cable length between two nodes when using patch cables: 50 m

☐ Maximum cable length between two nodes when using installation cables: 100 m

☐ UV-resistant for outdoor use

Procedure:

1. Plug the RJ45 plug of the network cable into the network port **X4** or **X5** until the RJ45 plug snaps into place. The assignment of the network cables to the ports is not relevant, as the ports constitute a switch function.
2. Connect the other end of the network cable to the network.

6.4 Connecting the Voltage Supply

⚠ WARNING

Danger to life due to electric shock

Under fault conditions, when working on the power supply circuit there may be dangerous voltages present on the product.

- With permanently connected power supply units, ensure that there is a disconnection unit (e.g. circuit breaker) present outside of the power supply unit.
- With pluggable power supply units, ensure that the outlet for the power supply unit is close to the power supply unit.
- The disconnect unit and the outlet for the power supply unit must be freely accessible at all times.

NOTICE

Damage to the product due to condensation

If the product is moved from a cold environment to a warm environment, condensation may form in the product.

- When there is a large temperature difference, wait for the product to reach room temperature before connecting to the voltage supply.
- Make sure the product is dry.

Additionally required material (not included in the scope of delivery):

- ☐ 1 power supply unit
- ☐ 1 AC connection cable
- ☐ 1 connection cable for connecting the power supply unit to the SMA Com Gateway

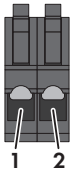
Requirements for the power supply unit:

- ☐ Short-circuit current: < 8 A
- ☐ Nominal output power: 5 W
- ☐ DC output voltage: 10 V to 30 V
- ☐ Compliance with the requirements on current sources with limited power in accordance with IEC 60950

Requirements on the connection cable for connecting the power supply unit to the SMA Com Gateway:

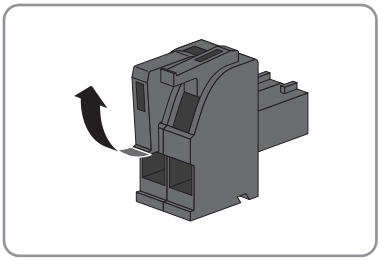
- ☐ Core cross-section: 0.2 to 1.5 mm²
- ☐ The cable must have at least two insulated conductors
- ☐ Maximum cable length: 3 m

Plug assignment:

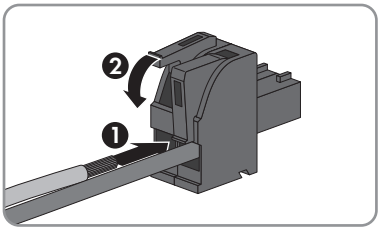
Plug	Position	Assignment
	1	Input voltage 10 to 30 V DC
	2	Ground (GND)

Procedure:

1. Mount the power supply unit (see the manufacturer manual).
2. Connect the connection cable to the power supply unit (see the manufacturer manual). Make a note of the insulated conductor colors and trim the unused insulated conductors back to the cable sheath.
3. Release the conductor entries on the supplied two-pole plug.



4. Connect the connection cable to the supplied two-pole plug. To do so, plug the conductors into the conductor entries and close the conductor entries. Observe the plug assignment.



5. Trim unused insulated conductors flush with the cable sheath.
6. Plug the two-pole plug into the jack **X1** on the SMA Com Gateway.
7. Connect the AC connection cable to the power supply unit (see the manufacturer manual).
8.

⚠ WARNING

Danger to life due to electric shock

Lethal voltages are present at the connection point of the utility grid.

- Disconnect the connection point from voltage sources and ensure that the connection point is voltage-free.

9. Connect the other end of the AC connection cable to the voltage supply.
10. Connect the connection point to the utility grid.

☑ The SMA Com Gateway starts detecting the RS485 devices (see Section 7 "Commissioning", page 25). This process can take several minutes.

7 Commissioning

7.1 Commissioning the SMA Com Gateway

Requirements:

☐ All RS485 devices must be in operation and connected correctly to the SMA Com Gateway via the RS485 bus.

☐ The SMA Data Logger must be in operation and connected correctly to the SMA Com Gateway via the network.

☐ The voltage supply must be connected correctly to the SMA Com Gateway.

Procedure:

1. Check whether the System LED on the SMA Com Gateway is glowing green.
   If the System LED is not glowing green, read the troubleshooting information (see Section 8 "Troubleshooting", page 26).
2. Check whether the SMA Com Gateway has been detected in the SMA Data Logger.
   If the SMA Com Gateway has not been detected, ensure that the network cable is connected correctly.
   If the problem persists, read the troubleshooting information (see Section 8 "Troubleshooting", page 26).
3. Check whether all RS485 devices are being shown in the SMA Data Logger.
   If not all of the RS485 devices have been detected, read the troubleshooting information (see Section 8 "Troubleshooting", page 26).
4. Add the SMA Com Gateway in the SMA Data Logger and reenter the system password (see SMA Data Logger manual).

7.2 Configuring the SMA Com Gateway

You can configure the SMA Com Gateway. Configuration takes place via the SMA Data Logger user interface (see SMA Data Logger manual). Parameters that are changed during a pending data acquisition request will be considered with the next request. The following configuration options are available:

- Setting the baud rate (1200 baud or 19200 baud). Renewed detection is necessary upon completion.
- Setting the number of RS485 devices to be detected (maximum 50). Renewed detection is necessary upon completion.
- Starting RS485 device detection.
- Restarting the SMA Com Gateway.
- Resetting the SMA Com Gateway to the default settings.
- Setting the IP configuration (DHCP or manual).

8 Troubleshooting

Problem	Cause and corrective measures
The SMA Data Logger can not find the SMA Com Gateway.	The network cable is not connected correctly. **Corrective measures:** • Ensure that the network cable is connected correctly and that the network port Link LED is glowing.
	The network cable or connector is defective or damaged. **Corrective measures:** • Replace the defective or damaged network cable or connector.
	The SMA Data Logger does not automatically assign an IP address to the SMA Com Gateway. **Corrective measures:** • Ensure that DHCP is activated on the SMA Data Logger. **or** • Assign a suitable static IP address to the SMA Com Gateway via SMA Connection Assist or Sunny Explorer. You can obtain the SMA Connection Assist and Sunny Explorer software free of charge at www.SMA-Solar.com.

Problem	Cause and corrective measures
Not all RS485 devices are being detected.	Not all RS485 devices are in operation. **Corrective measures:** • Ensure that all RS485 devices are in operation. Then perform a renewed RS485 device detection. To do this, press and hold the function button on the SMA Com Gateway using a sharp object (e.g. paperclip) for between 1 and 5 seconds.
	There are too many RS485 devices in the system. **Corrective measures:** • Ensure that there are no more than 50 RS485 devices in the system. Then perform a renewed RS485 device detection. To do this, press and hold the function button on the SMA Com Gateway using a sharp object (e.g. paperclip) for between 1 and 5 seconds. **or** • Ensure that the value set in the SMA Com Gateway for the number of RS485 devices to be detected is not too low. Then perform a renewed RS485 device detection. To do this, press and hold the function button on the SMA Com Gateway using a sharp object (e.g. paperclip) for between 1 and 5 seconds.
	The baud rate of one or more RS485 devices has been configured incorrectly. **Corrective measures:** • Ensure that all baud rates in the system are in accordance with the SMA Com Gateway. Then perform a renewed RS485 device detection. To do this, press and hold the function button on the SMA Com Gateway using a sharp object (e.g. paperclip) for between 1 and 5 seconds.

Problem	Cause and corrective measures
The device data is being displayed incorrectly in the SMA Data Logger	One or more RS485 devices have been replaced or added. **Corrective measures:** • Perform a renewed RS485 device detection. To do this, press and hold the function button on the SMA Com Gateway using a sharp object (e.g. paperclip) for between 1 and 5 seconds.
	One or more RS485 devices have been configured. **Corrective measures:** • Perform a renewed RS485 device detection. To do this, press and hold the function button on the SMA Com Gateway using a sharp object (e.g. paperclip) for between 1 and 5 seconds. Then restart the SMA Data Logger (see SMA Data Logger manual).

8.1 Updating the Firmware

There are two ways to update the SMA Com Gateway firmware:

- Updating the firmware automatically via SMA Data Logger
- Updating the firmware at the SMA Com Gateway via USB flash drive

Automatically Updating the Firmware via SMA Data Logger

- Set automatic firmware updating in the SMA Data Logger (see SMA Data Logger manual).

Updating the Firmware at the SMA Com Gateway via USB Flash Drive

Requirements:

☐ A USB flash drive with maximum 32 GB storage capacity and file system FAT32 must be available.

☐ The SMA Com Gateway must be in operation.

Procedure:

1. Create an "UPDATE" folder on the USB stick.
2. Save the update file with the desired firmware in the "UPDATE" folder on the USB flash drive. The update file is, for example, available for download on the SMA Com Gateway product page at www.SMA-Solar.com.
3. The update file will be renamed as "update.up2".

4. Plug the USB flash drive into the USB port on the SMA Com Gateway.
   ☑ The System LED flashes orange during the firmware update. This process can take several minutes.
   ☑ Once the firmware has been updated successfully, the System LED glows green continuously.
   ✖ The SYSTEM LED is not glowing green continuously?
      • Update the firmware again.
5. Pull the USB flash drive out of the USB port on the SMA Com Gateway.

9 Decommissioning the SMA Com Gateway

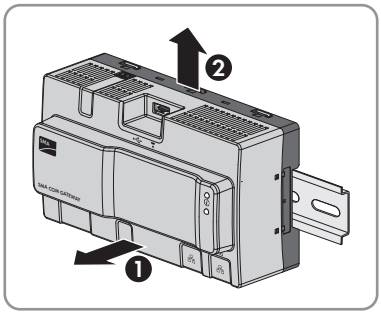
1. **⚠ WARNING**

   Danger to life due to electric shock

   Lethal voltages are present at the connection point of the utility grid.

   - Disconnect the connection point from the utility grid using the separator (e.g. circuit breaker).
   - Pull the two-pole power supply unit plug out of the jack **X1** on the SMA Com Gateway.

2. Release the RJ45 network cable plug and pull out of the network port **X4** or **X5** on the SMA Com Gateway.
3. Pull the six-pole plug for connecting the RS485 devices out of the port **X2** on the SMA Com Gateway.
4. Remove the SMA Com Gateway:
   - If mounted on a top-hat rail, unhook the SMA Com Gateway from the top-hat rail. To do so, tilt the lower edge of the SMA Com Gateway forwards and remove the SMA Com Gateway upwards out of the top-hat rail.



   - If mounted on a wall, remove the screws from the brackets and remove the SMA Com Gateway.
5. If the SMA Com Gateway is to be disposed of, dispose of the SMA Com Gateway in accordance with the locally applicable disposal regulations for electronic waste.

10 Technical Data

Communication

RS485 devices	Maximum 50 devices, 1200 or 19200 baud
SMA Data Logger	Speedwire, 10 / 100 Mbit/s

Connections

Voltage supply	2-pole connection, MINI COMBICON
RS485	6-pole connection, MINI COMBICON
SMA Data Logger / network (LAN)	2 x RJ45 switched, 10BaseT / 100BaseT
USB	1 x USB 2.0, type A

Voltage Supply

Voltage supply	External power supply unit
Input voltage range	10 V to 30 V
Power consumption	Type 4 W

Ambient Conditions in Operation

Ambient temperature	-20°C to +60°C
Max. permissible value for relative humidity (non-condensing)	5% to 95%
Maximum operating altitude above mean sea level (MSL)	3000 m
Degree of protection	IP20

General Data

Dimensions (W x H x D)	161.1 mm x 89.7 mm x 67.2 mm
Weight	203 g
Mounting location	Indoors
Mounting type	Top-hat rail mounting / wall mounting
Status display	LEDs for system-, RS485- and Ethernet status

Equipment

Warranty	2 years
Certificates and approvals	www.SMA-Solar.com

11 Contact

If you have technical problems with our products, please contact the SMA Service Line. The following data is required in order to provide you with the necessary assistance:

- Device type
- Serial number
- Firmware version
- Event message
- Device type, serial number and firmware version of the SMA Data Logger (if available)

Deutschland Österreich Schweiz	SMA Solar Technology AG Niestetal Sunny Boy, Sunny Mini Central, Sunny Tripower: +49 561 9522-1499 Monitoring Systems (Kommunikationsprodukte): +49 561 9522-2499 Fuel Save Controller (PV-Diesel-Hybridsysteme): +49 561 9522-3199 Sunny Island, Sunny Boy Storage, Sunny Backup: +49 561 9522-399 Sunny Central, Sunny Central Storage: +49 561 9522-299 SMA Online Service Center: www.SMA-Service.com	Belgien Belgique België Luxemburg Luxembourg Nederland	SMA Benelux BVBA/SPRL Mechelen +32 15 286 730 SMA Online Service Center: www.SMA-Service.com
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Other countries	International SMA Service Line Niestetal 00800 SMA SERVICE (+800 762 7378423) SMA Online Service Center: www.SMA-Service.com		

12 EU Declaration of Conformity

within the scope of the EU directives

- Electromagnetic compatibility 2014/30/EU (L 96/79-106, March 29, 2014) (EMC)
- Restriction of the use of certain hazardous substances 2011/65/EU (RoHS)

SMA Solar Technology AG confirms herewith that the product described in this document is in compliance with the fundamental requirements and other relevant provisions of the above-mentioned directives. The entire EU Declaration of Conformity can be found at www.SMA-Solar.com.


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