



**SOLAR SOLUTIONS YOU CAN BANK ON.  
FOR DECADES OF SUNRISES TO COME.**

/ Fronius: Leading the way for over 70 years. The Sattledt production site in Austria.



## A FAMILY TRADITION OF QUALITY AND INNOVATION ACROSS THE GLOBE

/ The Solar Energy Division has been working in the field of photovoltaics since 1992. We're a family-owned company with a longstanding tradition in power electronics. From the very first battery charger in 1945, we've been setting global standards in innovation, quality and power conversion. Our innovation is guided by our vision of 24 hours of sun, a future we envisage powered and supported exclusively by renewable energy.

### BANKABILITY

/ Privately owned, Fronius offers customers security and confidence in their purchases. Financially stable and assigned with the best possible risk indicator of 1\* by Dun & Bradstreet, it's clear that Fronius stands for a secure partnership.

### DEPENDABLE POWER

/ By choosing Fronius, customers experience dependable yields with a promise that, if something does fail, a certified Fronius Service Partner can easily repair the system in the field.  
/ Fastest on-site service across the sector.  
/ All string inverters come with a 7 year warranty.\*



\*Choose between a 5 year full warranty or a 7 year warranty  
(2 years full warranty plus 5 years parts warranty).

## QUALITY BUILT TO LAST

/ We are dedicated to building products that will last a lifetime in the harshest conditions. Our extensive tests include weathering, freezing, infrared, vibration and shipping to name a few. Our high standards have named us the quality leader in solar electronics since 2002.



## NATIONAL SUPPORT

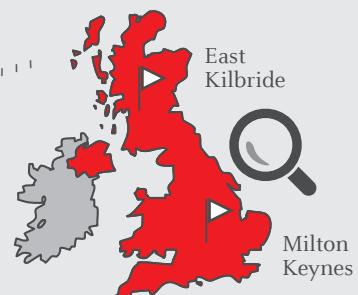
/ System operators can be rest assured that there is a network of installers trained by Fronius who can repair the system quickly on-site.

/ Our UK technical support line is open from 8:30 - 5:30 every week day.

/ Out of hours? No problem. Our Fronius SOS online tool is a 24/7 service for the installer where device data can be retrieved and support and replacements can be requested.

## A GLOBAL ENTERPRISE

/ Today Fronius exports over 90 percent of its products though 24 international subsidiaries and sales distributors in more than 60 countries. With 838 granted patents, we are innovation leaders on a world stage.



# THE FRONIUS SNAPINVERTER GENERATION

/ SnapINverter is the new generation of inverters from Fronius, featuring a simple, standardised mounting system. From family homes to large-scale installations - these inverters can be used anywhere and increase productivity many times over.



	FRONIUS GALVO	FRONIUS PRIMO	FRONIUS SYMO HYBRID
Phase Category	Single-Phase	Single-Phase	Three-Phase
Size Options	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	IP65	IP65	IP65
Dimensions	645 x 431 x 204 mm	645 x 431 x 204 mm	645 x 431 x 204 mm
Weight	16.8 kg	21.5 kg	19.9 kg
Superflex Design		•	
Dynamic Peak Manager		•	•
Multi Flow Technology & Storage Ready			•

## CHARACTERISTICS OF ALL 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.
- / Enables stable grid operation when PV density is high and prevents interruptions to feed-in.



### EXPORT LIMITATION

- / Limit the amount of energy fed back into the grid where limits or zero exports are applicable.
- / Smart meter and Datamanager products required.



FRONIUS SYMO 3 - 8.2 kW	FRONIUS SYMO 10 - 20 kW	FRONIUS ECO
Three-Phase	Three-Phase	Three-Phase
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
IP65	IP66	IP66
645 x 431 x 204 mm	725 x 510 x 225 mm	725 x 510 x 225 mm
3-6 kW, 19.9 kg, 7 & 8 kW, 21.9 kg.	10 & 12.5 kW, 34.8 kg, 15-20 kW, 43.4 kg.	35.7 kg
•	•	•
•	•	•

## CHARACTERISTICS OF SPECIFIC FRONIUS SNAPINVERTERS



### 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.



### READY FOR STORAGE

- / All the functions are built into the inverter so that it can be expanded into a comprehensive storage solution at any time. It can be used with or without a battery.
- / Emergency power function.



### MULTI FLOW TECHNOLOGY

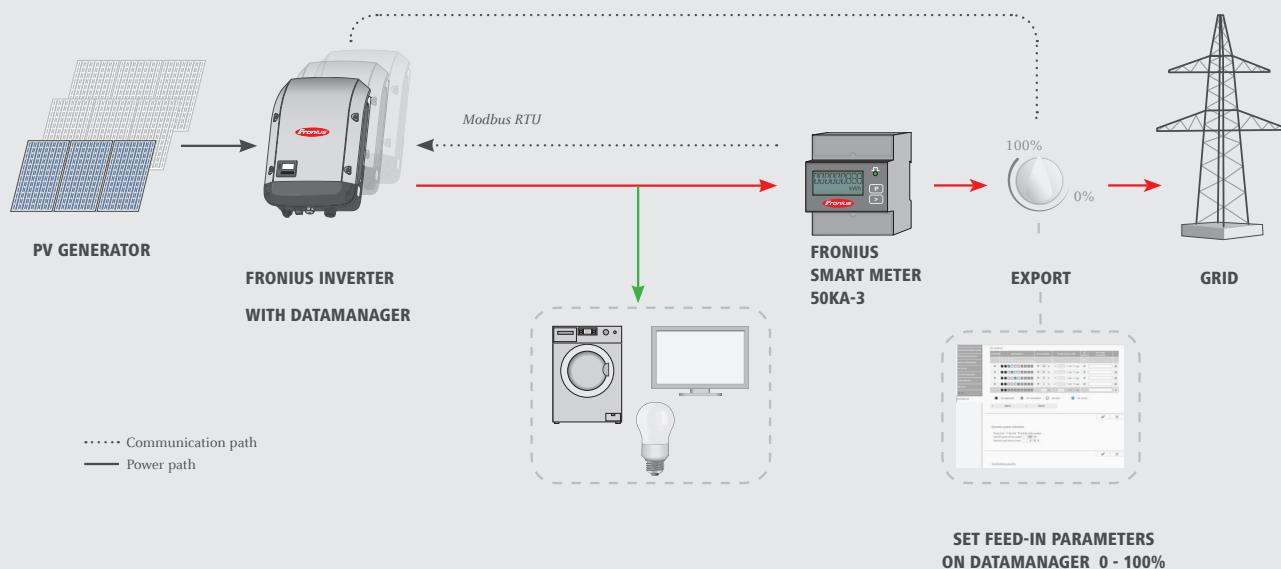
- / Different DC and AC energy flows are possible in parallel.
- / Battery can be charged from the DC or AC side.
- / Suitable for AC-coupled retrofitting.



## **EXPORT LIMITATION? NO PROBLEM. CHOOSE THE FRONIUS SOLUTION FOR LIMITED OR ZERO FEED-IN SITUATIONS**

/ The Fronius Feed-in Limitation system is a simple and economical solution using the Fronius Smart Meter and Fronius Datamanager 2.0 and fully complies with the current UK DNO requirements.

/ The limitation is based on the inverter shifting its optimum operating point to adapt the output power to not exceed a predefined export value to the grid. This predefined value is set within a password protected area of the Fronius Datamanager webinterface and is set in whole percentages from 0 - 100% or as a value in Watts.



The screenshot shows the Fronius Datamanager 2.0 interface. In the 'IO control' section, there are several rows of checkboxes for various pins (e.g., Input pattern, Active power, Power factor comp, UC output, I/O 0) with status indicators (not applicable, not considered, pin open, pin closed). In the 'Dynamic power reduction' section, there are fields for 'Power limit' (radio buttons for 'No limit' or 'limit for entire system'), 'total DC power of the system' (1000 Wp), and 'Maximum grid feed-in power' (0 %). Below these are sections for 'Controlling priority'.

/ Datamanager 2.0 webinterface screen. Simply enter a whole percentage from 0 - 100%, or as a value in Watts, for maximum grid feed in power

## / Dynamic Feed-in Control

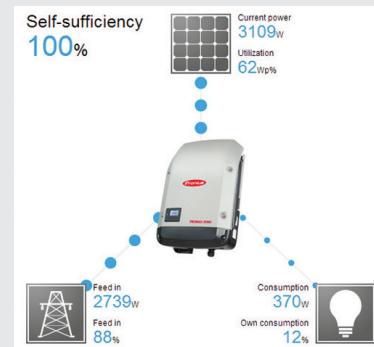
If there are feed-in limits (i.e. max. 70% of the kWp or max. 50 kW) self-consumption should first be considered, before the inverters power is reduced. With the Fronius dynamic feed-in control it is possible to set an individual power limit and to connect the Fronius Smart Meter directly to the inverter. The setting can easily be done on the webinterface of the inverter or Fronius Datamanager.



## / What equipment do I need?

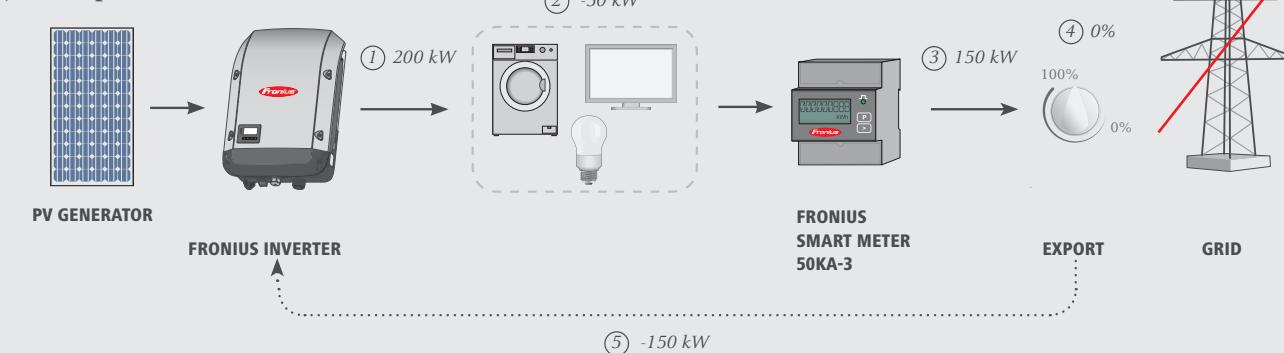
All you need is a Fronius Smart Meter and a Fronius Snapinverter (Fronius Symo, Fronius Primo, Fronius Galvo, Fronius Eco) with built-in Datamanager 2.0 or external Datamanager 2.0 Box which must have the latest software version installed (for zero export requirements contact us directly). For large installations, only one Datamanager is required for up to 100 inverters\*.

The Fronius Smart Meter is a bidirectional meter which optimises self-consumption and records the building's load curve. Thanks to highly accurate measurements and rapid communication via the Modbus RTU interface, dynamic feed-in control when feed-in limits are imposed is fast and accurate. Together with Fronius Datamanager 2.0, Feed-in limitation set-up is made easy.



/ Visualisation of energy flows on Solar.web

## / Example



- ① PV system produces 200 kW
- ② Self consumption of 50 kW
- ③ Possible export to grid 150 kW

- ④ Set export limit to 0% on Datamanager 2.0
- ⑤ Inverter reduces power output by 150 kW to meet 0% export limit

\*Installation/inverter location/cable type/cable run length dependent.

# THE PERFECTION IS IN THE DETAIL

/ Fronius provide a range of products to assist installers before, during and after installation to ensure that maximum efficiency and reliability is achieved.

## CONFIGURATION

/ Fronius Solar.configurator is a free tool that supports precise dimensioning of PV systems. Available both online and offline.



## EASY INSTALL

/ Less than 10 mins with SnapIN feature.



## SYSTEM MONITORING

/ Fronius Solar.web, available online or via an app, and Fronius Solar.TV are free monitoring tools that provide intelligent analysis and system monitoring.



## USER INTERFACE

/ Intuitive inverter display and commissioning wizard for set-up, monitoring and energy management.



## SYSTEM SUPPORT

/ Fronius SOS and Fronius Solar.service provide installers with free tools to enable maintenance, fault finding and action repair or replacement requests on-site.



## SMART METER

/ The Fronius Smart Meter measures power consumption bidirectionally and aids self-consumption, zero export & export limitation.



/ Perfect Welding / Solar Energy / Perfect Charging

## WE HAVE THREE DIVISIONS AND ONE PASSION: SHIFTING THE LIMITS OF POSSIBILITY.

/ Whether welding technology, photovoltaics or battery charging technology – our goal is clearly defined: to be the innovation leader. With around 3,300 employees worldwide, we shift the limits of what's possible - our record of over 830 granted patents is testimony to this. While others progress step by step, we innovate in leaps and bounds. Just as we've always done. The responsible use of our resources forms the basis of our corporate policy.

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

v05 May 2015 EN

Fronius UK Limited  
Maidstone Road, Kingston  
Milton Keynes, MK10 0BD  
United Kingdom  
[pv-sales-uk@fronius.com](mailto:pv-sales-uk@fronius.com)  
[www.fronius.co.uk](http://www.fronius.co.uk)

Fronius International GmbH  
Froniusplatz 1  
4600 Wels  
Austria  
[pv-sales@fronius.com](mailto:pv-sales@fronius.com)  
[www.fronius.com](http://www.fronius.com)