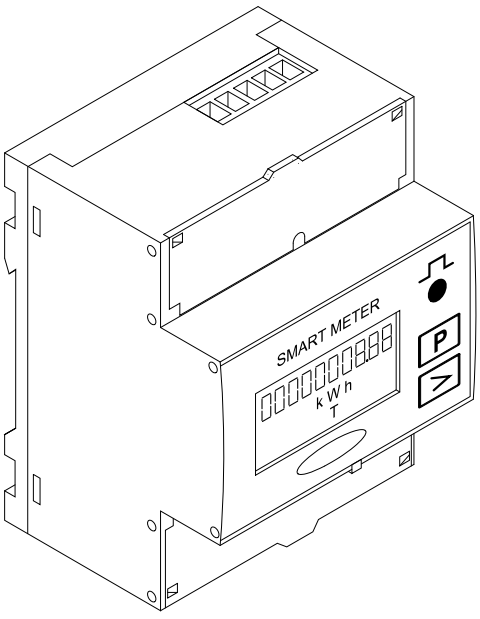
Operating Instructions

Fronius Smart Meter 63A-3



EN-US | Operating instructions

42,0426,0293,EA 016-20102025

Table of contents

General information

Safety information

Explanation of warnings and safety instructions

The warnings and safety instructions in these instructions are intended to protect people from possible injury and the product from damage.

⚠ DANGER!

Indicates an immediately dangerous situation
Serious injury or death will result if appropriate precautions are not taken.
▶ Action step to escape the situation

⚠ WARNING!

Indicates a potentially dangerous situation
Death or serious injury may result if appropriate precautions are not taken.
▶ Action step to escape the situation

⚠ CAUTION!

Indicates a potentially dangerous situation
Minor or moderate injury may result if appropriate precautions are not taken.
▶ Action step to escape the situation

NOTE!

Indicates impaired work results and/or damage to the device and components

The warnings and safety instructions are an integral part of these instructions and must always be observed to ensure the safe and proper use of the product.

Safety instructions and important information

The device has been manufactured in line with the state of the art and according to recognized safety standards.

⚠ WARNING!

Incorrect operation or misuse
Serious to fatal injuries to the operator or third parties as well as damage to the device and other property of the operator may result.
▶ All persons involved in the commissioning, maintenance, and servicing of the device must be appropriately qualified and have knowledge of working with electrical installations.
▶ Read these operating instructions in full and follow them carefully and precisely.
▶ The operating instructions must always be kept to hand wherever the device is being used.

IMPORTANT!
In addition to the operating instructions, observe the following general and local rules:
- Accident prevention
- Fire protection
- Environmental protection

IMPORTANT!
Labels, warning notices, and safety symbols are located on the device. A description can be found in these operating instructions.

IMPORTANT!

All safety and danger notices on the device:
- Must be kept in a legible state
- Must not be damaged/marked
- Must not be removed
- Must not be covered, have anything stuck on them, or painted over

⚠ WARNING!

Tampered-with and non-functioning protection devices
Serious to fatal injuries as well as damage to the device and other property of the operator may result.
- ▶ Never bypass or disable protection devices.
- ▶ Any protection devices that are not fully functional must be repaired by an authorized specialist before the device is switched on.

⚠ WARNING!

Loose, damaged, or under-dimensioned cables
An electric shock can be fatal.
- ▶ Use undamaged, insulated, and adequately dimensioned cables.
- ▶ Fasten the cables according to the specifications in the operating instructions.
- ▶ Loose, damaged, or under-dimensioned cables must be repaired or replaced immediately by an authorized specialist.

NOTE!

Installations or modifications to the device
The device may be damaged
- ▶ Do not carry out any alterations, installations, or modifications to the device without first obtaining the manufacturer's permission.
- ▶ Damaged components must be replaced.
- ▶ Only use original spare parts.

Environmental conditions

Operation or storage of the device outside the stipulated area will be deemed as not in accordance with the intended purpose.

General

Device description

The Fronius Smart Meter is a bidirectional electricity meter for optimizing self-consumption and recording a household's load characteristic curve. Together with a Fronius inverter or Fronius Datamanager 2.0 and a Fronius data interface, the Fronius Smart Meter allows you to view your own power consumption. The meter measures the energy flow to the loads or to the public grid and forwards the information to the Fronius inverter or Fronius Datamanager 2.0 via the Modbus RTU/RS485 interface.

⚠ CAUTION!

Danger due to non-compliance with the safety instructions
Risk of injury and damage to the device as a result.
- ▶ Follow all safety instructions.
- ▶ Switch off the power supply before establishing the mains connection.

Informationen am Gerät

Am Fronius Smart Meter befinden sich technische Daten, Kennzeichnungen und Sicherheitssymbole. Diese Informationen müssen in lesbarem Zustand gehalten werden und dürfen nicht entfernt, abgedeckt, überklebt oder übermalt werden. Die Hinweise und Symbole warnen vor Fehlbedienung, woraus schwerwiegende Personen- und Sachschäden resultieren können.

Symbole am Leistungsschild:

CE-Kennzeichnung
Alle erforderlichen und einschlägigen Normen sowie Richtlinien im Rahmen der einschlägigen EU-Richtlinie werden eingehalten, sodass die Geräte mit dem CE-Kennzeichen ausgestattet sind.

RCM (Regulatory Compliance Mark)
Alle entsprechenden Regulierungsanforderungen in Australien und Neuseeland werden in Bezug auf Sicherheit und elektromagnetische Verträglichkeit sowie spezielle Anforderungen für funktechnische Geräte eingehalten.

WEEE-Kennzeichnung
Gemäß Europäischer Richtlinie 2012/19/EU über Elektro- und Elektronik-Altgeräte und Umsetzung in nationales Recht, müssen verbrauchte Elektrogeräte getrennt gesammelt und einer umweltgerechten Wiederverwertung zugeführt werden. Stellen Sie sicher, dass Sie Ihr gebrauchtes Gerät bei Ihrem Händler zurückgeben oder holen Sie Informationen über ein lokales, autorisiertes Sammel- und Entsorgungssystem ein. Ein Ignorieren dieser EU Direktive kann zu potentiellen Auswirkungen auf die Umwelt und Ihre Gesundheit führen!

How information is presented in the document

The conventions regarding how information is presented in the document, which are set out below, have been defined in order to increase the readability and comprehensibility of the document.

Application notes

IMPORTANT! Indicates application notes and other useful information. It does not indicate a harmful or dangerous situation.

Software

Software functions and elements of a graphical user interface (e.g., buttons, menu items) are highlighted in the text with this **mark up**.

Example: Click **Save**.

Instructions for action

1 Action steps are displayed with consecutive numbering.

✓ *This symbol indicates the result of the action step or the entire instruction.*

Target group

This document provides detailed information and instructions to ensure that all users can use the device safely and efficiently.

- The information is intended for the following groups of people:
  - **Technical specialists:** People with appropriate qualifications and fundamental electronic and mechanical knowledge, who are responsible for the installation, operation, and maintenance of the device.
  - **End users:** People that use the device in daily operation and want to understand its basic functions.
- Regardless of any qualifications, only perform the activities listed in this document.
- All persons involved in the commissioning, maintenance, and servicing of the device must be appropriately qualified and have knowledge of working with electrical installations.
- The definition of professional qualifications and their applicability are subject to national law.

Data security

With regard to data security, the user is responsible for:

- Backing up any changes made to the factory settings
- Saving and storing personal settings

NOTE!

Data security for network and Internet connection

Unsecured networks and a lack of safeguards can result in data loss and unauthorized access. Observe the following points for safe operation:

- ▶ Operate inverters and system components on a private, secure network.
- ▶ Keep the network devices (e.g., WiFi routers) up to date with the latest technology.
- ▶ Keep the software and/or firmware updated.
- ▶ Use a wired network to ensure a stable data connection.
- ▶ For security reasons, do not make inverters and system components accessible from the Internet via port forwarding or Port Address Translation (PAT).
- ▶ Use the solutions provided by Fronius for monitoring and remote configuration.
- ▶ The optional communication protocol Modbus TCP/IP[1)] is an unsecured interface. Only use Modbus TCP/IP if no other secured data communication protocol (MQTT[2)]) is possible (e.g., compatibility with older Smart Meters).

[1] TCP/IP - Transmission Control Protocol/Internet Protocol
[2] MQTT - Message Queuing Telemetry Protocol

Copyright

Text and illustrations were accurate at the time of printing, subject to change.
We are grateful for suggestions for improvement and information on any discrepancies in the operating instructions.

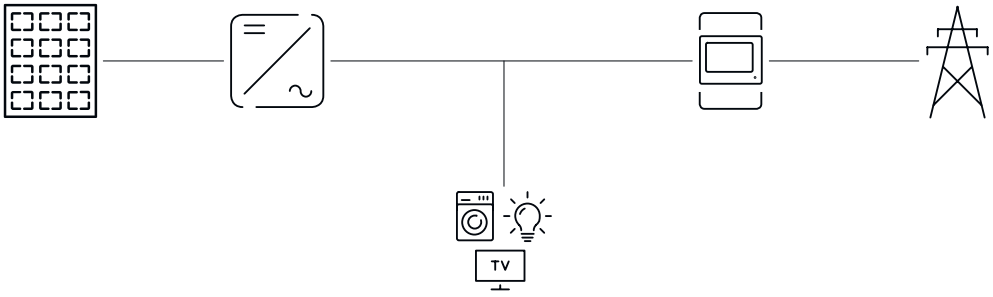
Installation

Positioning

The Fronius Smart Meter can be installed at two possible locations in the system, at the feed-in point and at the consumption point.

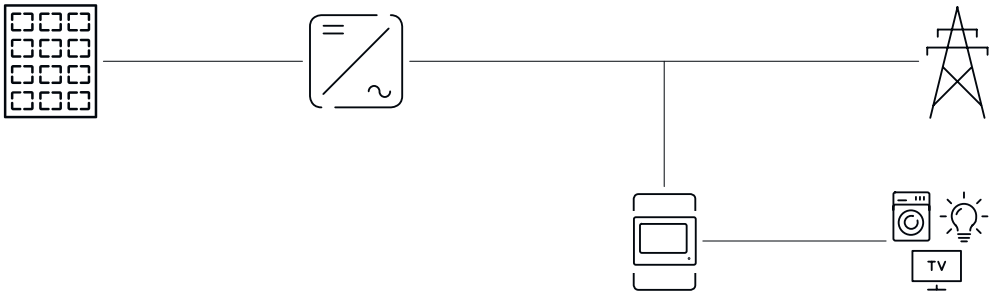
Positioning at the feed-in point

The positioning of the Fronius Smart Meter at the feed-in point.



Positioning at the consumption point

The positioning of the Fronius Smart Meter at the consumption point.



Checklist for installation

For installation information, see the following chapters:

1. Switch off the power supply before establishing a grid connection.
2. Mount the Fronius Smart Meter (see Installation on page 13).
3. Connect automatic circuit breakers or automatic circuit breakers and disconnectors (see Protective circuit on page 13).
4. Connect the mains cable to the Fronius Smart Meter (see Cabling on page 13).
5. Connect the output terminals of the Fronius Smart Meter to the Fronius inverter (see Connecting the data communication cable to the inverter on page 14).
6. If necessary, set terminating resistors (see Terminating resistors on page 15).
7. Tug on each wire and plug to make sure that they are securely connected to the terminal blocks.

8 Switch on the power supply to the Fronius Smart Meter.

9 Check the firmware version of the Fronius inverter. To ensure compatibility between the inverter and the Fronius Smart Meter, the software must always be kept up to date. The update can be started via the inverter web page or using Solar.web.

10 If several Fronius Smart Meters are installed in the system, set the address (see "Setting the address" under Setting the address of the Fronius Smart Meter on page 21).

11 Configure and commission the meter (see Commissioning on page 25).

Installation

The Fronius Smart Meter can be mounted on a 35 mm DIN rail. The housing comprises 4 DUs (division units, max. 72 mm).

Protective circuit

The Fronius Smart Meter is a hard-wired device and requires a disconnecting device (circuit breaker, switch, or disconnector) and overcurrent protection (automatic circuit breaker).

The Fronius Smart Meter consumes 10 - 30 mA. The nominal capacity of the disconnecting devices and the overcurrent protection is determined by the wire thickness, the mains voltage, and the required breaking capacity.

- Disconnecting devices must be mounted within sight and as close as possible to the Fronius Smart Meter; they must also be easy to use.
- The disconnecting devices must satisfy the requirements of IEC 60947-1 and IEC 60947-3, as well as all national and local regulations for electrical systems.
- Use overcurrent protection rated for max. 63 A.
- To monitor more than one mains voltage, use connected automatic circuit breakers.
- The overcurrent protection must protect the grid terminals marked L1, L2, and L3. In rare cases, the neutral conductor has an overcurrent protection which must simultaneously interrupt neutral and ungrounded lines.

Cabling

⚠ WARNING!

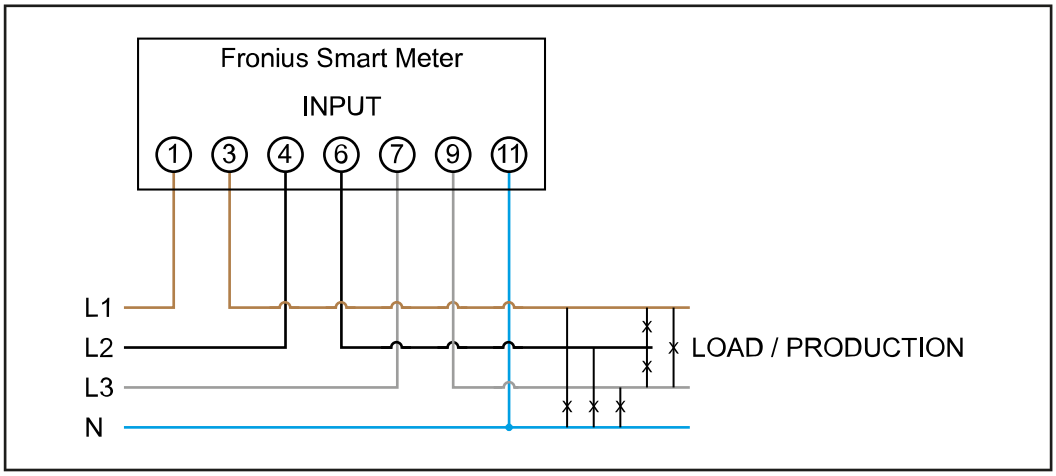
Danger from mains voltage.
An electric shock can be fatal.
▶ Switch off the power supply before connecting the mains voltage inputs to the Fronius Smart Meter.

IMPORTANT!
Do not install more than one cable per screw terminal. If necessary, use terminal blocks. Rate fuse according to the cross-section of the line.

Current path connection cross-section:
- Wire (rigid): min. 1 mm² / max. 16 mm²
- Wire (flexible): min. 1 mm² / max. 10 mm²
- Recommended torque: 1.2 Nm / max. 1.4 Nm

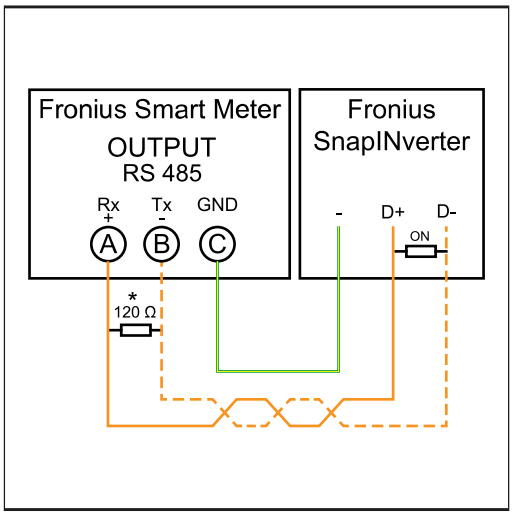
Data communication and neutral conductor connection cross-section:
- Wire (rigid): min. 0.05 mm² / max. 4 mm²
- Wire (flexible): min. 0.05 mm² / max. 2.5 mm²
- Recommended torque: 0.5 Nm / max. 0.8 Nm

Connect each voltage cable to the terminal strip as shown in the graphic below.



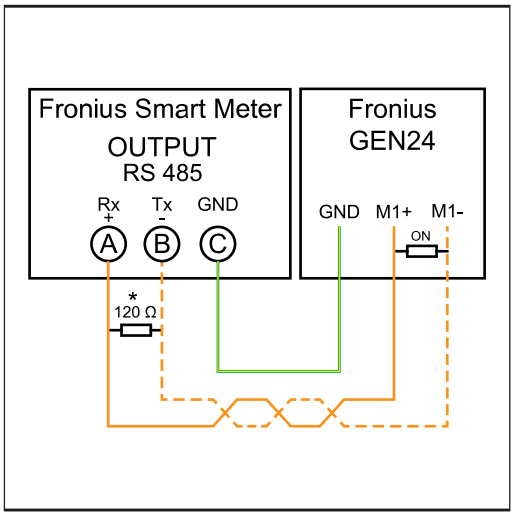
Connecting the data communication cable to the inverter

Fronius SnapINverter:
Connect the data communication connections of the Fronius Smart Meter to the Fronius system monitoring in the inverter. Several Smart Meters can be installed in the system, see chapter Multi meter system – Fronius SnapINverter on page 18.



1. Connect **A** to **D+**.
2. Connect **B** to **D-**.
3. Connect**C** to **-**.

Fronius GEN24 inverter:
Connect the data communication connections of the Fronius Smart Meter to the Modbus interface of the Fronius GEN24 inverter. Several Smart Meters can be installed in the system, see chapter Multi meter system - Fronius GEN24 inverter on page 20.



1 Connect **A** to **M1+**.
2 Connect **B** to **M1-**.
3 Connect **C** to **GND**.

IMPORTANT!

More information on successful commissioning.
Note the following information about connecting the data communication cable to the inverter.

- ▶ Use cables of type CAT5 or higher.
- ▶ The maximum cable length between the Fronius inverter and Fronius Smart Meter is 300 meters.
- ▶ Use a mutual twisted cable pair for data lines that belong together (D+, D- and M1+, M1-).
- ▶ If the output cables are close to the grid cabling, use wires or cables that are designed for 300 V to 600 V (never less than the operating voltage).
- ▶ Use double-insulated or sheathed output cables when they are close to bare conductors.
- ▶ Use shielded twisted pair cables to avoid faults.
- ▶ The outputs of the Fronius Smart Meter are electrically isolated from hazardous voltages.

Terminating resistors - explanation of symbols

Inverter in the system
z. e.g., Fronius Symo

Meter - Fronius Smart Meter
Terminating resistor R 120 Ohm is included in the scope of supply.

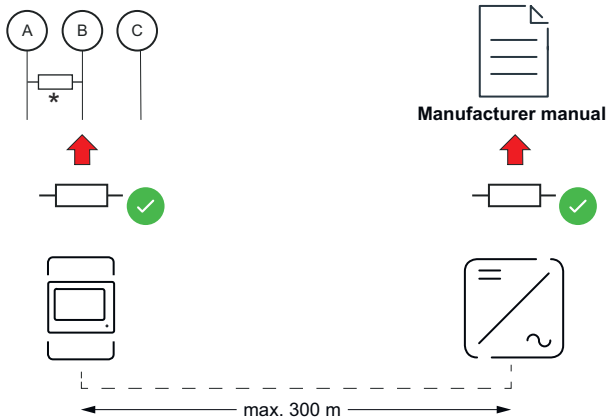
Fronius or third-party device, connection via Modbus RTU
e.g., Fronius Ohmpilot, battery, etc.

Terminating resistor
R 120 Ohm

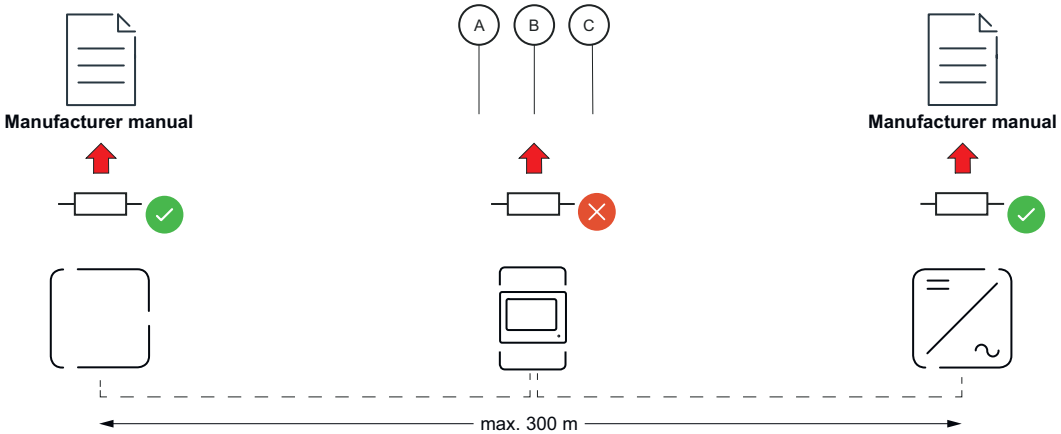
Terminating resistors

Due to interference, the use of terminating resistors according to the following overview is recommended for flawless operation.

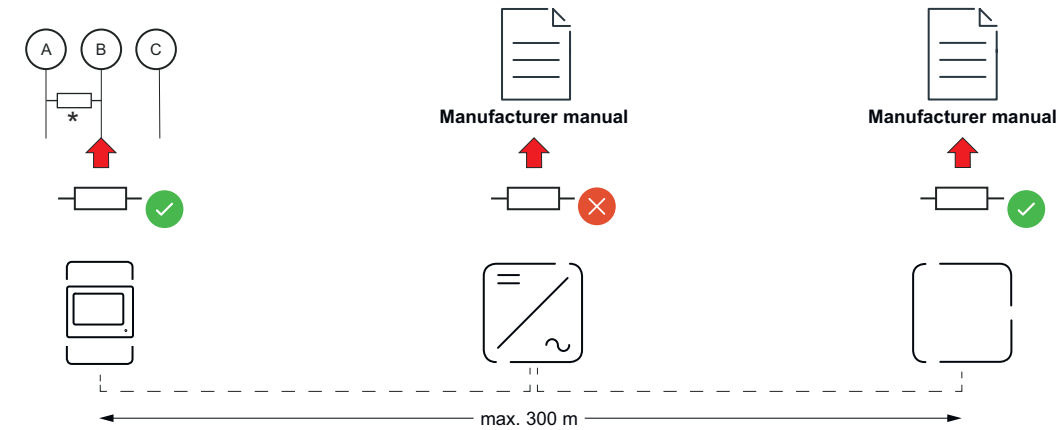
OPTION 1

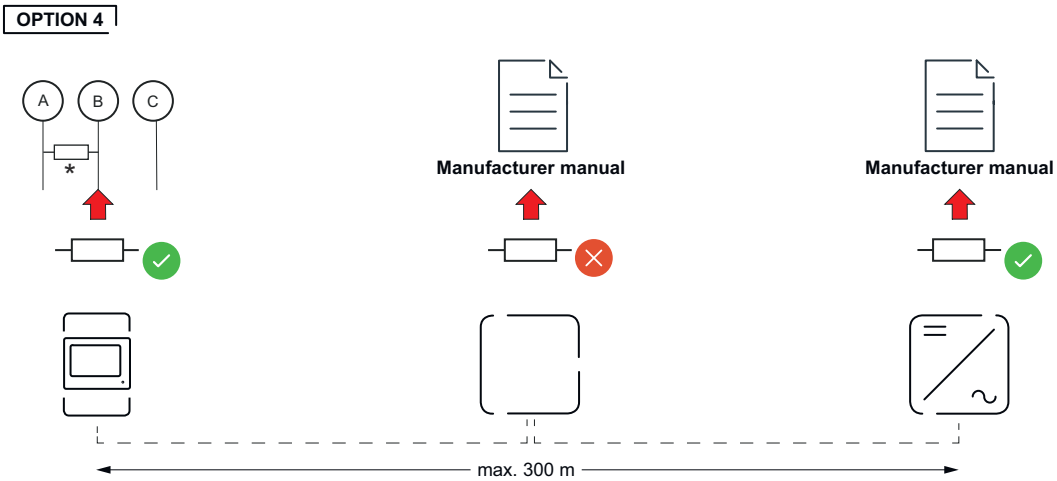


OPTION 2



OPTION 3





* The terminating resistor on the Fronius Smart Meter is installed between **A** and **B.** The terminating resistor R 120 Ohm is included with the Fronius Smart Meter.

Multi meter system - Explanation of symbols

Grid
Supplies the loads in the system if insufficient power is being generated by the PV modules or supplied by the battery.

Inverter in the system
e.g. Fronius Primo, Fronius Symo, etc.

Utility meter
Measures the metering data relevant for the billing of electricity quantities (primarily the kilowatt hours of grid purchases and grid power feed). On the basis of the data relevant for billing, the electricity retailer invoices a grid purchase and the purchaser of the surplus pays for the grid power feed.

Primary meter
Records the load curve of the system and makes the measured data available for energy profiling in Fronius Solar.web. The primary meter also regulates the dynamic feed-in control.

Secondary meter
Records the load curve of individual loads and producers (e.g. washing machine, lights, television, heat pump, etc.) in the consumption branch and makes the measured data available for energy profiling in Fronius Solar.web.

Modbus RTU, Third-party device
e.g. Fronius Ohmpilot, battery, etc.

Loads in the system
e.g. washing machine, lamps, TV, etc.

Additional loads in the system
e.g. heat pump

Additional producers in the system
e.g. wind power plant

Terminating resistor
R 120 Ohm

Modbus participant - Fronius SnapINverter

A maximum of 4 Modbus stations can be connected to the Modbus connection terminal.

IMPORTANT!
Only one primary meter, one battery and one Ohmpilot can be connected per inverter. Due to the high data transfer of the battery, the battery occupies 2 subscribers.

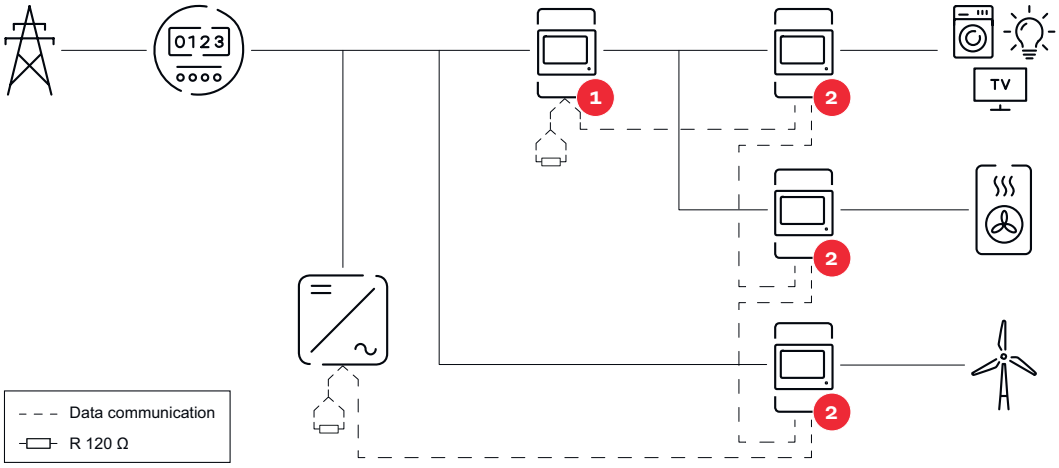
Example:

Input	Battery	Fronius Ohmpilot	Number of primary meters	Number of secondary meters
Modbus	✓	✓	1	0
	✓	✗	1	1
	✗	✓	1	2
	✗	✗	1	3

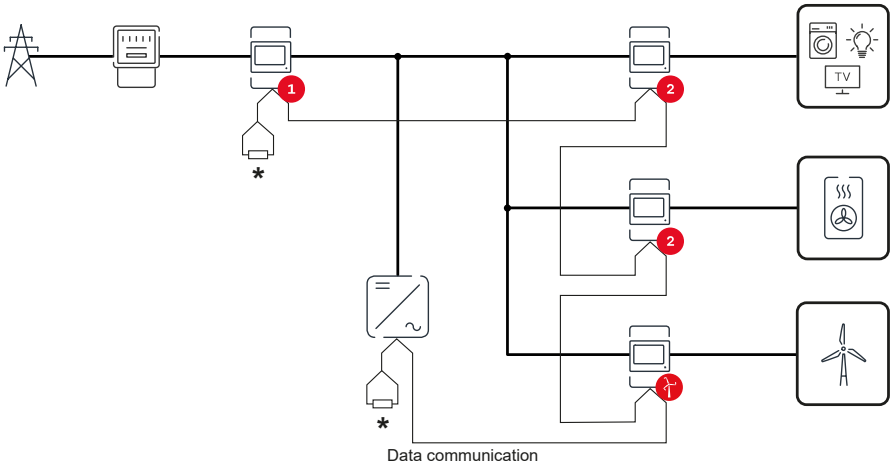
Multi meter system – Fronius SnapINverter

If several Fronius Smart Meters are installed, a separate address must be set for each one. The primary meter always receives the address 1. All other meters are numbered consecutively in the address range from 2 to 14. Different Fronius Smart Meter power categories can be used together.

IMPORTANT!
Use no more than 3 secondary meters in the system. To avoid interference, it is recommended to install the terminating resistors according to the chapter Terminating resistors.



*Position of the primary meter in the consumption branch. *Terminating resistor R 120 Ohm*



*Position of the primary meter at the feed-in point. *Terminating resistor R 120 Ohm*

The following must be observed in multi-meter systems:
- Each Modbus address is assigned only once.
- Place the terminating resistors individually for each channel.

Modbus participant - Fronius GEN24

The inputs M0 and M1 can be freely selected. A maximum of 4 Modbus participants can be connected to the Modbus terminal on the inputs M0 and M1.

IMPORTANT!
Only one primary meter, one battery and one Ohmpilot can be connected per inverter. Due to the high data transfer of the battery, the battery occupies 2 subscribers.

Example 1:

Input	Battery	Fronius Ohmpilot	Number of primary meters	Number of secondary meters
Modbus 0 (M0)	✗	✗	0	4
	✓	✗	0	2
	✓	✓	0	1

Input	Battery	Fronius Ohmpilot	Number of primary meters	Number of secondary meters
Modbus 1 (M1)	✗	✗	1	3

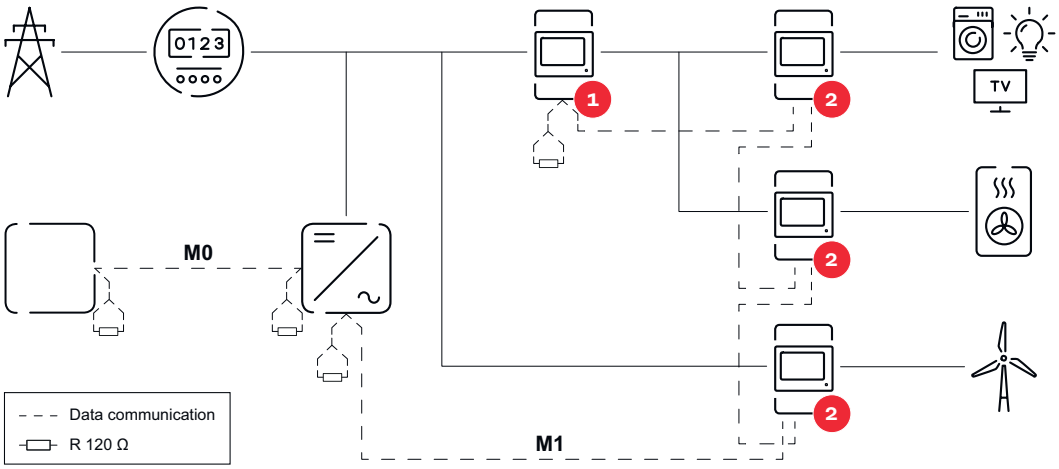
Example 2:

Input	Battery	Fronius Ohmpilot	Number of primary meters	Number of secondary meters
Modbus 0 (M0)	✗	✗	1	3
Modbus 1 (M1)	✗	✗	0	4
	✓	✗	0	2
	✓	✓	0	1

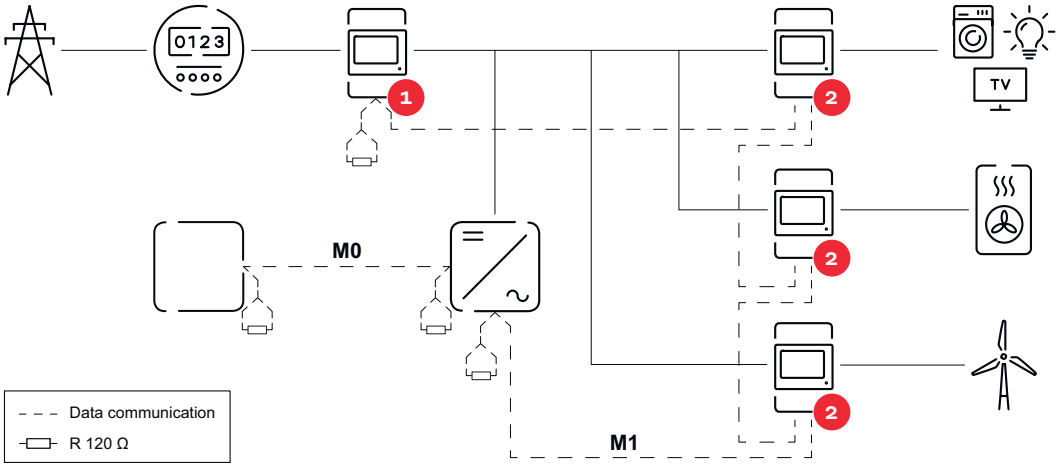
Multi meter system - Fronius GEN24 inverter

If several Fronius Smart Meters are installed, a separate address must be set for each one (see Setting the address of the Fronius Smart Meter on page 21). The primary meter always receives the address 1. All other meters are numbered consecutively in the address range from 2 to 14. Different Fronius Smart Meter power categories can be used together.

IMPORTANT!
Use no more than Use 7 secondary meters in the system. To avoid interference, it is recommended to install the terminating resistors according to the chapter Terminating resistors on page 15.



*Position of the primary meter in the consumption branch. *Termination resistance R 120 Ohm*



*Position of the primary meter at the feed-in point. *Termination resistance R 120 Ohm*

The following must be observed in a multi meter system:

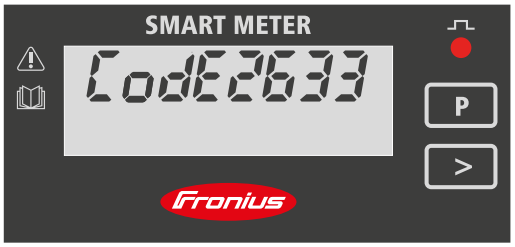
- Connect the primary meter and the battery to different channels (recommended).
- Distribute the remaining Modbus participants evenly.
- Each Modbus address is assigned only once.
- Place the terminating resistors individually for each channel.

Menu structure

A graphic view of the menu structure can be found in the User Information that is supplied as standard.

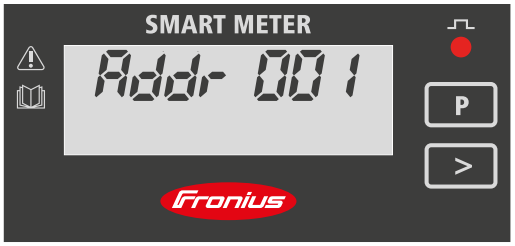
Setting the address of the Fronius Smart Meter

Symbol	Name	Event	Function
P	Prog	1 x	Increases the set value
>	Page	1 x	Moves the cursor
> + P	Enter	1 x	Confirms the entry



1 Press "Prog" and "Page" at the same time to enter the code.

2 Enter the password "2633". Increase the value with "Prog" and change to the next digit with "Page".



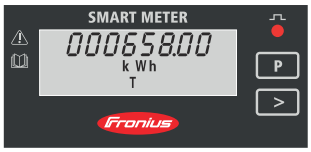
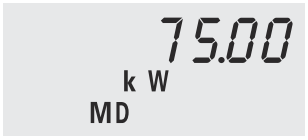
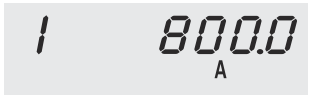
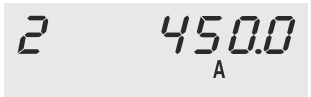
3 Press "Prog" and "Page" at the same time again to switch to the menu item "Addr" (address).

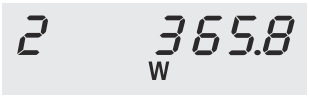
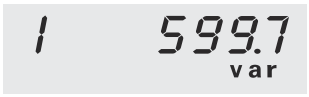
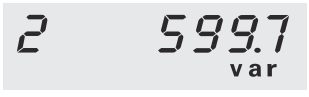
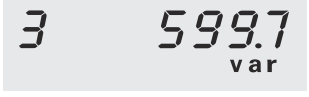
4 Set the relevant address.
- Permissible values: 1 - 14

Reading the Fronius Smart Meter operating parameters

Symbol	Name	Event	Function
>	Page	1 x	Continue to the next screen
>	Page	2 seconds	Reset value / change menu

The following illustrations are symbolic representations. The values displayed vary for each individual unit.

Display	Description
	**Total active energy consumed**
	**Total reactive energy**
	**Total active energy feed-in**
	**Maximum effective power average value** Press arrow key for 2 seconds to reset the value
	**Effective power average value**
	**Voltage and current menu** Press the arrow key and wait 2 seconds until the next display (current phase L1) appears.
	**Current phase L1**
	**Current phase L2**
	**Current phase L3**

Display	Description
	**Voltage phase L1**
	**Voltage phase L2**
	**Voltage phase L3**
	**Effective power**
	**Reactive power**
	**Apparent power**
	**Effective power phase L1**
	**Effective power phase L2**
	**Effective power phase L3**
	**Reactive power phase L1**
	**Reactive power phase L2**
	**Reactive power phase L3**
	**Power factor phase L1**
	**Power factor phase L2**
	**Power factor phase L3**

Display	Description
	**Frequency / power factor**

Commissioning

Fronius SnapINverter

General

IMPORTANT! Settings in the "Meter" menu item may only be entered by staff trained to do so!

The service password must be entered for the "Meter" menu item.

Three-phase or one-phase Fronius Smart Meters may be used. In both cases, selection is made via the "Fronius Smart Meter" item. The Fronius Datamanager automatically detects the meter type.

One primary meter and several secondary meters can be selected. The primary meter must be configured before a secondary meter can be chosen.

Connect to Fronius Datamanager 2.0

Access Point:

Activate the WiFi access point of the inverter:

1 Select the **Setup** menu on the inverter display.

2 Navigate to **WiFi Access Point**.

✓ *Network (**SS**) and password (**PW**) are displayed.*

3 Activate the **WiFi Access Point** with the Enter ↵ key.

Establish the connection from the inverter's WiFi access point to the PC:

1 Establish the connection to the inverter in the network settings (the inverter is displayed with the name "Fronius_240.XXXXXX").

2 Enter and confirm the password from the inverter display.

3 In the browser's address bar, enter the IP address http://192.168.250.181 and confirm.

✓ *The Fronius Datamanager 2.0 start page is displayed.*

LAN:

1 Connect the Fronius Datamanager and computer with a LAN cable.

2 Place the Fronius Datamanager 2.0 IP switch in the "A" position.

3 In the browser's address bar, enter the IP address http://169.254.0.180 and confirm.

Configuring the Fronius Smart Meter as the primary meter

1 Go to the Fronius Datamanager website.
- Open the web browser.
- In the address bar of the browser, enter the IP address (IP address for WLAN: 192.168.250.181, IP address for LAN: 169.254.0.180) or the host and domain name of the Fronius Datamanager and confirm.
- The Fronius Datamanager website will be displayed.

2 Click the **"Settings"** button.

3 Log in to the login area with the **"service"** user and the service password.

4 Open the **"Meter"** menu area.

5 Select the primary meter from the drop-down list.

6 Click the **"Settings"** button.

7 In the pop-up window, set the position of the meter (feed-in point or consumption point). For more information on the position of the Fronius Smart Meter, see Positioning on page 12.

8 Click the **"Ok"** button when the OK status is displayed. If the *Timeout* status is displayed, try again.

9 Click the ✓ button to save the settings.

The Fronius Smart Meter is configured as a primary meter.

The **"Current general view"** menu area displays the power of the PV modules, self-consumption, the energy fed into the grid, and the battery charge (if available).

Configuring the Fronius Smart Meter as a secondary meter

1 Go to the Fronius Datamanager website.
- Open the web browser.
- In the address bar of the browser, enter the IP address (IP address for WLAN: 192.168.250.181, IP address for LAN: 169.254.0.180) or the host and domain name of the Fronius Datamanager and confirm.
- The Fronius Datamanager website will be displayed.

2 Click the **"Settings"** button.

3 Log in to the login area with the **"service"** user and the service password.

4 Open the **"Meter"** menu area.

5 Select the secondary meter from the drop-down list.

6 Click the **"Add"** button.

7 Enter the name of the secondary meter in the **"Name"** input field.

8 Enter the previously assigned address in the **"Modbus address"** input field.

9 Add meter description.

10 Click the ✓ button to save the settings.

The Fronius Smart Meter is configured as a secondary meter.

Fronius GEN24 inverter

General

IMPORTANT! Settings in the "Device configuration" menu item may only be entered by staff trained to do so!

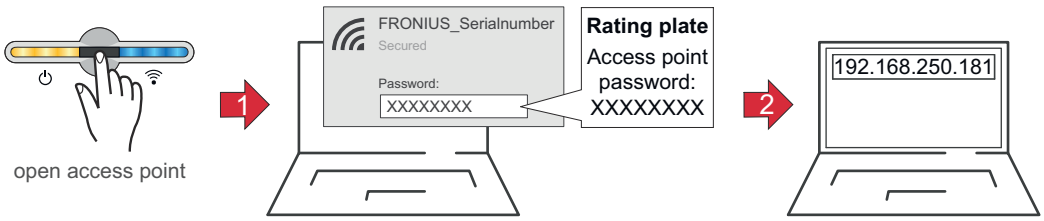
The service password must be entered for the "Device configuration" menu item.

Three-phase or one-phase Fronius Smart Meters may be used. In both cases, selection is made via the "Components" menu area. The meter type is determined automatically.

One primary meter and several secondary meters can be selected. The primary meter must be configured before a secondary meter can be chosen.

Installation with the browser

WLAN:



1 Open the access point by touching the sensor

✓ *Communications LED flashes blue.*

2 Establish the connection to the inverter in the network settings (the inverter is displayed with the name "FRONIUS_" and the serial number of the device).

3 Enter the password from the rating plate and confirm.
IMPORTANT!
To enter the password in Windows 10, first select the **Connect using a security key instead** link to be able to establish the connection with the password.

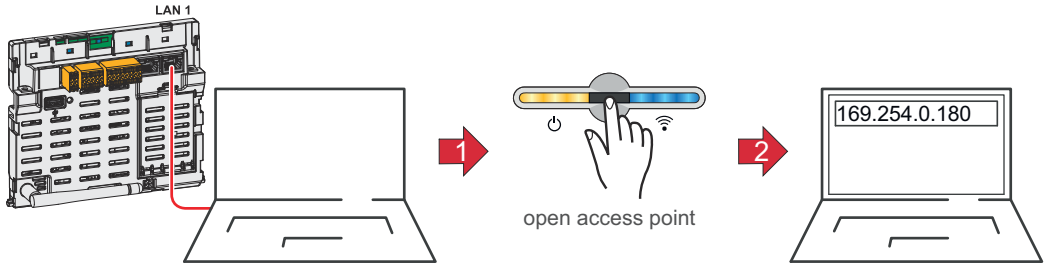
4 Enter the IP address 192.168.250.181 in the address bar of the browser and confirm. The installation wizard opens.

5 Follow the installation wizard and complete the installation in the individual areas.

6 Add the system components in Fronius Solar.web and commission the PV system.

The network wizard and product setup can be performed independently. A network connection is required for the Fronius Solar.web installation wizard.

Ethernet:



1 Establish a connection to the inverter (LAN1) using a network cable (min. CAT5 STP).

2 Open the access point by touching the sensor once

✓ *Communications LED flashes blue.*

3 Enter the IP address 169.254.0.180 in the address bar of the browser and confirm. The installation wizard opens.

4 Follow the installation wizard and complete the installation in the individual areas.

5 Add the system components in Fronius Solar.web and commission the PV system.

The network wizard and product setup can be performed independently. A network connection is required for the Fronius Solar.web installation wizard.

Configuring the Fronius Smart Meter as the primary meter

1 Access the inverter website.
- Open the web browser.
- In the address bar of the browser, enter the IP address (IP address for WLAN: 192.168.250.181, IP address for LAN: 169.254.0.180) or the host and domain name of the inverter and confirm.
- The inverter website is displayed.

2 Click the **"Device configuration"** button.

3 Log in to the login area with the **"Technician"** user and the technician password.

4 Access the **"Components"** menu area.

5 Click the **"Add component"** button.

6 In the "Position" drop-down list, set the position of the meter (feed-in point or consumption point). For more information on the position of the Fronius Smart Meter, see Positioning on page 12.

7 Click the **"Add"** button.

8 Click the **"Save"** button to save the settings.

The Fronius Smart Meter is configured as a primary meter.

Configuring the Fronius Smart Meter as a secondary meter

1 Access the inverter website.
- Open the web browser.
- In the address bar of the browser, enter the IP address (IP address for WLAN: 192.168.250.181, IP address for LAN: 169.254.0.180) or the host and domain name of the inverter and confirm.
- The inverter website is displayed.

2 Click the **"Device configuration"** button.

3 Log in to the login area with the **"Technician"** user and the technician password.

4 Access the **"Components"** menu area.

5 Click the **"Add component"** button.

6 In the **"Position"** drop-down list, select the meter type (producer/load meter).

7 Enter the previously assigned address in the **"Modbus address"** input field.

8 Enter the name of the meter in the **"Name"** input field.

9 In the "Category" drop-down list, select the category (producer or load).

10 Click the **"Add"** button.

11 Click the **"Save"** button to save the settings.

The Fronius Smart Meter is configured as a secondary meter.

Technical data

Technical data

Modbus transmission speed: 9600 baud
Parity bit: none
Software version: Datamanager 3.7.2 / Energypackage 1.3.3

Input	
Nominal voltage (4-conductor) Operating range	230 - 400 V ±15%
Power consumption in the voltage path (max. voltage)	2.2 VA (1.5 W) three-phase
Nominal frequency Tolerance	50 - 60 Hz 49 to 61 Hz
Nominal current, Ib	10 A
Maximum current, Imax	63 A
Starting current	40 mA
Short-time overload (EN/IEC 62053-21, EN/IEC 62053-23)	20 Imax / 0.5 s
Self-consumption - current path (max. current)	1.5 W for phase
Power factor Operating range (EN/IEC 62053-21, EN/IEC 62053-23)	Active cosφ 0.5 ind to 0.8 cap, Reactive senφ 0.5 ind to 0.5 cap
Current total harmonic distortion	In acc. with EN 50470

Output	
RS485 communication Electrically isolated from measuring input	
Standard	RS485 - 3 conductors
Transmission	Serial, asynchronous
Protocol	Compatible with Modbus RTU
Addresses	1 to 255
Number of bits	8
Stop bit	1
Parity bit	None - odd - even
Baud rate	4800 - 9600 - 19200 bit/s
Response time	≤ 200 ms

Insulation (EN/IEC 62052-11, 62053-21)	
Installation category	III
Degree of pollution	2
Insulation voltage	300 V phase-neutral

Electromagnetic compatibility	
Emission test	In acc. with EN/IEC 62052-11, EN 50470
Immunity test	In acc. with EN/IEC 62052-11, EN 50470

Operating conditions	
Reference temperature	23°C (±2°C)
Operating range	-25 to 55 °C
Temperature limit for storage and transport	-40 to 70 °C
Tropical model	
Max. power loss (for thermal dimensioning of the switch cabinet)	≤ 6 W
Mechanical environment Electromechanical environment	M1 E2

Housing	
Housing	4 modules according to DIN 43880
Sealable front and terminal cover	
Connection	Screw connection
Mounting	Can be snapped onto 35 mm DIN rail
Housing material	Polycarbonate, self-extinguishing
Degree of protection (EN 60529)	IP51 front, IP20 connections
Weight	260 grams

Screw terminals	
Measuring input	
Wire (rigid)	min. 1 mm² / max. 16 mm²
Wire (flexible)	min. 1 mm² / max. 10 mm²
Recommended torque	1.2 Nm / max. 1.4 Nm
Output	
Wire (rigid)	min. 0.05 mm² / max. 4 mm²
Wire (flexible)	min. 0.05 mm² / max. 2.5 mm²
Recommended torque	0.5 Nm / max. 0.8 Nm

Fronius manufacturer's warranty

Detailed, country-specific warranty conditions are available at www.fronius.com/solar/warranty.

To obtain the full warranty period for your newly installed Fronius product, please register at www.solarweb.com.

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www.fronius.com

At www.fronius.com/contact you will find the contact details of all Fronius subsidiaries and Sales & Service Partners.