

/ Perfect Welding / Solar Energy / Perfect Charging



**MEET THE NEW HEROES.**  
**TOGETHER FOR 100%**  
**RENEWABLE ENERGY.**

# A FAMILY TRADITION OF QUALITY & INNOVATION.

A passion for new technologies, intensive research, and revolutionary solutions has been shaping the Fronius brand since the beginning. From the very first battery charger in 1945, our family-owned company has been setting global standards in innovation, quality, and power conversion.

The Solar Energy Division has been working in the field of photovoltaics since 1992. As a solar pioneer and manufacturer of inverters from day one, we now offer a wide range of products relating to generating, storing, distributing, and consuming energy from renewable sources.

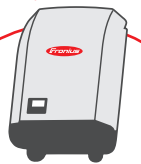
## OUR VISION OF 24 HOURS OF SUN IS WHAT DRIVES US

We believe in a future where we are able to cover 100% of our global energy requirements with renewable resources:

The world of 24 hours of sun. The key lies in technologies and solutions that will gradually allow renewable energy to be generated and stored ever more efficiently before being distributed and consumed on an intelligent and cost-effective basis. We are working on this project day in, day out, to drive the transition towards an energy-efficient future featuring 100% renewables with the help of our technologies and energy solutions.



**15<sup>GW</sup>**  
Inverter  
output



**1,700,000**  
inverters

Share why you are  
24 hours of sun and  
add your **statement** on  
[www.24hrsofsun.com](http://www.24hrsofsun.com)



# FRONIUS GEN24 PLUS

## UNIQUELY VERSATILE.

The Fronius GEN24 Plus is the solution for solar energy supply. Whether it is used in photovoltaics, a storage system, backup power, heating or e-mobility, the Fronius GEN24 Plus offers a unique range of solutions and is therefore playing a pioneering role in the home energy revolution.



reddot award 2019  
winner

### PV POINT

The integrated basic grid backup – a socket that is supplied with power during power outages – ensures that important loads can continue to operate even without a battery.



## EXTREMELY SIMPLE INSTALLATION AND COMMISSIONING

- / Time and cost savings due to quick-release screws, push-in spring terminals and a sophisticated wall mounting system.
- / User-friendly setup wizard compatible with any smartphone or tablet
- / Easy commissioning in a few steps
- / Copy&paste function for easy configuration
- / Open interfaces



Thanks to the Fronius GEN24 Plus, energy security is no longer simply a question of cost:

Whether a battery was fitted when the PV system was installed or added later – the GEN24 Plus always deliver the most appropriate backup power solution.

Multi Flow Technology means that loads can be supplied with energy and the battery can be simultaneously charged during power outages. This results in a longer-lasting backup power supply and a higher degree of self-supply.

TECHNICAL DATA	PRIMO GEN24 Plus	SYMO GEN24 Plus
Single-phase / three-phase	single-phase 230 V	three-phase 230 / 400 V
Power classes	3 / 3.6 / 4 / 4.6 / 5 / 6 kW	6 / 8 / 10 kW
MPP-Tracker	2	2
Protection class	IP 66	IP 66
Dimensions (height x width x depth)	528 x 474 x 163 mm	594 x 527 x 165 mm
Weight	16.6 kg	24 kg
DC input voltage range (U <sub>dc min</sub> - U <sub>dc max</sub> )	65 V - 600 V	80 V - 1000 V

# FRONIUS TAURO

## HARD SHELL, SMART CORE.

The Fronius Tauro is the first choice for commercial PV. The inverter allows, like no other, for flexible system planning, minimising balance of system (BOS) costs and generating highest yields even in extreme conditions (heat, cold, dust - you name it).



TECHNICAL DATA	FRONIUS TAURO ECO
Power classes	50, 100 kW
Max. PV generator power ( $P_{dc \max}$ )	75, 150 kWp
Max. DC input voltage ( $U_{dc \max}$ )	1,000 V
Protection class	IP 65
Dimensions (height x width x depth)	755 x 1,109 x 346 mm
Weight	72 - 101 kg





## INNOVATIVE COOLING TECHNOLOGY

The innovative double wall construction and active cooling technology allow the Fronius Tauro to be placed in direct sunlight whilst still ensuring continuous yield.

## FLEXIBLE SYSTEM DESIGN

Due to the flexibility, the Fronius Tauro is suitable for every commercial system and can be individualized to your preference.

## AC DAISY CHAINING

Thanks to its unique AC daisy chaining option, Tauro can guarantee significant savings in the cost of cabling and boxes.

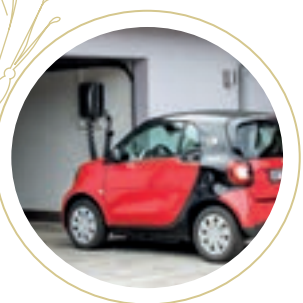
# MAXIMIZED PROFIT DUE TO LOW BOS COSTS AND HIGH YIELD

Thanks to the different features, like the AC daisy chaining or the innovative cooling technology, the Fronius Tauro guarantees not only a reduction of BOS costs but also ensures continuous yield in high temperatures.

# ENERGY SECTOR INTEGRATION – THE KEY TO 24 HOURS OF SUN.

In order to change our energy system, we need to replace fossil fuels with renewables - not only when producing electricity, but also when it comes to heating and mobility. 24 hours of sun means electrifying all energy sectors - and supplying them with 100% renewable electricity such as solar power.

With Fronius solutions for PV, storage, heating and e-mobility, which are available today, becoming 100% renewable is now for the first an individual choice.



100% 

Renewable energy is not only possible during the day but also at night. Together we can make 24 hours of sun a reality for everyone.





The Fronius Ohmpilot allows a home owner to heat his home with excess solar energy that is otherwise given away. Moreover, a heating system is given a rest during sunny months. That extends its life span by 20% and more.

# FRONIUS OHMPILOT

## INTELLIGENT, CONTINUOUSLY ADJUSTABLE REGULATION OF HEAT SOURCES.

The Fronius Ohmpilot is a consumption regulator designed to use excess solar power to heat water. Thanks to the continuously adjustable regulation from 0 to 9 kW, surplus PV current can be put to highly efficient use and fed to the loads in the household.

The Fronius Ohmpilot is primarily used to intelligently control heating elements for providing hot water in boilers and buffer storage tanks, but can also be used for infrared heating or towel radiators. The result is maximum self-consumption, a reduction in the household's CO<sub>2</sub> emissions and less wear on the building's main heating system during the summer months.

TECHNICAL DATA	FRONIUS OHMPILOT
Frequency (Input)	50.0 Hz
Max. input current (I <sub>ac max</sub> )	1 x 16 A / 3 x 16 A
Input voltage	230 V / 400 V
Max. output power	3 kW / 9 kW (each continuously adjustable)
AC output current (I <sub>ac nom</sub> )	1 x 13 A / 3 x 13 A
Dimensions (height x width x depth)	350 x 280 x 110 mm
Output voltage	230 V / 400 V
Frequency (Output)	50.0 Hz

# THE FRONIUS WORLD OF STORAGE SOLUTIONS

THE PATH TO MAXIMUM INDEPENDENCE.

Fronius offers an array of bespoke storage solutions designed to satisfy every need – from laying the foundations for a future storage solution to installing a fully integrated system: the storage solutions with Fronius hybrid inverter and Fronius Ohmpilot.

MAXIMUM  
INDEPENDENCE

1 Fronius Hybrid-Inverter



2 Fronius Inverter



3 Fronius Smart Meter



4 Fronius Ohmpilot





### DC-COUPLED BATTERY STORAGE SYSTEM WITH THERMAL STORAGE SYSTEM AND GRID BACK-UP FUNCTION

The complete system with grid back-up function increases self-consumption to up to 100 %, thus enabling maximum independence.



### DC-COUPLED BATTERY STORAGE SYSTEM WITH GRID BACK-UP FUNCTION

The storage solution with full back-up function is infused with proven quality.



### DC-COUPLED BATTERY STORAGE SYSTEM

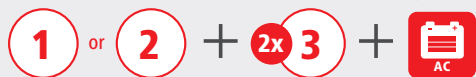
The Fronius Symo Hybrid inverter can be combined with the LG Chem RESU, BYD Battery Box HV or BYD Battery-Box Premium HVM. The GEN24 Plus is compatible with BYD Battery-Box Premium HVS/HVM and create a competitively priced storage solution for quality- and cost-conscious system owners.



### PV STRING-COUPLED BATTERY STORAGE SYSTEM

Any Fronius inverter\* combined with a battery from Solarwatt creates the perfect storage solution for single-phase markets.

\* Exception: Fronius hybrid inverters



### AC-COUPLED BATTERY STORAGE SYSTEM

The inverters can be combined with an AC-coupled storage system, guaranteeing straightforward integration into Fronius Solar.web system monitoring.\*

\* AC battery visualisation coming in 2020



### THERMAL STORAGE SYSTEM

The Fronius Ohmpilot not only maximises your rate of self-consumption by heating water, but it is also the simplest storage solution from Fronius.



### STORAGE SYSTEM READY WITH HYBRID INVERTERS

The hybrid inverters, when combined with a Fronius Smart Meter and Solar.web, provide an energy consumption overview and lay the groundwork for future storage systems.

# FRONIUS ENERGY PROFILING

Fronius Energy Profiling allows for well-grounded energy use analyses. Thus it enables the installer to provide a personalized, data-based customer service. Using Fronius Energy Profiling, he is able to offer customized solutions that truly make sense to his clients.



In order to achieve effective Energy Profiling, PV as well as batteries and the major loads need to be represented in the monitoring tool Fronius Solar.web. Up to 4 Fronius Smart Meters can provide the most relevant information and – together with Solar.web – form the basis for the analysis



# FRONIUS SOLAR.WEB

## NOT JUST A MONITORING TOOL.

With Fronius Solar.web, energy systems can be conveniently monitored and analyzed.

### BENEFITS OF SOLAR.WEB

- / Energy Profiling Functions
- / Presentation of system data
- / Attractive visualization
- / Automatic system faults notification
- / Access to remote software updates and software based product improvements
- / Installer system fleet management

Fronius Solar.web started off as a mere tool for monitoring and visualizing PV systems. Today, it is much more than that – it is the basis for detailed analyses. For the end customer, Solar.web is more and more becoming a hub for controlling and operating energy flows. For the installer, it has become the key to a personalized, data-based customer service.



# FRONIUS SNAPINVERTER

The SnapINverter generation features a uniform, intelligent design and maximum flexibility. As an installer, you are sure to enjoy the benefits of simple installation and commissioning along with quick and straightforward servicing. Thanks to the standardized product line ranging from 1.5 to 27.0 kW, the SnapINverters are the ideal choice for any system size, from family homes through to large-scale installations.

Available with a  
Fronius Smart Meter.



TECHNICAL DATA	FRONIUS GALVO	FRONIUS PRIMO	FRONIUS SYMO HYBRID 3-5.0 kW
Phase Category	Single-phase 230 V	Single-phase 230 V	Three-phase 230 V / 400 V
Power classes	1.5 / 2 / 2.5 / 3 / 3.1 kW	3 / 3.5 / 3.6 / 4 / 4.6 / 5 / 6 / 8.2 kW	3 / 4 / 5 kW
MPP-Tracker	1	2	1
IP Rating	IP 65	IP 65	IP 65
Dimensions (height x width x depth)	645 x 431 x 204 mm	645 x 431 x 204 mm	645 x 431 x 204 mm
Weight	16.4 kg (1.5 / 2 kW) / 16.8 kg (2.5 / 3 / 3.1 kW)	21.5 kg	19.9 kg
Superflex Design / Dynamic Peak Manager	no	yes	yes
Hybrid	no	no	yes

## CHARACTERISTICS OF FRONIUS SNAPINVERTERS



### SnapINverter Technology

- / Simple, standardised mounting system, user interface and set-up procedure.
- / Connection area separate from power stage set compartment.
- / Hinged design for easy installation and servicing.



### Integrated Data Communication

- / Fully integrated data logging, WLAN, Ethernet, energy management, web server, and a range of interfaces.
- / Connect to third-party components via Modbus TCP SunSpec, Modbus RTU SunSpec, or Fronius Solar API (JSON).



### Smart Grid Ready

- / Smart functions are built into the devices including control functions for optimum feed-in of reactive power and effective power.
- / Stable grid operation is enabled when the PV system density is high and feed-in interruptions are prevented.



The Fronius SnapINverters are characterized by their consistent intelligent design and maximum flexibility.

TECHNICAL DATA	FRONIUS SMART METER
Options	63A-1 / 63A-3 / 50kA-3
Grid connection	single-phase or three-phase
Current measurement	direct connection or via CTs
Dimensions (height x width x depth)	89 x 35 x 66 mm / 89 x 71 x 66 mm
Communication	Modbus RTU

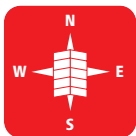


FRONIUS SYMO 3-8.2 kW	FRONIUS SYMO 10-20 kW	FRONIUS ECO
Three-phase 230 V / 400 V	Three-phase 230 V / 400 V	Three-phase 230 V / 400 V
3 / 3.7 / 4.5 / 5 / 6 / 7 / 8.2 kW	10 / 12.5 / 15 / 17.5 / 20 kW	25 / 27 kW
2	2	1
IP 65	IP 66	IP 66
645 x 431 x 204 mm	725 x 510 x 225 mm	725 x 510 x 225 mm
19.9 kg	34.8 kg (10 / 12.5 kW) / 43.4 kg (15 / 17.5 / 20 kW)	35.7 kg
yes	yes	no
no	no	no



### Export Limitation / Zero feed-in

/ Limit the amount of energy fed into the grid wherever feed-in restrictions are applicable.  
/ Only a Fronius Smart Meter is required.



### Superflex Design

/ Two MPP trackers in conjunction with a high system voltage and wide DC input voltage range; every DC input has its own MPP tracker.  
/ Single inverter for different roof orientations, shading of one or two strings or the use of residual modules.

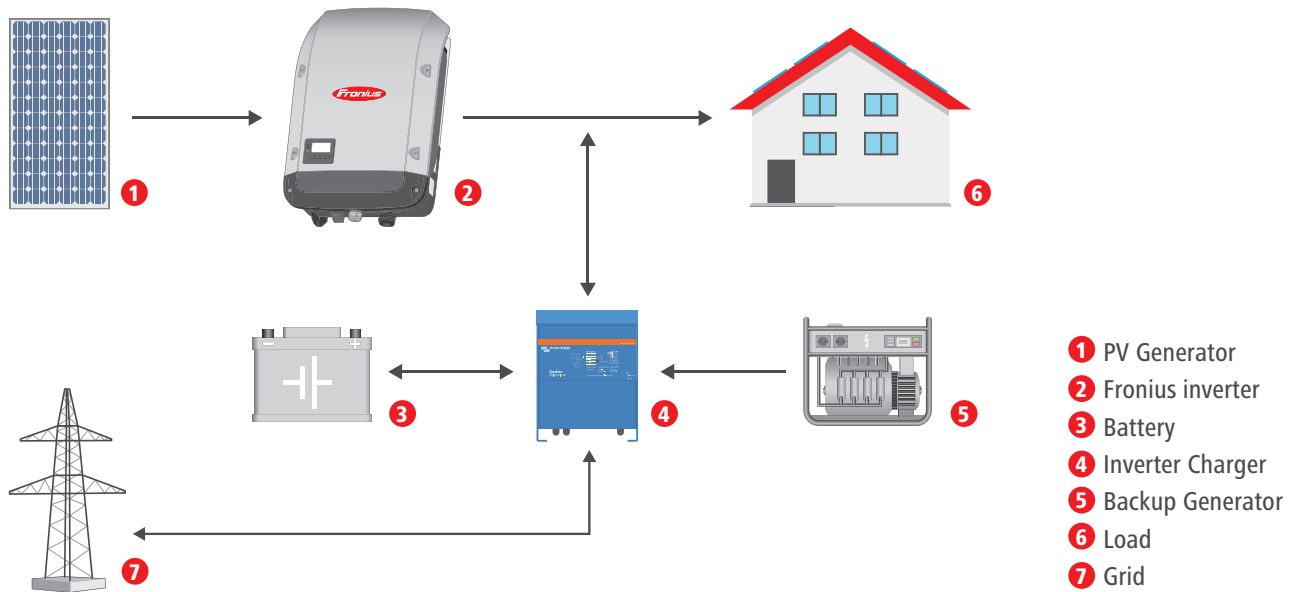


### Dynamic Peak Manager

/ New MPP tracking algorithm.  
/ Automatically checks the characteristic curve on a regular basis and finds the Global Maximum Power Point (GMPP), even in partial shade.

# FRONIUS MICROGRID SOLUTION

Microgrids in remote regions are often supplied by inverter chargers (off-grid inverters with batteries). PV systems with Fronius grid-tied inverters can be easily integrated into microgrids of this kind, as Fronius inverters have a special MicroGrid Setup for this purpose complete with various functions to ensure stable microgrid operation.



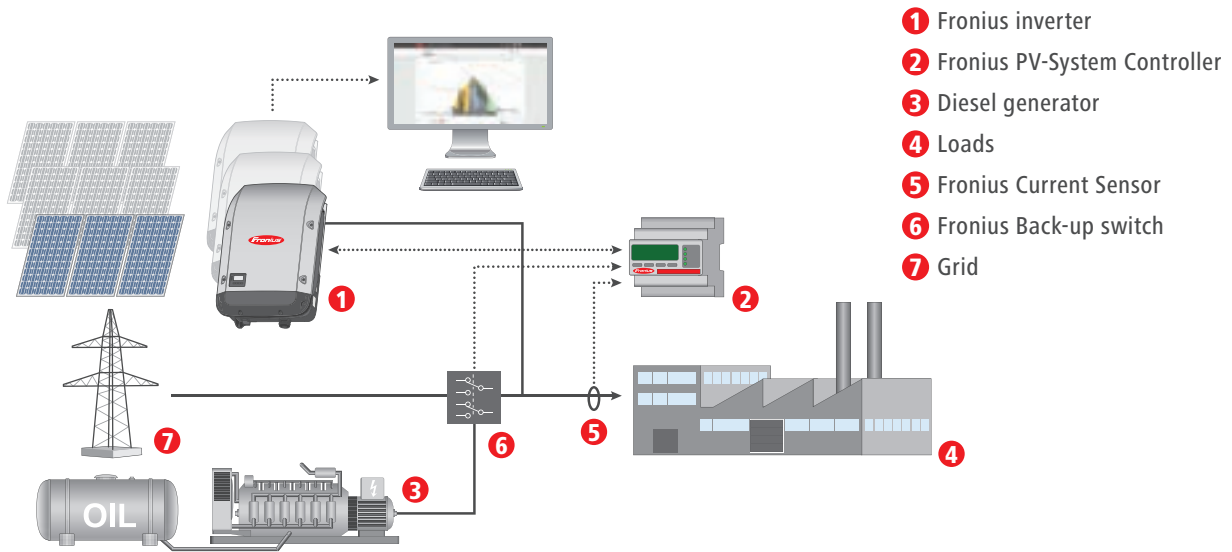
The Fronius inverter provides the MicroGrid with as much PV energy as possible. If the load is less than the maximum capacity of the PV generator and if the batteries are already full (or the charging power of the inverter charger is too low), automatic PV power reduction will be required.





# FRONIUS PV-GENSET EASY

With the Fronius PV Genset Easy solution, photovoltaic systems can be integrated into existing diesel systems both quickly and easily. The solution is optimized for low-voltage applications with one diesel generator, although it also works for back-up applications. For solutions optimized for more than one diesel generator please get in touch with your Fronius contact person.



## FRONIUS WARRANTIES

All Fronius string inverters and storage units come with a two-year warranty as standard. If you register your product at Solar.web you can choose from several additional extended warranty models to find one that suits your individual needs.\*

01 / PRODUCT REGISTRATION IN  
FRONIUS SOLAR.WEB

02 / SELECT FREE WARRANTY MODEL

03 / PURCHASE WARRANTY EXTENSIONS FOR  
GREATER PROTECTION

Fronius offers the perfect warranty for your individual needs. Warranty extensions of up to 20 years are available for purchase.

\* Applies to certain countries only. For further information on all countries, please visit [www.fronius.com/solar/warranty](http://www.fronius.com/solar/warranty).

# ONE VISION. STRONG PARTNERS.

We give Fronius System Partners an exclusive competitive advantage: not only for successful sales, but also in terms of the expert implementation and support of our system solutions.

## THE FRONIUS INSTALLER

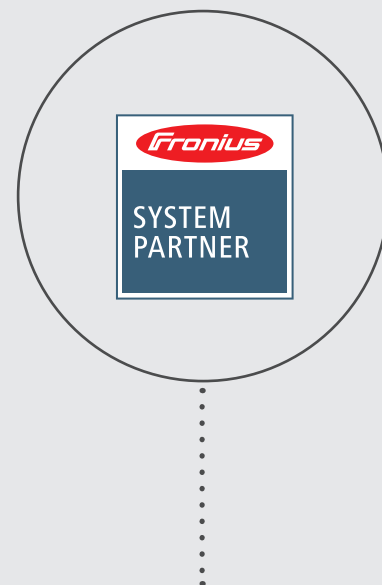
- / The strong base for a successful cooperation
- / Fronius installers can exchange the entire inverter in a service case

## FRONIUS SYSTEM PARTNER

- / Technical expertise straight from the manufacturer: Attend our training courses
- / The fastest service plan on the market: Our PC board replacement concept
- / The best support (Fronius SOS, expert support on our technical hotline)
- / Exclusive services such as sales and marketing support, and regular events

## FRONIUS SOS - SOLAR ONLINE SUPPORT

- / Our platform designed for installers that allows for quick and efficient troubleshooting
- / All you need is a laptop or smart device and the serial number of the inverter
- / Available 24/7



# AT A GLANCE: ITEM NUMBERS.

FRONIUS PRIMO	ITEM NUMBER
Fronius Primo 3.0-1	4,210,069
Fronius Primo 3.5-1	4,210,068
Fronius Primo 3.6-1	4,210,067
Fronius Primo 4.0-1	4,210,066
Fronius Primo 4.6-1	4,210,065
Fronius Primo 5.0-1	4,210,063
Fronius Primo 5.0-1 AUS	4,210,663
Fronius Primo 6.0-1	4,210,062
Fronius Primo 8.2-1	4,210,060

FRONIUS GALVO	ITEM NUMBER
Fronius Galvo 1.5-1	4,200,011
Fronius Galvo 2.0-1	4,200,012
Fronius Galvo 2.5-1	4,200,013
Fronius Galvo 3.0-1	4,200,014
Fronius Galvo 3.1-1	4,200,015

FRONIUS PRIMO GEN24 PLUS	ITEM NUMBER
Fronius Primo GEN24 Plus 3.0	4,210,140,002
Fronius Primo GEN24 Plus 3.6	4,210,141,002
Fronius Primo GEN24 Plus 4.0	4,210,142,002
Fronius Primo GEN24 Plus 4.6	4,210,143,002
Fronius Primo GEN24 Plus 5.0	4,210,144,002
Fronius Primo GEN24 Plus 6.0	4,210,145,002

FRONIUS SYMO GEN24 PLUS	ITEM NUMBER
Fronius Symo GEN24 Plus 6.0	4,210,153,002
Fronius Symo GEN24 Plus 8.0	4,210,155,002
Fronius Symo GEN24 Plus 10.0	4,210,157,002

FRONIUS ECO	ITEM NUMBER
Fronius Eco 25.0-3	4,210,056,040
Fronius Eco 27.0-3	4,210,057,040

Accessories	
DC Connector Kit 10 - 27 kVA	4,251,015
DC Connector Kit 35	4,251,029
Option DC SPD Typ 1+2 - S	4,251,024
Option DC SPD Typ 1+2 - M	4,251,025
Option DC SPD Typ 2 - S	4,251,019
Option 1 DC-plug +-pair MC4	4,251,021
Option fuses 6x15A DC+	4,251,022
Option 6xbolts DC+	4,251,023

FRONIUS SYMO	ITEM NUMBER
Fronius Symo 3.0-3-S	4,210,030
Fronius Symo 3.7-3-S	4,210,031
Fronius Symo 4.5-3-S	4,210,032
Fronius Symo 3.0-3-M	4,210,036
Fronius Symo 3.7-3-M	4,210,038
Fronius Symo 4.5-3-M	4,210,033
Fronius Symo 5.0-3-M	4,210,034
Fronius Symo 6.0-3-M	4,210,040
Fronius Symo 7.0-3-M	4,210,041
Fronius Symo 8.2-3-M	4,210,039
Fronius Symo 10.0-3-M	4,210,050
Fronius Symo 12.5-3-M	4,210,051
Fronius Symo 15.0-3-M	4,210,052
Fronius Symo 17.5-3-M	4,210,053
Fronius Symo 20.0-3-M	4,210,054

Accessories	
DC Connector Kit 10 - 27 kVA	4,251,015
DC Connector Kit 35	4,251,029
Option DC SPD Typ 1+2 - S	4,251,024
Option DC SPD Typ 1+2 - M	4,251,025
Option DC SPD Typ 2 - S	4,251,019
Option DC SPD Typ 2 - M	4,251,020
Option 1 DC-plug +-pair MC4	4,251,021
Retrofit DC OVP Type 2	41,0001,0708
Retrofit DC OVP Type 1+2	41,0001,0719

FRONIUS SYMO HYBRID	ITEM NUMBER
Fronius Symo Hybrid 3.0-3-S	4,210,070
Fronius Symo Hybrid 4.0-3-S	4,210,071
Fronius Symo Hybrid 5.0-3-S	4,210,072

FRONIUS OHMPILOT	ITEM NUMBER
Fronius Ohmpilot 9.0-3	4,240,160

FRONIUS PV-GENSET SOLUTION	ITEM NUMBER
Fronius PV System Controller	43,0001,1471
Fronius Genset measurement extension	43,0001,1472
Fronius current sensors 3-ph (40 – 170 kVA 3-ph)	43,0010,0407
Fronius current sensors 1-ph (150 – 1,000 kVA 3-ph)	43,0010,0323
Fronius current sensors 1-ph (500 – 1,400 kVA 3-ph)	43,0010,0322

FRONIUS SYSTEM MONITORING	ITEM NUMBER
Fronius Datamanager Box 2.0	4,240,125
Fronius Sensor Card	4,240,004
Fronius Sensor Card retrofit	4,240,004,Z
Fronius Sensor Box	4,240,104
Fronius Update Package	4,240,019
Grid and system protection	43,0008,0188
Fronius Smart Meter 50kA-3	43,0001,1478
Fronius Smart Meter 63A-3	43,0001,1473
Fronius Smart Meter 63A-1	43,0001,1477

Sensors	
Ambient temperature sensor	43,0001,1188
Module temperature sensor	43,0001,1190
Irradiation sensor	43,0001,1189
Wind Sensor	42,0411,0027

FRONIUS CHECKBOX 500V	ITEM NUMBER
Fronius Checkbox 500V	4,240,155

SERVICES	ITEM NUMBER
Commissioning support	42,005,013
PV System Design	42,008,006

# THREE BUSINESS UNITS, ONE GOAL: TO SET THE STANDARD THROUGH TECHNOLOGICAL ADVANCEMENT.

What began in 1945 as a one-man operation now sets technological standards in the fields of welding technology, photovoltaics and battery charging. Today, the company has around 4,760 employees worldwide and 1,253 patents for product development show the innovative spirit within the company. Sustainable development means for us to implement environmentally relevant and social aspects equally with economic factors. Our goal has remained constant throughout: to be the innovation leader.

## PERFECT WELDING

Our mission is Perfect Welding; a task we have approached with passion and skill for decades in order that our customers can join materials with the perfect weld seam. With our outstanding technologies and services and together with our customer's applications, not only do we solve their specific welding technology problems, but we also make a substantial contribution to increasing their productivity.

## SOLAR ENERGY

Our mission is to achieve 24 hours of sun. Day after day we are hard at work turning this vision of a future in which 100% of the world's energy needs are covered by renewable sources into a reality. We are therefore concentrating on solutions to intelligently, efficiently and economically generate, store, distribute and consume solar energy.

## PERFECT CHARGING

As know-how leaders in the world of battery charging, we deliver exceptional solutions to create the maximum benefit for our customers. For the intralogistics sector, we are committed to energy flow optimisation for electric forklift trucks and are constantly striving for the next innovation. Our powerful charging systems for vehicle workshops guarantee safe and reliable processes.

Further information about all Fronius products and our global sales partners and representatives can be found at [www.fronius.com](http://www.fronius.com)

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