

TECHNICAL ARTICLE

SnapINverter – the new generation of inverters

With the SnapINverter generation, quality leader Fronius is proud to present a new and globally unique product range. All string inverters from Fronius are simultaneously SnapINverters. Fronius Galvo, Fronius Symo and Fronius Symo Hybrid cover the entire power range from 1.5 to 20 kW. All the benefits of these devices are united under the motto “seen one, seen them all”. Over the next year they will be followed by the Fronius Primo and Fronius Eco inverters.

The new generation of Fronius inverters offers a number of unique benefits for the installer. They are safe and easy to install and service, extremely flexible and usable anywhere. They are also future-proof as standard and user-friendly.

Standardised fitting and installation experience

All Fronius SnapINverters offer a standardised installation experience, whereby each model is installed and commissioned in exactly the same way. By making life easier for installers, we are also saving their time and money. After just one training course, all SnapINverters can be fitted and installed with the greatest of ease.

Such an approach also delivers clear benefits in terms of installer training. The synergies not only extend across the entire product range, but can also promote a fluid transfer of knowledge within a company. Lower costs, quicker delivery of projects and associated improvements in efficiency and productivity are the significant advantages for the installer.

Installation and servicing: simple and safe

The unique hinged system with “SnapIN” function simplifies the inverter fitting and installation process. After fitting the lightweight wall bracket and cabling the device, the inverter is placed in the wall bracket before being swivelled into position and secured. The lightweight, compact design of the SnapINverter also makes for easy installation. No special tools are needed and the devices can also be fitted to pillars. Fitting, installation and servicing are quicker than ever before and costs are reduced.

Maximum flexibility and universal usability

With the SnapINverter product range, Fronius covers the entire spectrum of market requirements from 1.5 to 20 kW. Whether for a single-family home or a large photovoltaic system, the comprehensive inverter portfolio has the right device for every situation.

The Fronius Galvo SnapINverter

With power categories from 1.5 to 3.1 kW, the Fronius Galvo single-phase HF transformer inverter is ideal for private households. It combines maximum flexibility, innovative technologies and the highest levels of safety in a single device. With its low power categories, the inverter allows a particularly high self-consumption rate. The integral energy management relay can be used to control consumers, thereby further increasing self-consumption.

The Fronius Symo SnapINverter

With a comprehensive product range from 3 to 20 kW, the three-phase Fronius Symo inverter offers maximum flexibility. Whether for a single-family home or a large-scale system, this inverter series is suitable for every installation size. An internet connection via WLAN or Ethernet fitted as standard as well as a practical system design featuring two MPP (Maximum Power Point) trackers make the device extremely flexible and communicative. Above all, the system design is exceptionally flexible, thanks to the Fronius SuperFlex Design.

Fronius SuperFlex Design

Whether for photovoltaic systems facing east/west, with or without shading, or connection of residual modules, the SuperFlex Design makes the Fronius Symo series suitable for all requirements.

It guarantees a simple and flexible system design, thanks to the high system voltage (1000 V) and wide input voltage range (150 V to 800 V). Flexibility is also assured by two MPP trackers and the inverter's suitability for both indoor and unrestricted outdoor applications.

With a high system voltage of 1,000 V, wide MPP voltage range and two high-performance MPP trackers, the PV system can be flexibly adapted to any roof configuration. As well as outstanding system planning features, the Fronius Symo also has a completely new type of MPP tracking algorithm – the Dynamic Peak Manager.

Dynamic Peak Manager ensures maximum output and yield

The Dynamic Peak Manager guarantees maximum power and yield, even under difficult conditions such as (partial) shade, module failure, etc. This is possible thanks to the completely autonomous operation of the two MPP trackers. A particularly impressive feature of the Dynamic Peak Manager is that it automatically checks the entire characteristic at regular intervals to ensure it can always find the maximum operating point, even when partially shaded. It dynamically adapts its behaviour when searching for the optimal operating point. This allows the inverter to deliver the maximum output in all circumstances.

The Fronius Symo Hybrid SnapINverter

The SnapINverter family also includes the storage-capable Fronius Symo Hybrid. This inverter is available in power categories from 3 to 5 kW and forms the heart of the Fronius storage solution. Together with the Fronius Solar Battery, it provides maximum autonomy in the private electricity supply. The battery connected on the DC-side ensures maximum efficiency in the overall system, since it avoids multiple conversion between DC and AC. The three-phase design guarantees maximum self-consumption and emergency power supply throughout the whole house. Furthermore, the storage solutions can be adapted to individual needs and existing PV systems can be retrofitted at any time.

Future-proof and user-friendly as standard

From system planning to system monitoring, the new generation of inverters is future-proof and user-friendly as standard. A free online tool for precise configuration of photovoltaic systems helps with system planning. From the autumn of this year it will be possible to set up Fronius system monitoring from a tablet or smartphone. Simply connect the inverter to the WLAN network, follow the wizard instructions and the system will be connected to the Fronius Solar.web. A self-explanatory and user-friendly interface helps the installer with set up and commissioning.

Simple servicing, straightforward upgrades and optional card slots make SnapINverters future-proof. The free online monitoring tool Fronius Solar.web together with the Fronius Solar.web App enable system operators to monitor PV system yields at their own convenience.

Fronius SnapINverters have open interfaces for connecting the inverters to other systems. This allows data sharing and means the inverters can also be controlled by third-party components. One possible application involves integration into home automation systems to increase self-consumption and visualise the photovoltaic system on the user interface of the home control system. An especially notable feature is that the open interfaces work in parallel with the Fronius Solar.web for monitoring purposes, allowing Fronius to guarantee quick and competent support.

With their energy meter interfaces, Fronius SnapINverters can provide dynamic feed-in management taking self-consumption into account, which is necessary for the 70% rule in Germany, for example. The meter data also allows visualisation and analysis of self-consumption in Fronius Solar.web.

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The new inverter generation from Fronius: SnapINverters.

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About Fronius International GmbH

Fronius International GmbH is an Austrian company with headquarters in Pettenbach and other sites in Wels, Thalheim, Steinhaus and Sattledt. With 3,239 employees worldwide, the company is active in the fields of welding technology, photovoltaics and battery charging technology. Around 93% of its products are exported through 19 international Fronius subsidiaries and sales partners/representatives in over 60 countries. With its innovative products and services and 864 active patents, Fronius is the global technology leader.

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