

NEXT LEVEL SOLAR. TODAY, ENERGY IS A CHOICE. TAKE YOUR SOLAR GAME TO THE NEXT LEVEL



(mont)

## 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.

#### FRONIUS: LEADING THE WAY FOR OVER 70 YEARS. OUR PRODUCTION SITE IN SATTLEDT, AUSTRIA.

### SERVICE

Strong partnerships and a firstclass service strategy are our number-one priority. Our Fronius Service Partner program offers installers the fastest service on the market.

### QUALITY

Decades of experience are also reflected in our high quality standards, from development and production through to the servicing of our products. Share why you are 24 hours of sun and add your statement on www.24hoursofsun.com



#### RELIABILITY

Regardless of the source, a reliable energy supply means electricity is always available, whenever it's needed. Fronius has always been guided by the quest to provide the quality, technical support and monitoring that is needed to guarantee this.

## 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.

www.24hoursofsun.com

## 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.

## **E-MOBILITY**

Fronius energy solutions are tested and approved for use with various leading e-mobility products.



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 up to 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 consumers 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 CO2 emissions and less wear on the building's main heating system during the summer months.

DATA	FRONIUS OHMPILOT
Frequency (Input)	50,0 Hz
Max. input current (lac max)	1x16 A / 3x16 A
Input voltage	230 V / 400 V
Max. output power	3 kW / 9 kW (each continuously adjustable)
AC output current (lac nom)	1x13 A / 3x13 A
Output voltage	230 V / 400 V
Frequency (Output)	50,0 Hz

/ 5

# THE FRONIUS SNAPINVERTER GENERATION

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.



DATA	FRONIUS GALVO	FRONIUS PRIMO	FRONIUS SYMO 3-8.2 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 / 3,7 / 4,5 / 5 / 6 / 7 / 8,2 kW
MPP Tracker	1	2	2
IP Rating	IP 65	IP 65	IP 65
Dimensions	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

#### 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.





FRONIUS SYMO 10-20 kW	
Three-phase 230 V / 400 V	
10 / 12,5 / 15 / 17,5 / 20 kW	
2	
IP 66	
725 x 510 x 225 mm	
34,8 kg (10 / 12,5 kW) / 43,4 kg (15 / 17,5 / 20 kW)	
yes	

FRONIUS ECO	
Three-phase 230 V / 400 V	
25 / 27 kW	
1	
IP 66	
725 x 510 x 225 mm	
35,7 kg	
20	



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	89 x 35 x 66 mm / 89 x 71 x 66 mm
Communication	Modbus RTU



#### 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.

# 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 Fronius system: the Fronius Energy Package with Fronius Ohmpilot.

#### COMPATIBLE WITH DC-COUPLED BATTERIES

The Fronius Symo Hybrid can be combined with LG Chem RESU batteries or soon also with BYD Battery-Box batteries. Together they form the economical storage solution for quality- and cost-conscious system owners.

#### FRONIUS SYMO HYBRID WITH FRONIUS SMART METER AND SOLAR.WEB

The Fronius Symo Hybrid is at the heart of every storage solution from Fronius. Together with a Smart Meter and the Fronius Solar.web monitoring tool, it not only provides an overview of your actual electricity consumption, but also lays the foundations for future energy storage upgrades.





#### FRONIUS ENERGY PACKAGE AND FRONIUS OHMPILOT

The complete system from a single source maximises your rate of self-consumption to up to 100% and thus enables maximum independence.

## MAXIMUM INDEPENDENCE



#### FRONIUS ENERGY PACKAGE

The complete storage solution with emergency power function is infused with proven Fronius quality both in the products and in the support services.



#### COMPATIBLE WITH STRING COUPLED BATTERIES

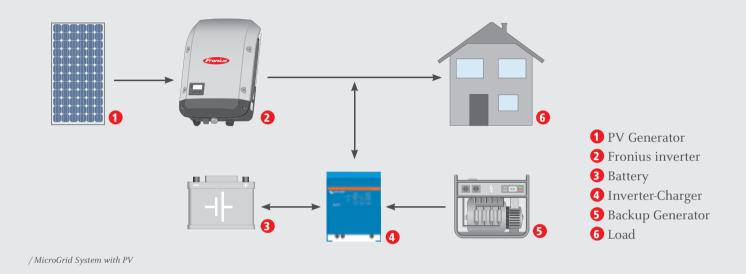
The Fronius Primo in combination with a Solarwatt battery is the storage solution for single-phase markets.

#### FRONIUS HEATING SOLUTION

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

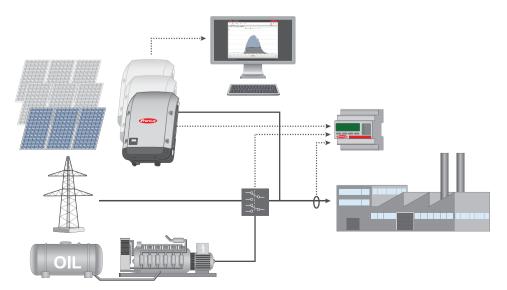
# **FRONIUS MICROGRID SOLUTION**

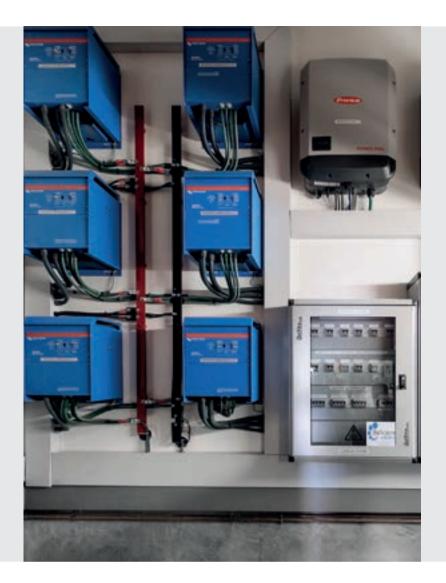
Microgrids in remote regions are often supplied by inverter chargers (off-grid inverters with batteries). PV systems with Fronius grid-tied inverters can be easily integrated into microgrids of this kind, as Fronius inverters have a special MicroGrid Setup for this purpose complete with various functions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



# 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.

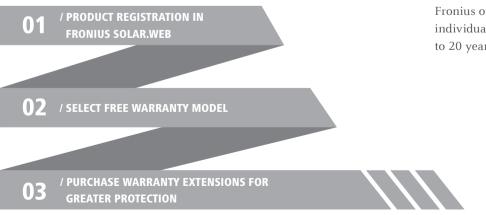




The Fronius inverter provides the MicroGrid with as much PV energy as possible. If the load is less than the maximum capacity of the PV generator and if the batteries are already full (or the charging power of the inverter charger is too low), automatic PV power reduction will be required.

## **FRONIUS WARRANTIES**

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

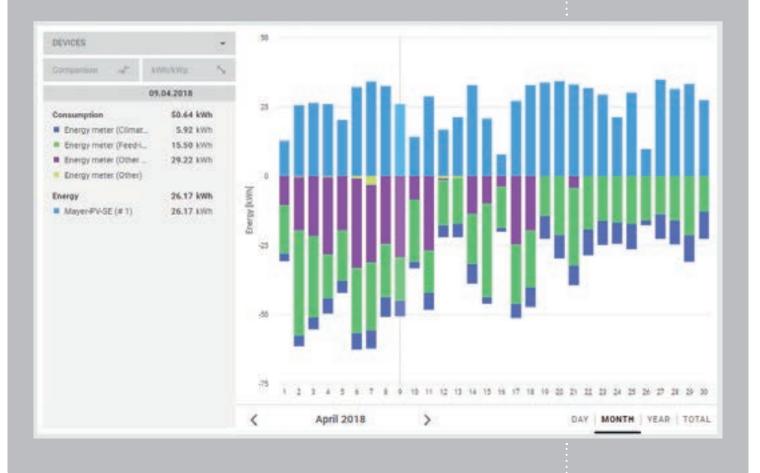


Fronius offers the perfect warranty for your individual needs. Warranty extensions of up to 20 years are available for purchase.

## 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. To this end, up to 4 Fronius Smart Meters can provide the most relevant information and – together with Solar.web – form the basis for the analysis.



ART METER



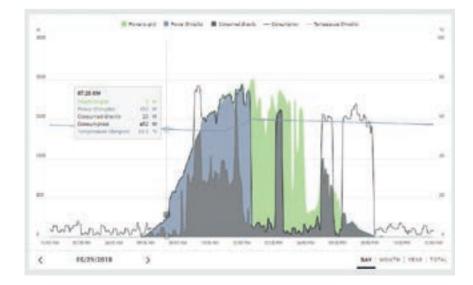
With Fronius Solar.web, energy systems can be conveniently monitored and analyzed.

#### **BENEFITS OF SOLAR.WEB**

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

## FRONIUS SOLAR.WEB NOT JUST A MONITORING TOOL

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.



## EXCELLENCE IN SERVICE AND SUPPORT

Our aftersales service is considered the global benchmark within the industry.







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SOS.FRONIUS.COM
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#### THE FRONIUS INSTALLER

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

#### THE FRONIUS SERVICE PARTNER PROGRAMME

/ 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

#### GET EVEN CLOSER WITH FRONIUS FSP PLUS

/ Together we can reach our goal of achieving widespread, high-quality service coverage

- / Serve Fronius customers that do not have a service company at hand
- / Utilize the benefits of a strong service and support partnership

#### FRONIUS SOS - SOLAR ONLINE SUPPORT

- / Our platform designed for installers that allows for quick and efficient trouble shooting
- / 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 ENERGY PACKAGE	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 Solar Battery 4.5	4,220,110
Fronius Solar Battery 6.0	4,220,111
Fronius Solar Battery 7.5	4,220,112
Fronius Solar Battery 9.0	4,220,113
Fronius Solar Battery 10.5	4,220,114
Fronius Solar Battery 12.0	4,220,115
Fronius Smart Meter 50kA-3	43,0001,1478
Fronius Smart Meter 63A-3	43,0001,1473

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 POWER PACKAGE	ITEM NUMBER
Fronius AC Combiner, left	4,240,149
Fronius AC Combiner, right	4,240,150

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

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 Sensor Card4,240,004Fronius Sensor Card retrofit4,240,004,ZFronius Sensor Box4,240,104Fronius Update Package4,240,019Grid and system protection43,0008,0188Fronius Smart Meter 50kA-343,0001,1478Fronius Smart Meter 63A-343,0001,1477Fronius Smart Meter 63A-143,0001,1477SensorsAmbient temperature sensor43,0001,1188Module temperature sensor43,0001,1190Irradiation sensor43,0001,1189	FRONIUS SYSTEM MONITORING	ITEM NUMBER
Fronius Sensor Card retrofit4,240,004,ZFronius Sensor Box4,240,104Fronius Update Package4,240,019Grid and system protection43,0008,0188Fronius Smart Meter 50kA-343,0001,1478Fronius Smart Meter 63A-343,0001,1473Fronius Smart Meter 63A-143,0001,1477SensorsAmbient temperature sensor43,0001,1188Module temperature sensor43,0001,1190Irradiation sensor43,0001,1189	Fronius Datamanager Box 2.0	4,240,125
Fronius Sensor Box4,240,104Fronius Update Package4,240,019Grid and system protection43,0008,0188Fronius Smart Meter 50kA-343,0001,1478Fronius Smart Meter 63A-343,0001,1473Fronius Smart Meter 63A-143,0001,1477SensorsAmbient temperature sensor43,0001,1188Module temperature sensor43,0001,1190Irradiation sensor43,0001,1189	Fronius Sensor Card	4,240,004
Fronius Update Package4,240,019Grid and system protection43,0008,0188Fronius Smart Meter 50kA-343,0001,1478Fronius Smart Meter 63A-343,0001,1473Fronius Smart Meter 63A-143,0001,1477SensorsAmbient temperature sensor43,0001,1188Module temperature sensor43,0001,1190Irradiation sensor43,0001,1189	Fronius Sensor Card retrofit	4,240,004,Z
Grid and system protection43,0008,0188Fronius Smart Meter 50kA-343,0001,1478Fronius Smart Meter 63A-343,0001,1473Fronius Smart Meter 63A-143,0001,1477SensorsAmbient temperature sensor43,0001,1188Module temperature sensor43,0001,1190Irradiation sensor43,0001,1189	Fronius Sensor Box	4,240,104
Fronius Smart Meter 50kA-343,0001,1478Fronius Smart Meter 63A-343,0001,1473Fronius Smart Meter 63A-143,0001,1477SensorsAmbient temperature sensor43,0001,1188Module temperature sensor43,0001,1190Irradiation sensor43,0001,1189	Fronius Update Package	4,240,019
Fronius Smart Meter 63A-343,0001,1473Fronius Smart Meter 63A-143,0001,1477Sensors	Grid and system protection	43,0008,0188
Fronius Smart Meter 63A-143,0001,1477Sensors43,0001,1188Module temperature sensor43,0001,1188Module temperature sensor43,0001,1190Irradiation sensor43,0001,1189	Fronius Smart Meter 50kA-3	43,0001,1478
SensorsAmbient temperature sensor43,0001,1188Module temperature sensor43,0001,1190Irradiation sensor43,0001,1189	Fronius Smart Meter 63A-3	43,0001,1473
Ambient temperature sensor43,0001,1188Module temperature sensor43,0001,1190Irradiation sensor43,0001,1189	Fronius Smart Meter 63A-1	43,0001,1477
Module temperature sensor43,0001,1190Irradiation sensor43,0001,1189	Sensors	
Irradiation sensor 43,0001,1189	Ambient temperature sensor	43,0001,1188
	Module temperature sensor	43,0001,1190
Wind sensor 42 0411 0027	Irradiation sensor	43,0001,1189
42,0411,0027	Wind sensor	42,0411,0027

FRONIUS CHECKBOX 500V	ITEM NUMBER
Fronius Checkbox 500V	4,240,155
SERVICES	ITEM NUMBER
SERVICES Commissioning support	ITEM NUMBER 42,005,013



## **FRONIUS WORLDWIDE**

With more than 12 GW in inverter power delivered, more than 1.500.000 inverters sold and solutions that make you take your solar game to the next level, Fronius is your partner for solar energy worldwide.



/ Perfect Welding / Solar Energy / Perfect Charging

#### 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 4,550 employees worldwide and 1,241 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.

Further information about all Fronius products and our global sales partners and representatives can be found at www.fronius.com

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