



Fronius GEN24 Plus Battery Storage Solution User Manual

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The Advantages At A Glance

- Use of PV energy also possible at night
- Demand-oriented backup power variants
- Simultaneous supply of the loads and charging of the battery also possible in the event of a power outage
- High self-consumption and self-sufficiency rates

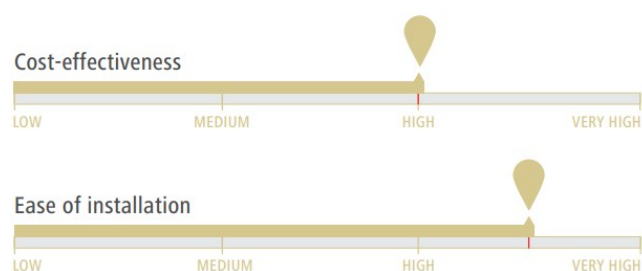
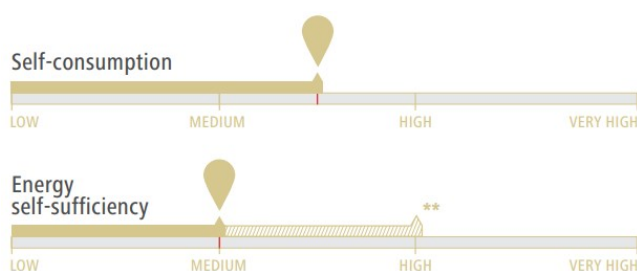
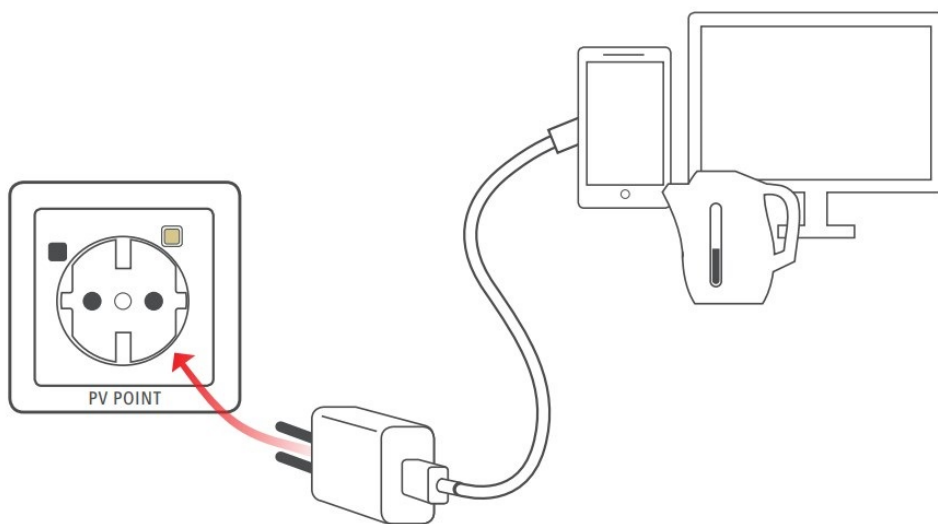
1. Fronius Inverter
2. Fronius Smart Meter
3. BYD Battery-Box Premium HVS/HVM



Onboard Basic Backup Power Supply

The PV Point

- Single-phase loads in households up to 3 kW can be supplied with backup power
- No additional installations necessary
- Automatic activation in case of a grid outage



- The test for the 2020 energy storage inspection was still carried out with the BYD Battery-Box HV
- depending on the heat generation in the household.

Compatibilities and maximum Charging and discharging Power

BYD BATTERY-BOX PREMIUM *	HVS 5 .1	HVS 7 .7	HVS 1 0.2	HVM 8 .3	HVM 1 1.0	HVM 1 3.8	HVM 1 6.6	HVM 1 9.3	HVM 2 2.1
Usable capacity of the battery [kWh]	5.1	7.7	10.2	8.3	11.0	13.8	16.6	19.3	22.1
Nominal voltage of the battery [V]	204	307	409	153	204	256	307	358	409
Battery operating voltage [V]	160 – 240	240 – 360	320 – 480	120 – 180	160 – 240	200 – 300	240 – 360	280 – 420	320 – 480
Max. charge/discharge current Primo/Symo GEN24 Plus [A]	22								

*Values according to BYD.

MAXIMUM CHARGING AND DISCHARGING POWER WITH GEN24 PLUS (KW)	HVS 5 .1	HVS 7 .7	HVS 1 0.2	HVM 8 .3	HVM 1 1.0	HVM 1 3.8	HVM 1 6.6	HVM 1 9.3	HVM 2 2.1
Primo GEN24 3.0 Plus	3.2	3.2	–	–	3.2	3.2	3.2	3.2	–
Primo GEN24 3.6 Plus	3.9	3.9	–	–	3.9	3.9	3.9	3.9	–
Primo GEN24 4.0 Plus	4.2	4.2	–	–	4.2	4.2	4.2	4.2	–
Primo GEN24 4.6 Plus	4.5	4.9	–	–	4.5	4.9	4.9	4.9	–
Primo GEN24 5.0 Plus	4.5	5.3	–	–	4.5	5.3	5.3	5.3	–
Primo GEN24 6.0 Plus	4.5	6.3	–	–	4.5	5.6	6.3	6.3	–
Symo GEN24 6.0 Plus	4.5	6.3	6.3	–	4.5	5.6	6.3	6.3	6.3
Symo GEN24 8.0 Plus	4.5	6.8	8.3	–	4.5	5.6	6.8	7.9	8.3
Symo GEN24 10.0 Plus	4.5	6.8	9.0	–	4.5	5.6	6.8	7.9	9.0

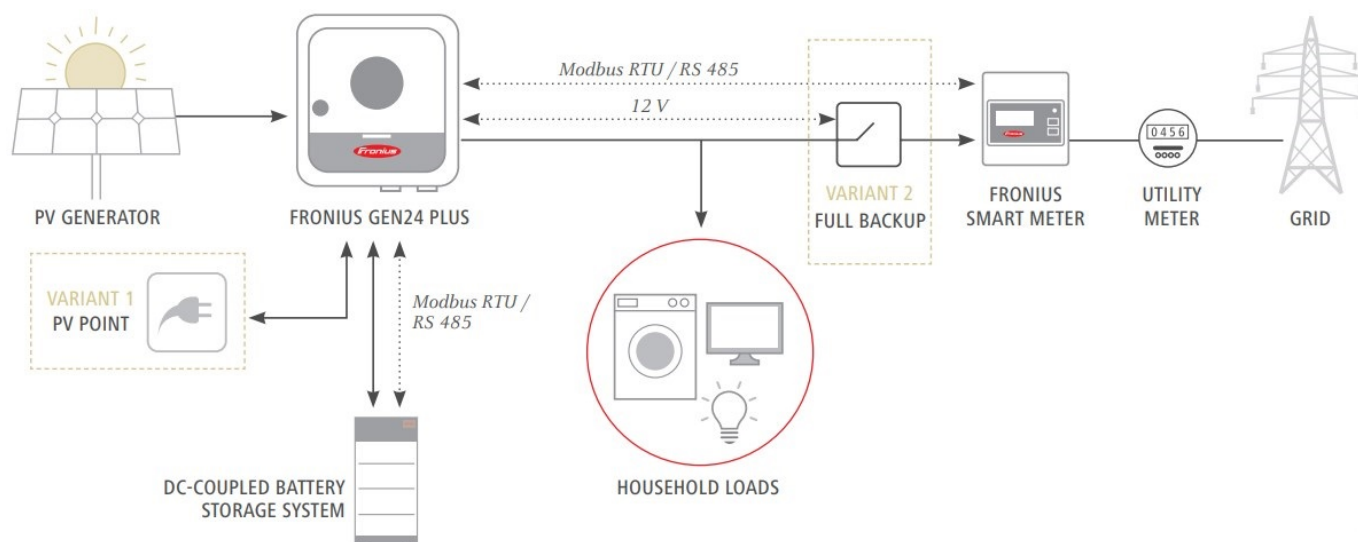
Take a look at our references to see how battery storage solution can be implemented in the best possible way:



Reference Wels / austria



Configuration Scheme



- communication path
- power path

What is needed to Implement the Fronius Battery Storage solution

device	type	note
inverter	Fronius Primo GEN24 (3.0-6.0) Plus or Symo GEN24 (6.0-10.0) Plus	Depending on the type of inverter and the type and capacity of the battery
battery storage system	BYD Battery-Box Premium HVS/HVM	You can find more details on the BYD Battery-Box Premium HVS/HVM under the following links https://eft-systems.de/ and http://alpspower.com.au/
Fronius Smart Meter	63A-1; 63A-3; 50KA-3 240V-3 UL; 480V-3 UL; 600V-3 UL	<ul style="list-style-type: none"> • Suitable for single-phase and three-phase grids • Measures energy consumption and energy from the grid
communication inverter with battery	The inverter communicates with the battery via a shielded 4-pin cable (CAT5 and higher) via Modbus RTU (RS485). The terminating resistors must be set at the end of the ring. For further details, please refer to the GEN24 Plus Operating Instructions.	
communication inverter with smart meter	communication inverter with smart meter	Cable connection (CAT5 and higher) via Modbus RTU (RS485)

Backup Power Options

Variant 1:

Backup power variant: PV Point

For the PV Point, a socket must be connected to the OP-terminal of the inverter in accordance with the installation

standard. The PV Point can be implemented with or without a battery storage. For further details on installation, please refer to the GEN24 Plus Operating Instructions

Variant 2:

Backup power variant: Full BackUp™

For the Full Backup, additional mains switchover contactors or auxiliary relays (Enwitec) are required. The requirements for this switchover vary from country to country – please contact your grid operator. For the Full Backup, a battery storage is required.

* only one of the two backup power variants can be implemented

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 5,440 employees worldwide and 1,264 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

Fronius India Private Limited

GAT no 312, Nanekarwadi
Chakan, Taluka – Khed District
Pune 410501
India

pv-sales-india@fronius.com

www.fronius.in

Fronius Australia Pty Ltd.

90-92 Lambeck Drive

Tullamarine VIC 3043

Australia

pv-sales-australia@fronius.com

www.fronius.com.au

Fronius UK Limited

Maidstone Road, Kingston

Milton Keynes, MK10 0BD

United Kingdom

pv-sales-uk@fronius.com

www.fronius.co.uk

Fronius International GmbH

Froniusplatz 1

4600 Wels

Austria

pv-sales@fronius.com

www.fronius.com

**Documents / Resources**

A technical diagram of the Fronius GEN24 Plus Battery Storage Solution. It shows a battery unit connected to a solar panel array and a house. The diagram includes labels for the battery, solar panels, and the house. It also features a small inset image of the battery unit and a list of features.	<p>Fronius GEN24 Plus Battery Storage Solution [pdf] User Manual</p> <p>GEN24 Plus Battery Storage Solution, GEN24 Plus, Battery Storage Solution, Storage Solution</p>
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References

- [ALPS POWER PTY LTD – BYD Battery-Box Australia Authorized Partner](#)
- [Welcome to Fronius UK](#)
- [Fronius International](#)
- [Welcome to Fronius Australia](#)
- [Welcome to Fronius India](#)
- [Eft-Systems](#)