

/ Perfect Welding / Solar Energy / Perfect Charging



SHIFTING THE LIMITS



## **FRONIUS SNAPINVERTERS** **SMARTER, LIGHTER, MORE FLEXIBLE**

### **FRONIUS GALVO, PRIMO, SYMO, SYMO HYBRID & ECO**

A range for all applications. A range for all systems. A range for easy installation.

The Fronius SnapINverter range represents the latest stage in the evolution of inverter technology:

/ Smarter: Inbuilt WLAN monitoring, easy commissioning, energy management function

/ Lighter: Light weight, easy snap-in installation, less installation time and cost, inbuilt DC isolator

/ More flexible: Generous MPPT voltage range, SuperFlex design, Smart Grid ready, future-proof upgradeability

Be impressed: visit [www.fronius.com.au](http://www.fronius.com.au)

# FRONIUS SNAPINVERTERS

## Smarter, Lighter, More Flexible

/ With the SnapINverter product range, Fronius covers the entire spectrum of market requirements, from 1.5 to 27 kW. Whether for a single-family home or a large photovoltaic (PV) system, the comprehensive SnapINverter portfolio contains the perfect device. Customers opting for a Fronius SnapINverter are not only rewarded with a smart inverter that maximises yield, but also with the quality assurance of a company that has been leading the way since 1945. With the Fronius “Smarter, Lighter, More Flexible” SnapINverter range, future-proof comes as standard, and that’s just the beginning.

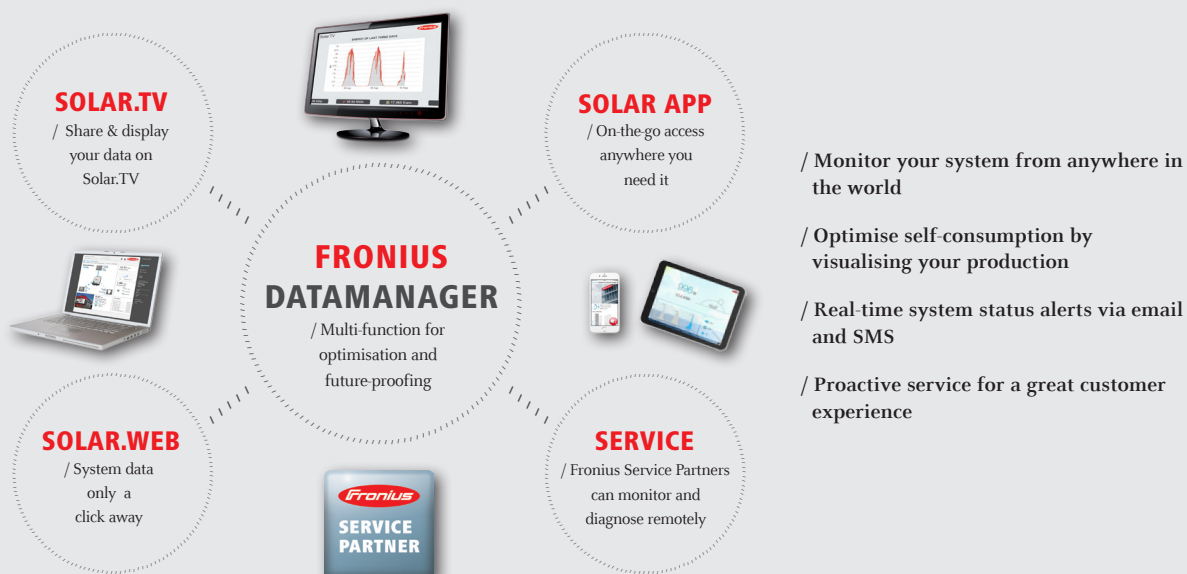


## SMARTER



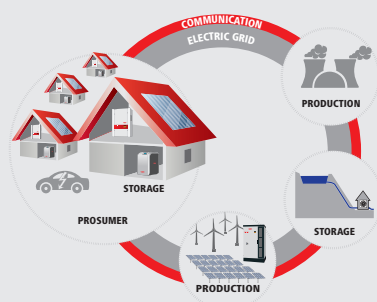
### WI-FI SYSTEM MONITORING

/ The Fronius SnapINverter range efficiently meets data communication and system monitoring needs. An integrated Datamanager ensures easy connection to the internet via Wi-Fi or Ethernet. Keep an eye on your yield using your PC, smart phone or tablet, without any extra cost.



### SMART GRID READY

/ As the number of decentralised energy generators rises, so too does the need for an intelligent power grid. In the near future, grid operators will impose new requirements on local generators including photovoltaic systems - requirements the Fronius SnapINverter range already meets today.

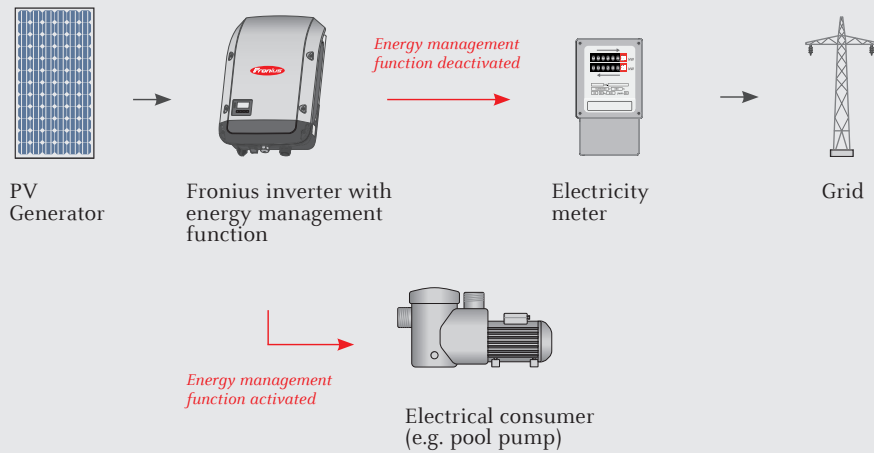


- / Future-proof
- / Meets present & future grid connection requirements
- / Helps to support and improve grid stability



### ENERGY MANAGEMENT FUNCTION

/ With an integrated energy management function, the Fronius SnapINverter range provides a solution for optimising the self-consumption of generated solar power. The energy management function allows power to be directed to a specific electrical appliance, fast-tracking your payback.



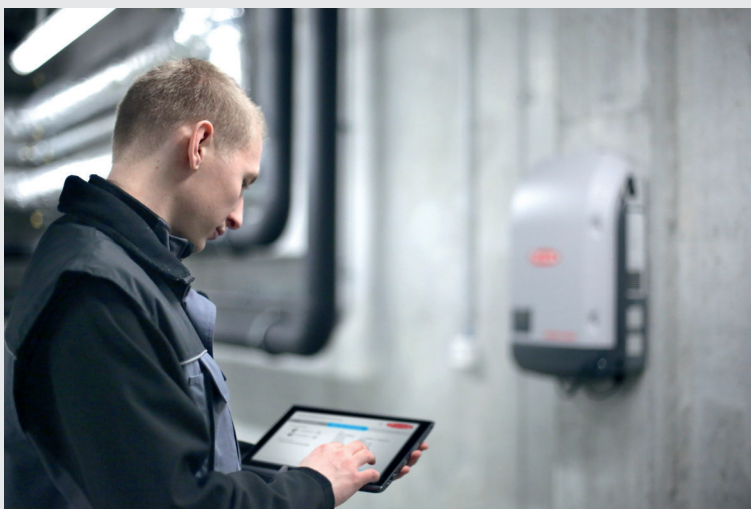
### OPEN DATA COMMUNICATION

/ It is easy to connect Fronius SnapINverters to components from third party suppliers. The open SunSpec Modbus TCP, RTU (RS485) and JSON protocols provide a simple way of establishing a data connection to other systems such as BMS, SCADA and home automation.



### PROACTIVE SERVICE

/ Trained by Fronius, Fronius Service Partners (FSPs) can remotely monitor a PV system using Fronius Solar.web. In the event of a fault, FSPs receive instant notification so they can react immediately to ensure maximum up-time. FSPs have a reserve of spare parts ready to get a PV system back up and running with one trip to site, and thanks to Fronius monitoring capabilities FSPs can also assist with upgrading to a customised battery solution.



- / Fastest service available
- / Protect your investment
- / Nationwide Fronius Service Partners
- / Remote system diagnosis
- / One-trip-to-site service
- / Future-proof system integration



### DC ISOLATOR

/ The integrated DC isolator is compliant with installation standard AS/NZS 5033\*. No additional DC isolator adjacent to the inverter is required, which saves time and cost.

\*Check the Fronius Australia website for technical datasheets outlining installation suitability.

## LIGHTER



### LIGHT WEIGHT

/ The Fronius SnapINverter range is up to 50% lighter than comparable inverters\*. This, in combination with the snap-in design, allows for quick & easy installation.

\*Findings from an internal study carried out June 2015.



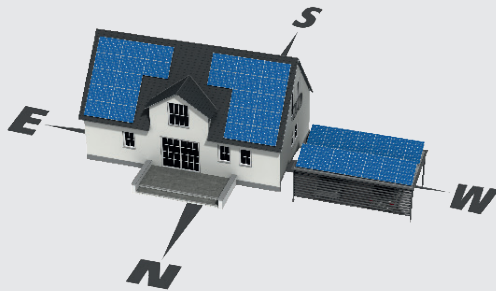
- / Snap-in design is quick and easy to install
  - / Installation can be performed by one person\*
  - / Lower installation costs
  - / Convenient, low-cost maintenance
- \*Please check work safety regulations.\*

## MORE FLEXIBLE



### SUPERFLEX TECHNOLOGY

/ Fronius Superflex technology makes designing a PV system easier than ever. The low starting and very broad voltage range of the two MPPTs allows connection of highly asymmetric configurations. This enables the designer to solve most shading issues, including multiple orientated or partly shaded roofs. In some cases even a 1:9 ratio between MPPT1 and MPPT2 is possible.



- / High system design flexibility
- / Most module configurations can be used
- / Optimised performance for shading



### SOLAR BATTERY OPTIONS

/ Batteries can easily be added to any PV system that uses a Fronius SnapINverter, either in AC coupled or DC coupled system architecture\*. With this future-proof concept, Fronius ensures that every system is primed to integrate storage. Fronius or Tesla batteries can be added at any time, and to help decide which battery size to choose, Fronius Solar.web tracks energy usage\*\* and production.

\*Depending on which SnapINverter is chosen. \*\*Consumption monitoring with installation of additional Fronius Smart Meter.



### DYNAMIC PEAK MANAGER

/ Even in partially shaded conditions the Fronius Dynamic Peak Manager always finds the maximum output power, ensuring that the inverter is always operating at the point of maximum output. Get up to 4 per cent more yield from a system that has to contend from time to time with shade.

# THE FRONIUS SNAPINVERTER RANGE

/ Smarter, Lighter, More Flexible

## SYMO HYBRID

/ The personal storage solution

/ The flexible, future-proof platform perfect for battery storage integration. Three phase.

/ 3.0 to 5.0 kW



## PRIMO

/ Optimised energy management

/ The optimal single phase inverter for self-consumption management

/ 3.0 to 8.2 kW



## SYMO

/ Unrivaled 3-phase technology

/ The super flexible, three phase inverter for commercial applications

/ 3.0 to 20.0 kW



## GALVO

/ Repowering

/ The perfect single phase replacement inverter with high frequency transformer topology

/ 1.5 to 3.0 kW



# FRONIUS SNAPINVERTER GENERATION

## ECO

/ Project optimisation

/ The high power density, three phase inverter for large scale commercial installations

/ 25.0 to 27.0 kW

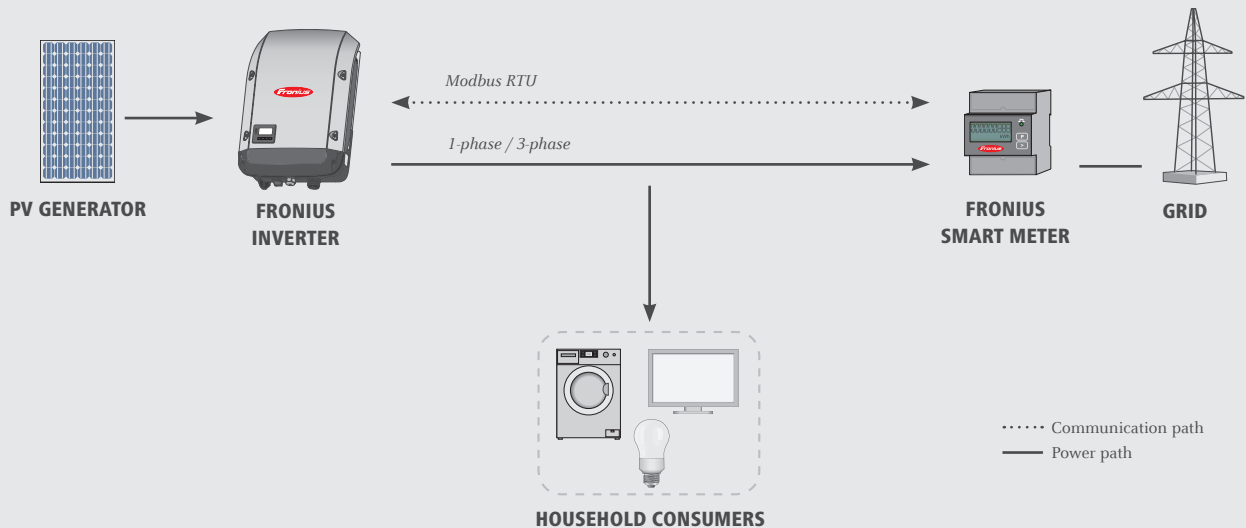


## FRONIUS SNAPINVERTERS INTEGRATED FEATURES

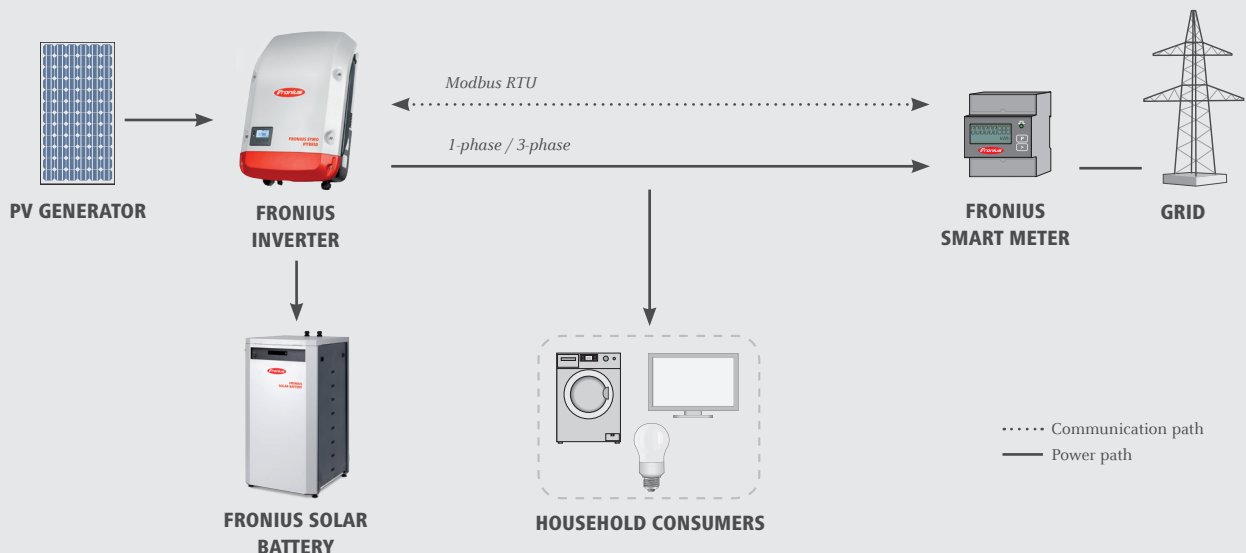
/ Inbuilt features at a glance

	GALVO	PRIMO	SYMO	SYMO HYBRID	ECO
Energy management function inbuilt	✓	✓	✓	✓	✓
Multi MPPTs	-	✓	✓	-	-
Extra broad MPPT voltage window	✓	✓	✓	✓	-
Dynamic Peak Manager: Shading resistant MPPT	-	✓	✓	✓	✓
Suitable for installations under 600V DC	✓	✓	✓	✓	-
Easy installation	✓	✓	✓	✓	✓
DC isolator inbuilt	✓	✓	✓	✓	✓
WLAN monitoring inbuilt	✓	✓	✓	✓	✓
Remote monitoring	✓	✓	✓	✓	✓
Quick commissioning	✓	✓	✓	✓	✓
Smart Grid Ready	✓	✓	✓	✓	✓
Proactive Service Ready	✓	✓	✓	✓	✓
Galvanic Isolation	✓	-	-	-	-

## GRID CONNECTED CONFIGURATION DIAGRAM



## STORAGE SOLUTION CONFIGURATION DIAGRAM



/ The Fronius Smart Meter is compatible with all inverters with an RS485 interface (Modbus RTU). The Fronius Smart Meter works in conjunction with the Fronius Datamanager 2.0 for the Fronius IG<sup>1)</sup>, Fronius IG Plus and Fronius CL inverters, whereas the Fronius Datamanager Box 2.0 is used with the Fronius IG TL, Fronius Agilo and Fronius Agilo TL inverters. The Fronius Smart Meter can be retrofitted at any time together with the Fronius Datamanager 2.0 in inverters that have already been installed.

<sup>1)</sup> Power reduction is not possible.

/ 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 3,000 employees worldwide, we shift the limits of what's possible - our record of over 1,000 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)

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Fronius Australia Pty Ltd.  
90-92 Lambeck Drive  
Tullamarine VIC 3043  
Australia  
[pv-sales-australia@fronius.com](mailto:pv-sales-australia@fronius.com)  
[www.fronius.com.au](http://www.fronius.com.au)

## FRONIUS SNAPINVERTER PERFORMANCE DATA

/ One generation for any application

	GALVO	PRIMO	SYMO	SYMO HYBRID	ECO
AC Output power	1.5 – 3.0kVA	3.0 – 8.2kVA	3.0 – 8.2kVA, 10.0 – 20.0kVA	3.0, 4.0, 5.0kVA	25.0, 27.0kVA
Technology	HF Transformer	Transformerless	Transformerless	Transformerless	Transformerless
Number of phases	1	1	3	3	3
Max input voltage	420V*, 550V*	1000V	1000V	1000V	1000V
DC start up voltage	120V*, 165V*	80V	150V*, 200V*	150V	580V
Number of MPP trackers usable	1	2	1*, 2	1	1
MPP voltage range	120 – 335V*, 165 – 440V*	80 – 800V	150 – 800V*, 200V – 800V*	150 – 800V	580 – 850V
Optimised tracking algorithm	No	Yes	Yes	Yes	No
Max efficiency	96.1%	97.8%	98.1%	97.6%	98.7%
Degree of protection	IP 65	IP 65	IP 65*, IP 66*	IP 65	IP 66
Weight	16.8kg	21.5kg	16.0kg*, 19.9kg*, 21.9kg*, 34.8kg*, 43.4kg*	22.0kg	35.7kg
Power factor	0.85 - 1 ind./cap.	0.85 - 1 ind./cap.	0.70 - 1 ind./cap.* 0.85 - 1 ind./cap.*	0.85 - 1 ind./cap.	0.0 - 1 ind./cap.
Dimensions (h x w x d mm)	645 x 431 x 204	645 x 431 x 204	645 x 431 x 204* 725 x 510 x 225*	645 x 431 x 204	725 x 510 x 225

\* Depends on specific inverter model. Please refer to specific datasheet for more information.

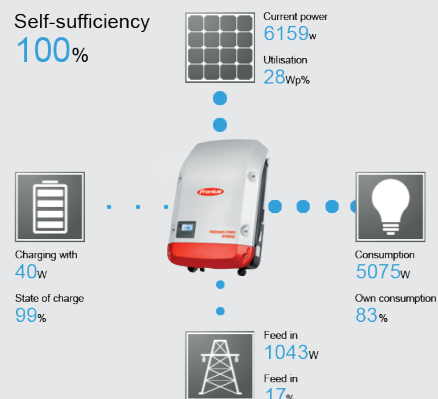
## ACCESSORIES AND SOLUTIONS

### FRONIUS SMART METER

/ Thanks to its monitoring capabilities, the Fronius Smart Meter plays a key role in making a PV system storage ready. Combined with Fronius Solar.web, the Fronius Smart Meter presents a clear overview of power consumption, feed-in and surplus energy, enabling improved energy management and giving accurate information on future battery requirements.

### SOLAR.WEB

/ PV systems can be monitored, analysed and compared quickly and easily using the Fronius Solar.web online portal. Up-to-date system data can be accessed at any time and is clearly presented via a user-friendly range of analysis functions. Solar.web is also a convenient platform for adjusting system configurations.



/ Battery Charging Systems / Welding Technology / Solar Electronics

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Fronius Australia Pty Ltd.  
90-92 Lambeck Drive  
Tullamarine VIC 3043  
Australia  
pv-sales-australia@fronius.com  
www.fronius.com.au

Fronius International GmbH  
Froniusplatz 1  
4600 Wels  
Austria  
pv@fronius.com  
www.fronius.com

# FRONIUS SMART METER

/ Measuring power consumption, feed-in and surplus energy in the home



/ The Fronius Smart Meter is a bidirectional meter which optimises self-consumption and records the household'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 faster and more accurate than with the S0 meter. Together with Fronius Solar.web, the Fronius Smart Meter presents a clear overview of power consumption. In the Fronius Energy Package storage solution, the Fronius Smart Meter provides perfectly coordinated management of the various energy flows and optimises overall energy management. The Fronius Smart Meter is ideally suited for use with the Fronius Symo, Fronius Symo Hybrid, Fronius Galvo, Fronius Primo, Fronius Eco inverters and the Fronius Datamanager 2.0.

## FRONIUS SMART METER

TECHNICAL DATA	FRONIUS SMART METER 63A-1 residential	FRONIUS SMART METER 63A-3 residential	FRONIUS SMART METER 50kA-3 commercial
Nominal voltage	230 – 240 V	400 – 415 V	400 – 415 V
Max. current	1 x 63 A	3 x 63 A	3 x 50,000 A <sup>1)</sup>
Cable cross-section, power path	1 – 16 mm <sup>2</sup>	1 – 16 mm <sup>2</sup>	0.05 - 4 mm <sup>2</sup>
Cable cross-section, communication	0.05 – 4 mm <sup>2</sup>	0.05 – 4 mm <sup>2</sup>	0.05 – 4 mm <sup>2</sup>
Installation	DIN rail	DIN rail	DIN rail
Housing (width)	2 pole DIN 43880	4 pole DIN 43880	4 pole DIN 43880
Measurement (mm)	89 x 35 x 65.6	89 x 71.2 x 65.6	89 x 71.2 x 65.6
Accuracy class	1	1	1
Interface to inverter	Modbus RTU (RS485)	Modbus RTU (RS485)	Modbus RTU (RS485)
Display	6-digit LCD	8-digit LCD	8-digit LCD
Connection for measurement (current)	Direct connect	Direct connect	Via current transducers (CTs) <sup>2)</sup>

<sup>1)</sup> CTs with 5A secondary output <sup>2)</sup> CTs are not included in Smart Meter

## THE ADVANTAGES AT A GLANCE

- / Fast and accurate dynamic feed-in control
- / Clear overview of power consumption, feed-in and surplus energy in Fronius Solar.web
- / Optimised energy management with the Fronius Energy Package storage solution

