



The Latest Innovations from Fronius

3/10-2024

SOLARPARTNERS
— SUPPLY & SUPPORT —



Today's Fronius representatives



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Agenda

1. Organization Fronius Sweden
2. Fronius Verto & Verto Plus
3. Fronius Argeno
4. Fronius GEN24 12.0 SC
5. Energy Cost Assistent (ECA)
6. Fronius Backup solutions
7. New Wattpilot Features
8. Data security



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Nicole Friedwagner
Sales Marketing



Daniel Zacherl
Tech Support International

Increasing power range

Fronius Verto

25.0



27.0



30.0



33.3

380-400 V

4
MPP-Tracker

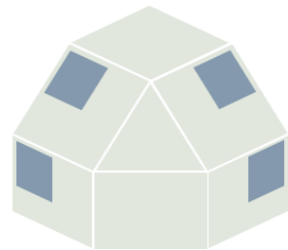
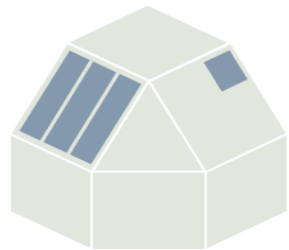
2
Strings
per MPPT

28 A
per MPPT
&
per String

**150 –
870 V**
MPPT voltage range

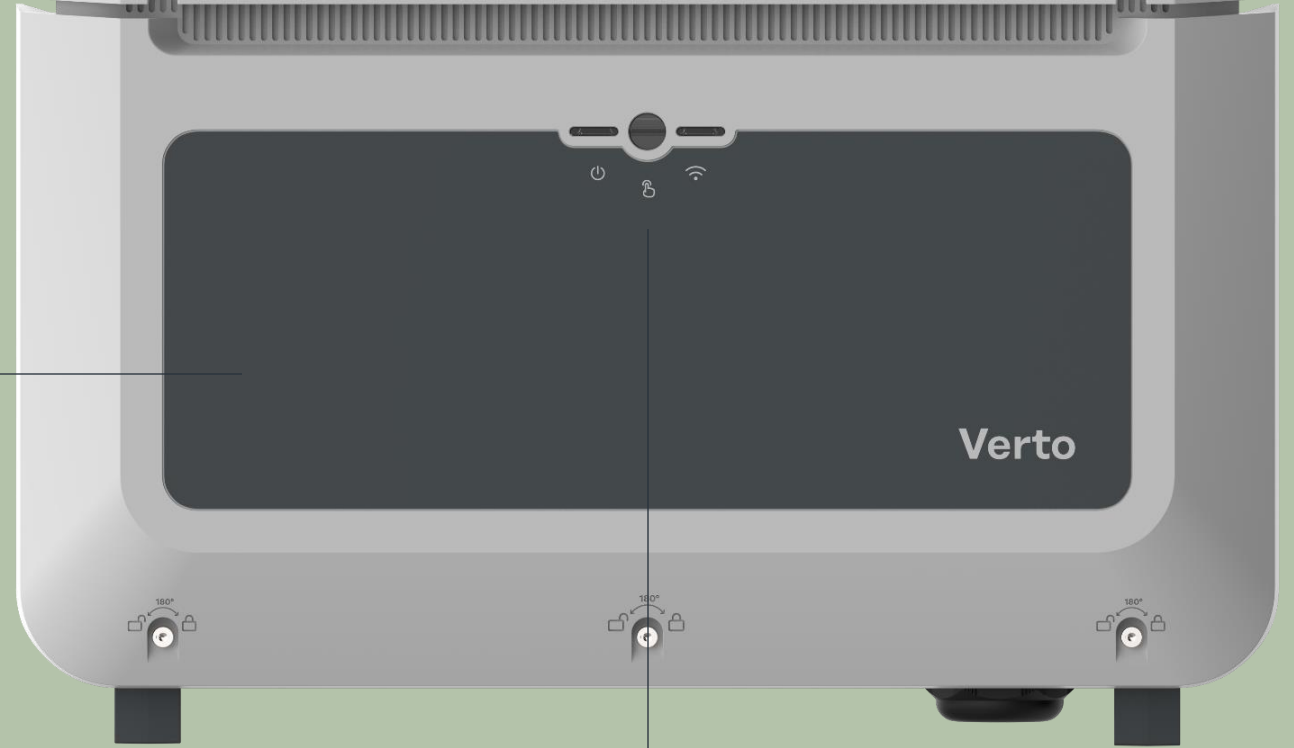


Enabling highest flexibility

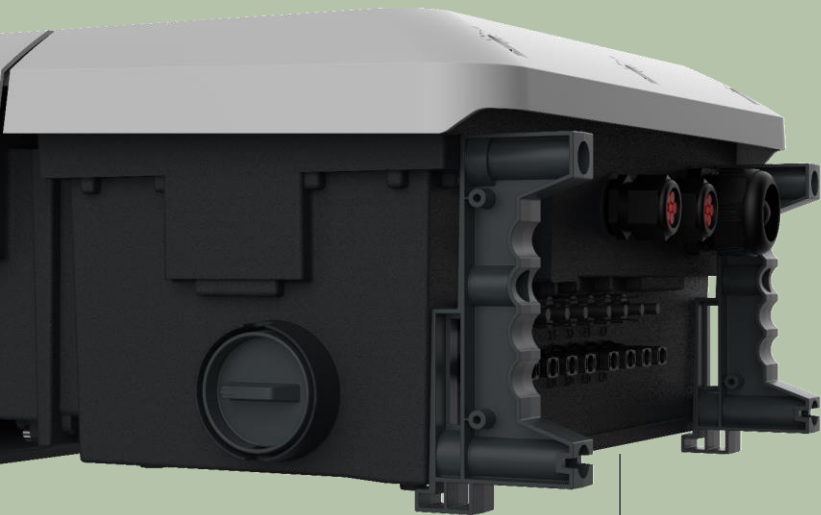


SPDs

Integrated AC + DC
Type 1+2 or Type 2



Well-known
Commissioning
& Interfaces **Pilot**



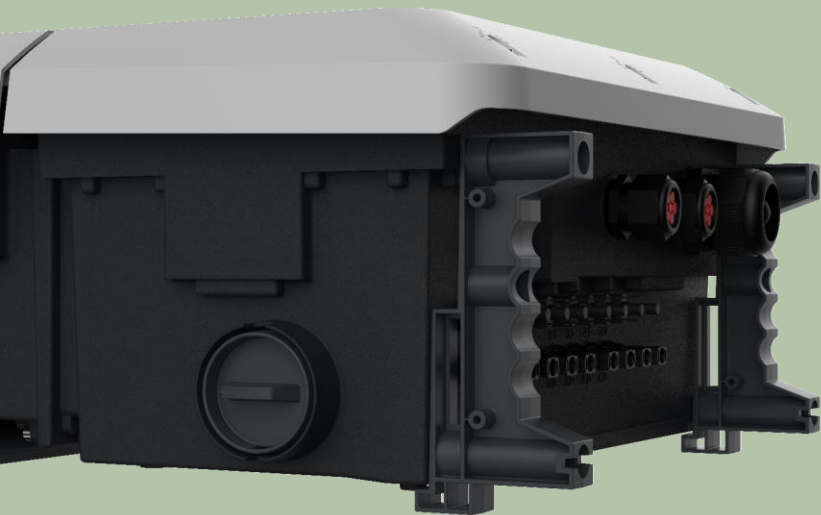
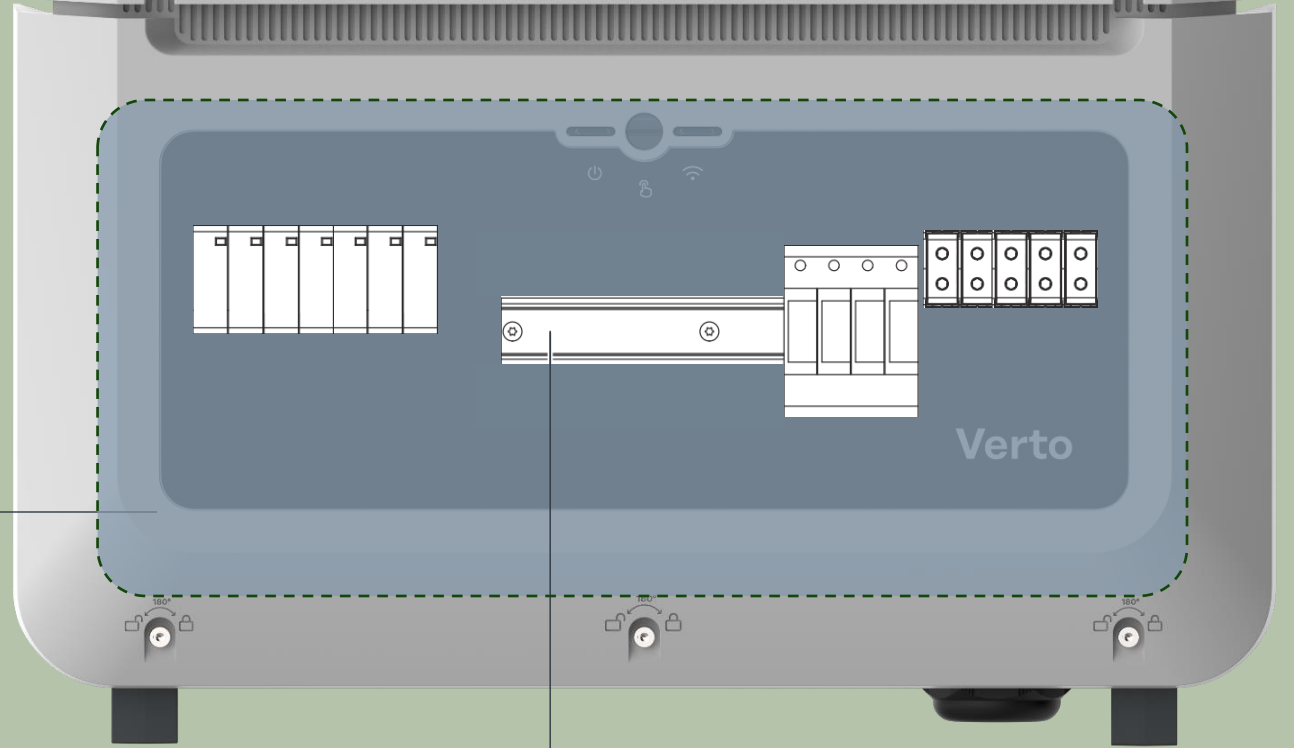
DC-quick connectors

MC-4

Applying proven concepts

Installation Comfort

Large Installation Area



Flexibility

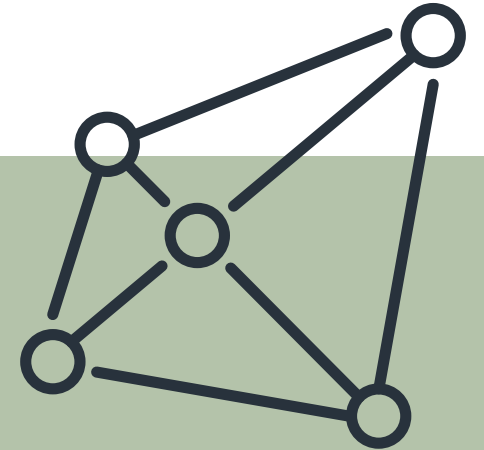
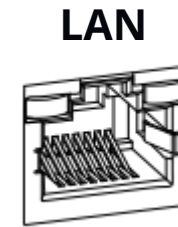
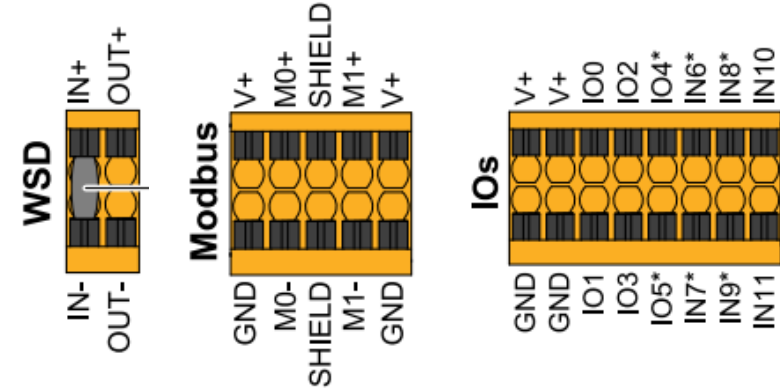
DIN-rail for
3rd party components

Applying proven concepts

Interfaces

Fronius Pilot

- Well-known commissioning with Solar.start App or Web User Interface
- Monitoring via Solar.web
- Energy management with I/Os
- Connection to Fronius Smart Meter
- Open interfaces



Arc Guard (AFCI)

Arc Guard technology is a self-learning arc detection system that interrupts serial DC arcs before they become a problem

—> **Increased protection against fire hazards**

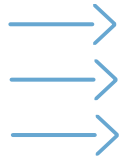


Arc fault circuit interrupter

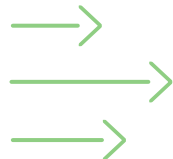
Asymmetric Generation

Systematic asymmetric power generation

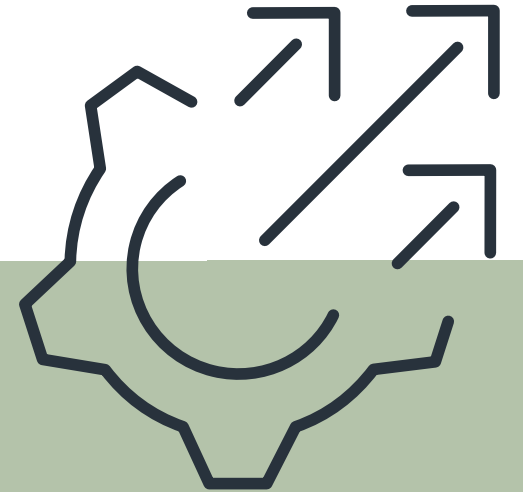
in combination with Fronius Smart Meter



Relevant in grids with phase-exact energy measurement



Physically reducing energy imports from the grid
by shifting power to phases with local consumption



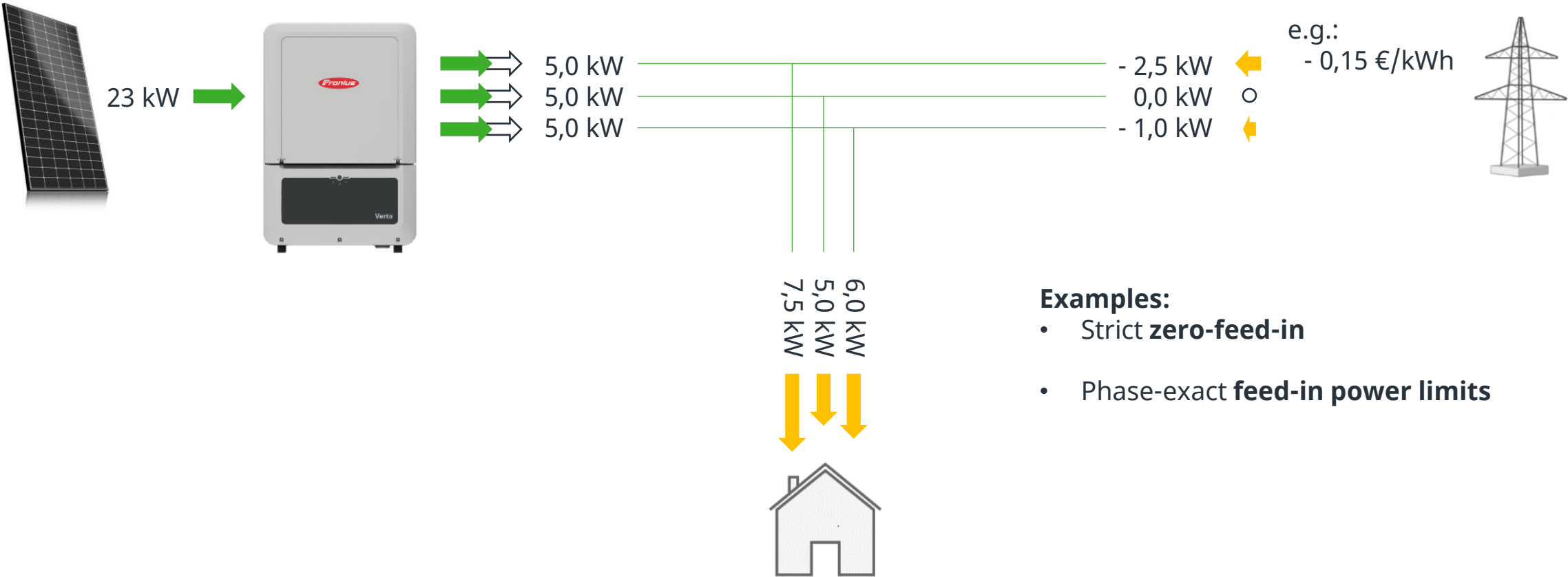
Limitations:

- As of SW 1.32
- max. 25 A asymmetry
- N.A. with 480V

Strict Feed-In Policies

Problem:

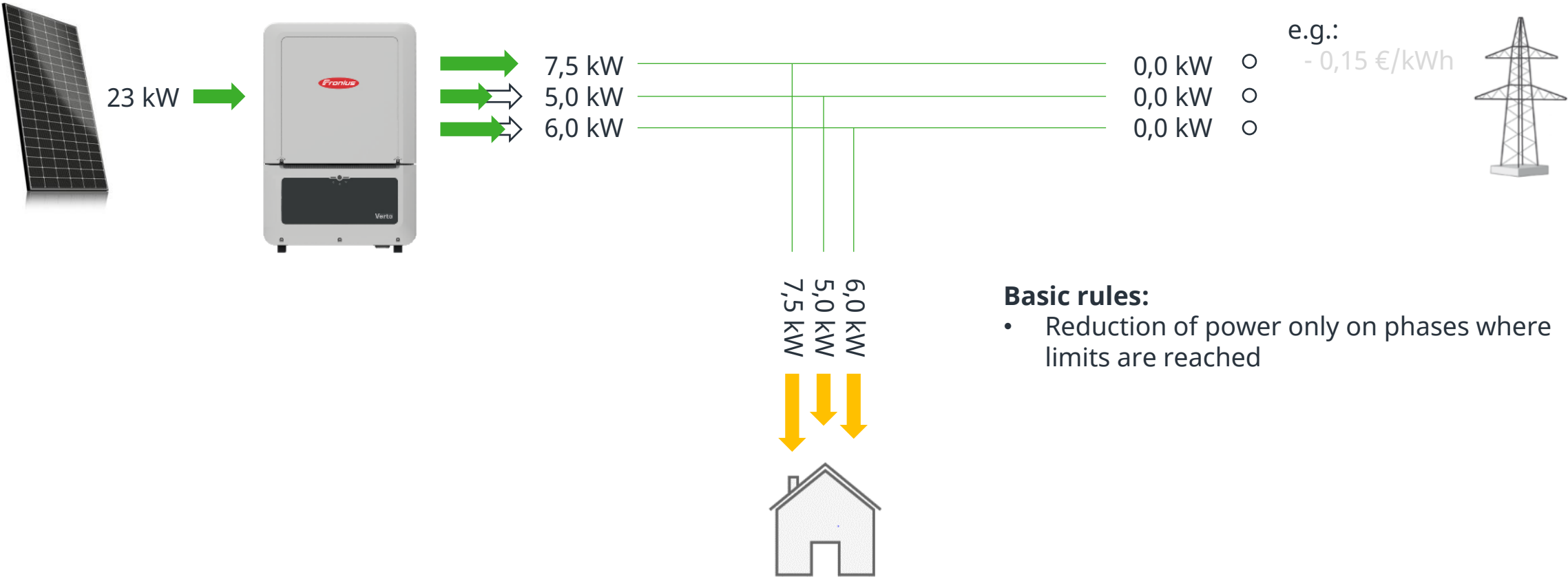
Lost revenues due to „weakest phase“ approach



Strict Feed-In Policies

Solution:

Asymmetric Generation



Basic rules:

- Reduction of power only on phases where limits are reached

Service - Concept

In field:

- Exchange of **Pilot** and **AC- & DC-SPDs**
- **Device Exchange**
 - Simplified through MC4-connectors



Fronius Verto Plus

- Verto going **hybrid**
- Power up to **30 kW_{AC}**
- **Full Backup** capable
- 3 MPPTs á 2 Strings – MC4
- 1 Battery connection – MC4 Evo Sto

Preview



More details on compatible batteries etc. will follow

Fronius Argeno

Designed to empower.



10

MPP-Tracker

2

Strings
per MPPT

125 kW

Max DC Voltage 1100V

30 A

per MPPT

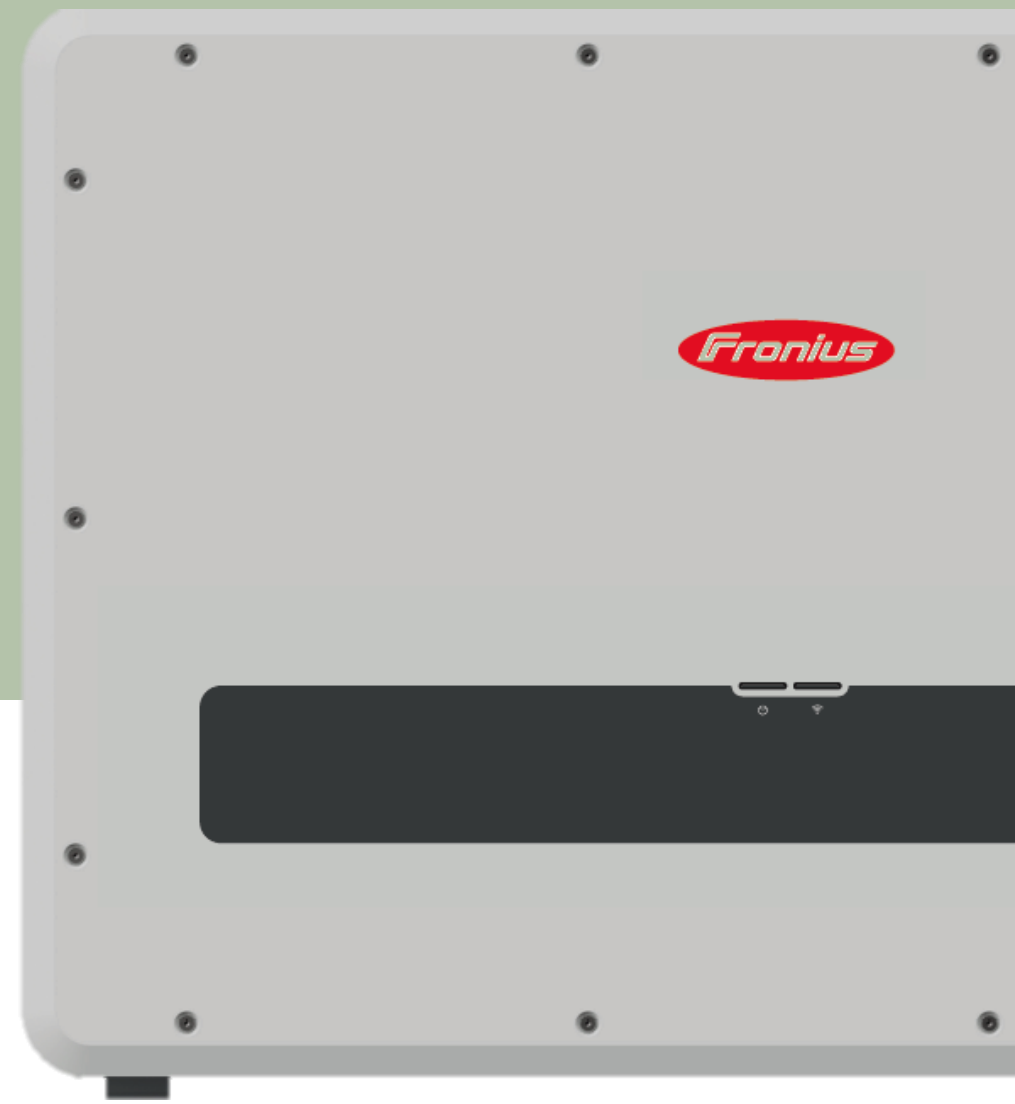
550 – 850 V

MPPT voltage range

The Fronius logo is a red oval with the word "Fronius" in white, italicized font.

99,1 %

Peak efficiency



Highest efficiency

- Highest Euro-Efficiency on the market @ 98,7% (99,1%_{max})
 - Equals to ~400W more power than other inverters
- Market leading temperature derating
 - Derating starting at 50°C
 - Suitable for hottest environments without energy losses
- 200% oversizing capability



Reliable protection

- Changeable SPD Typ 1+2 integrated as standard on DC and AC side
 - Typ 1+2 fits always, no need to worry about installation standard
 - No inverter replacement needed in case of SPD tripping
 - Less time on site in case of necessary replacement



Service - concept

In the field:

- Replacing **fans** and **AC & DC SPDs**
- **Inverter exchange**
 - Simple through Phoenix connectors



GEN24, Backup & Software News

Even more powerful! Symo GEN24 12.0 SC

Symo GEN24 & GEN24 Plus 12.0 SC

- 12 kW nominal AC output power
- Increase of the DC input current (I_{dcmax})
 - MPPT 1: 28A / MPPT2: 14A
- Up to 18 kWp PV generator power

Product launch in July 2024



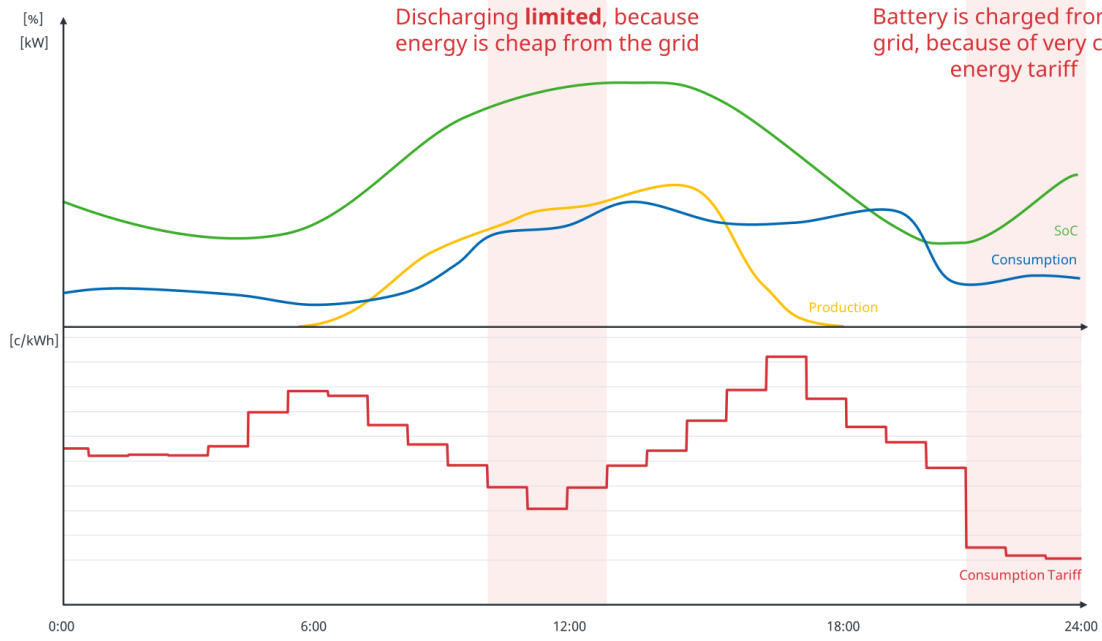
Feed-in-limitation up to 20 inverters



- 1 Master inverter GEN24 Plus (+battery), Tauro or Verto
- Slave inverters – GEN24, Tauro, SnapINverter (per Master max. 5 Light inverters)
- communication via Modbus TCP/IP – all inverters in same network
- only **1 Smart Meter required**

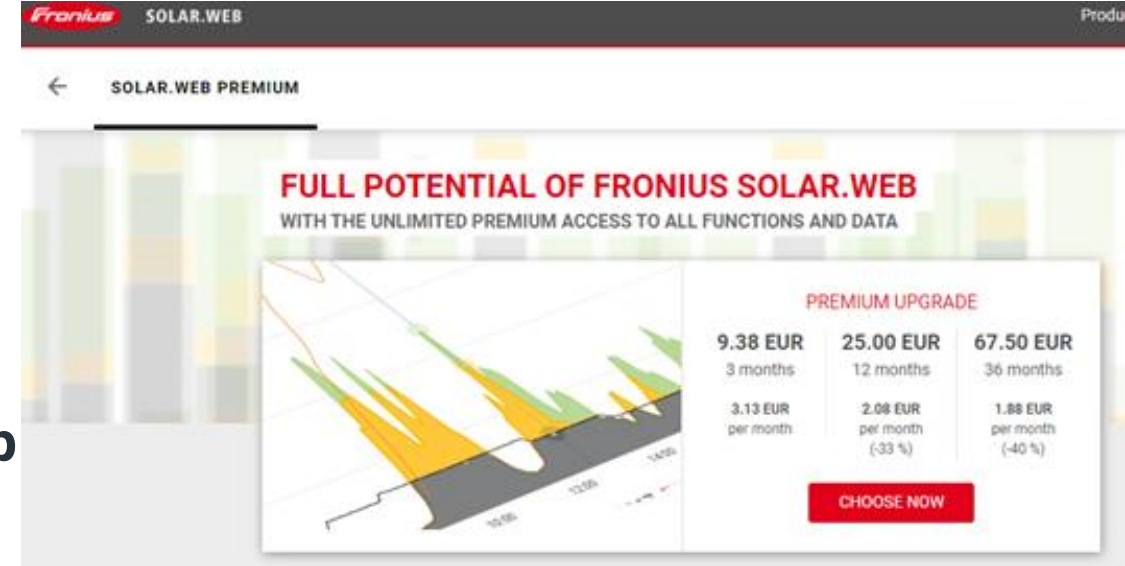
Energy Cost Assistant (ECA)

The Energy Cost Assistant (ECA) increases efficiency of a PV-system by **optimizing battery management**. It charges and discharges the battery according to production, consumption and tariff forecast.



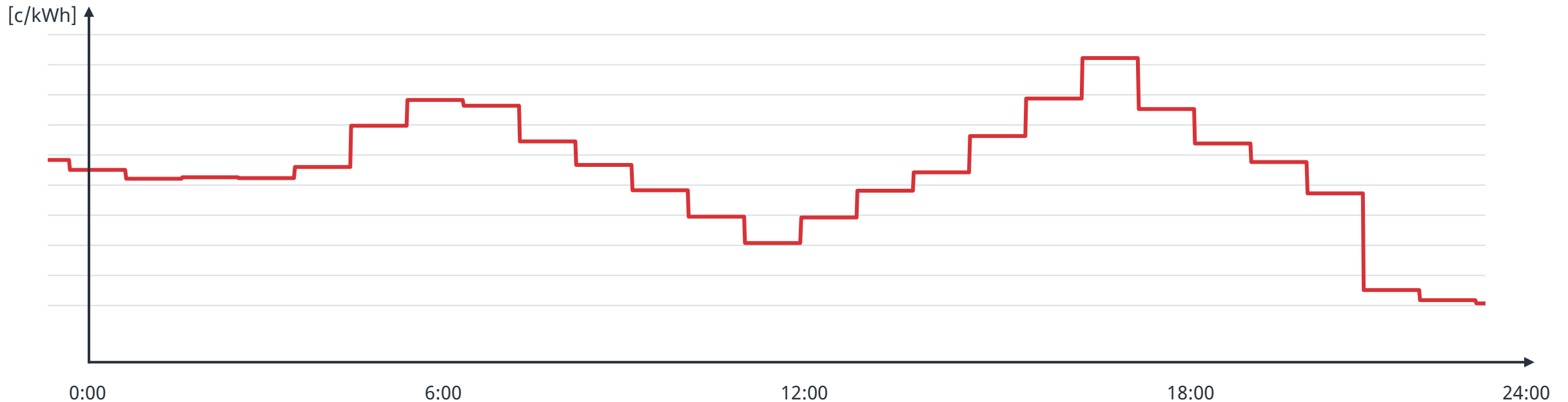
Key Facts

- Part of **Solar.web Premium**
- Includes integration of **flexible tariffs in Solar.web**
- **Only relevant for hybrid systems**
- **No extra hardware needed, only software update 1.34**



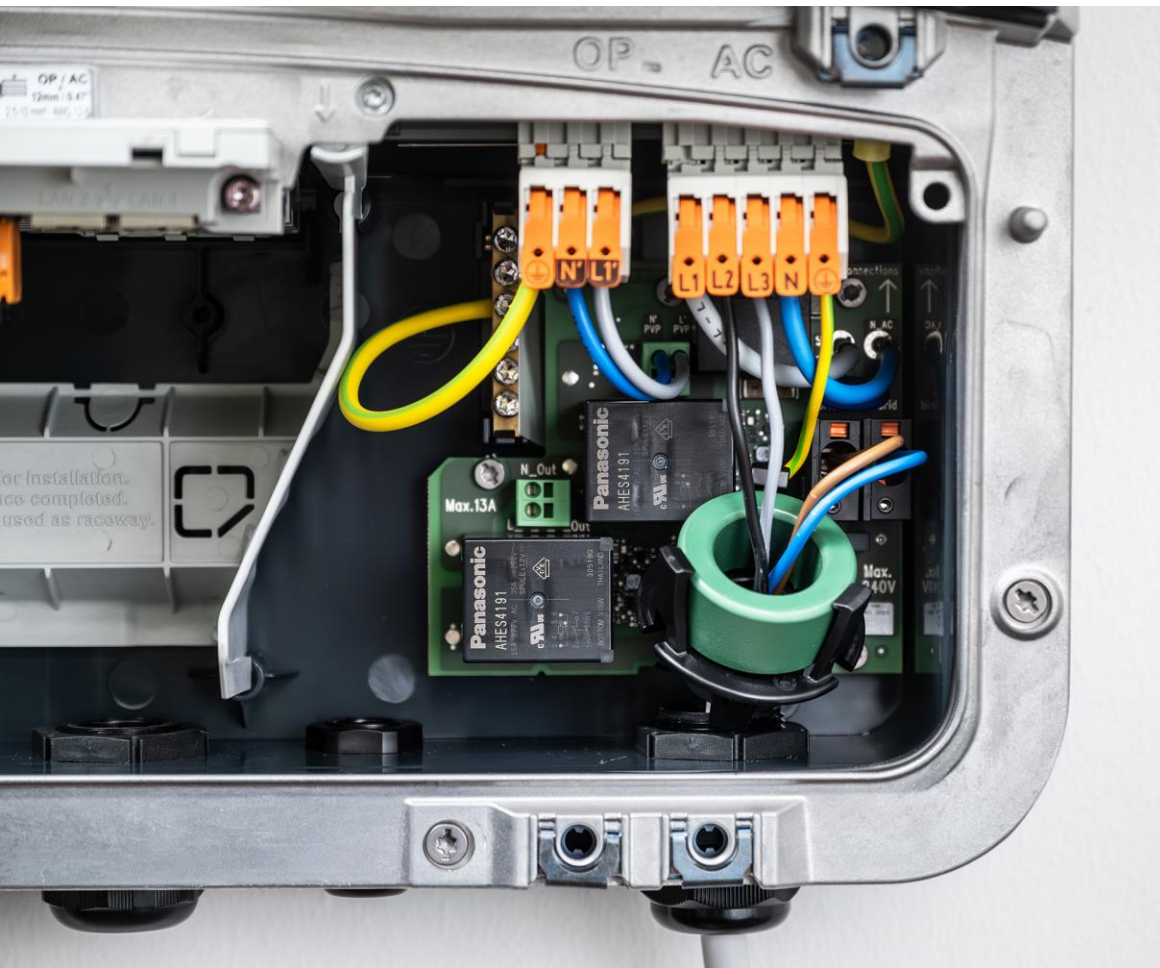
The screenshot shows the 'SOLAR.WEB PREMIUM' page. It features a 3D bar chart on the left and a pricing table on the right. The pricing table is titled 'PREMIUM UPGRADE' and lists three options: 3 months (9.38 EUR), 12 months (25.00 EUR), and 36 months (67.50 EUR). Below these, it shows the monthly cost: 3.13 EUR per month, 2.08 EUR per month (-33%), and 1.88 EUR per month (-40%). A red 'CHOOSE NOW' button is at the bottom right.

PREMIUM UPGRADE		
9.38 EUR	25.00 EUR	67.50 EUR
3 months	12 months	36 months
3.13 EUR per month	2.08 EUR per month (-33%)	1.88 EUR per month (-40%)



New basic backup power solution

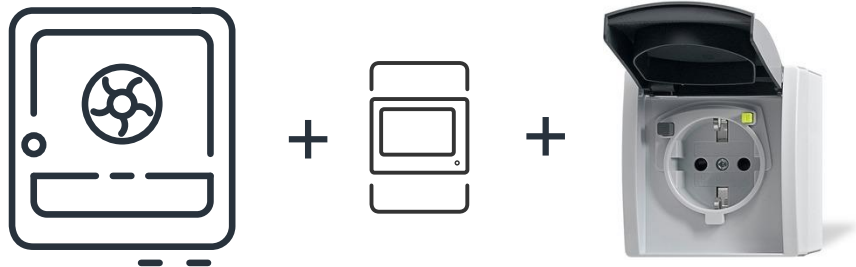
PV Point Comfort



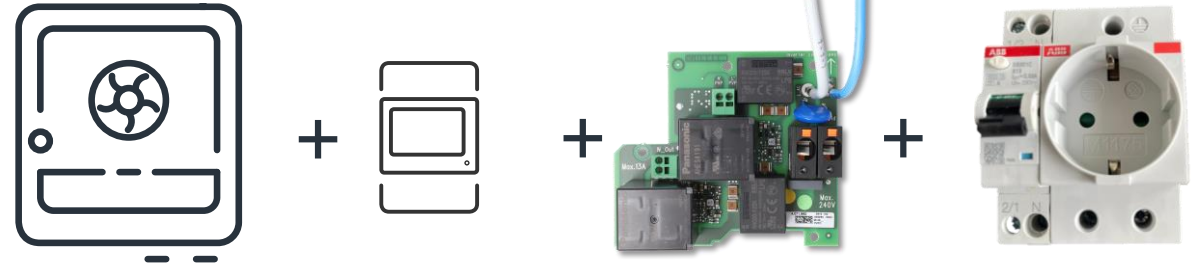
Product already available

PV Point

PV Point



New
PV Point Comfort
[already available]



PV Point	Functions	PV Point Comfort
3 kW, single phase	Nominal output in backup power mode	3 kW, single phase
Integrated	Integrated/Retrofit	Retrofit PCB (4,240,315,CK)
Only in backup mode	Supply of loads	Permanant
RCD Type A 30 mA	Fusing	RCD Type A 30 mA + 13 A circuit breaker

Full Backup

New

Backup Switch



+



+



New

Backup Controller



+



+



Backup Switch	Functions	Backup Controller
Manually	Switchover	Automatic
DIN rail directly in the AC panel	Installation	DIN rail directly in the AC panel
Single and three-phase	Grid types	Initially three-phase
63A	Current carrying capacity	35A

Backup Switch

Full backup switching solution

- **Manual** switching solution
- Direct installation in the **control cabinet**
- **Price-efficient solution** with integrated auxiliary contacts
- **Versatile:** loads up to **63A**, network types **with and without neutral conductor separation** as well as **1- and 3-phase networks**

Variants:

- Backup switch 1P/3P-63A
- Backup Switch 1PN/3PN-63A



Situation with backup switch



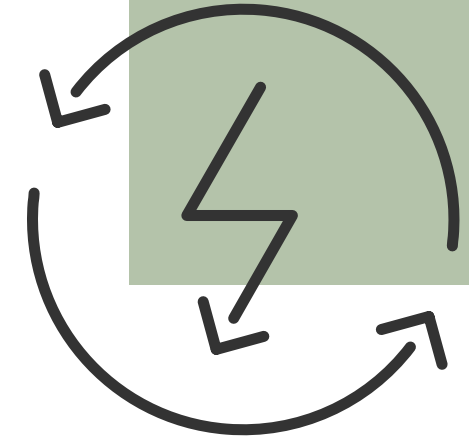
AC Panel



Backup Controller

Full backup switching solution

- **Automatic** switching solution
- Direct installation in the **control cabinet**: no additional **switchover boxes** required
- **Can** be installed on **1 top-hat rail** with **Smart Meter**
- Automatic **restoration of mains parallel operation**: Return to normal operation without the need for manual intervention.



Variants:

- Backup Controller 3P-35A
- Backup Controller 3PN-35A →

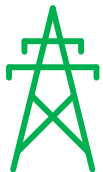
Product launch Q2 2025

User interface



Blue LED "ON"
Backup operation running
House disconnected from grid

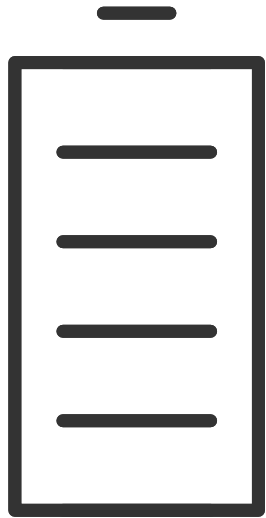
Green LED "ON"
Grid available and connected



Situation with backup controller



AC Panel

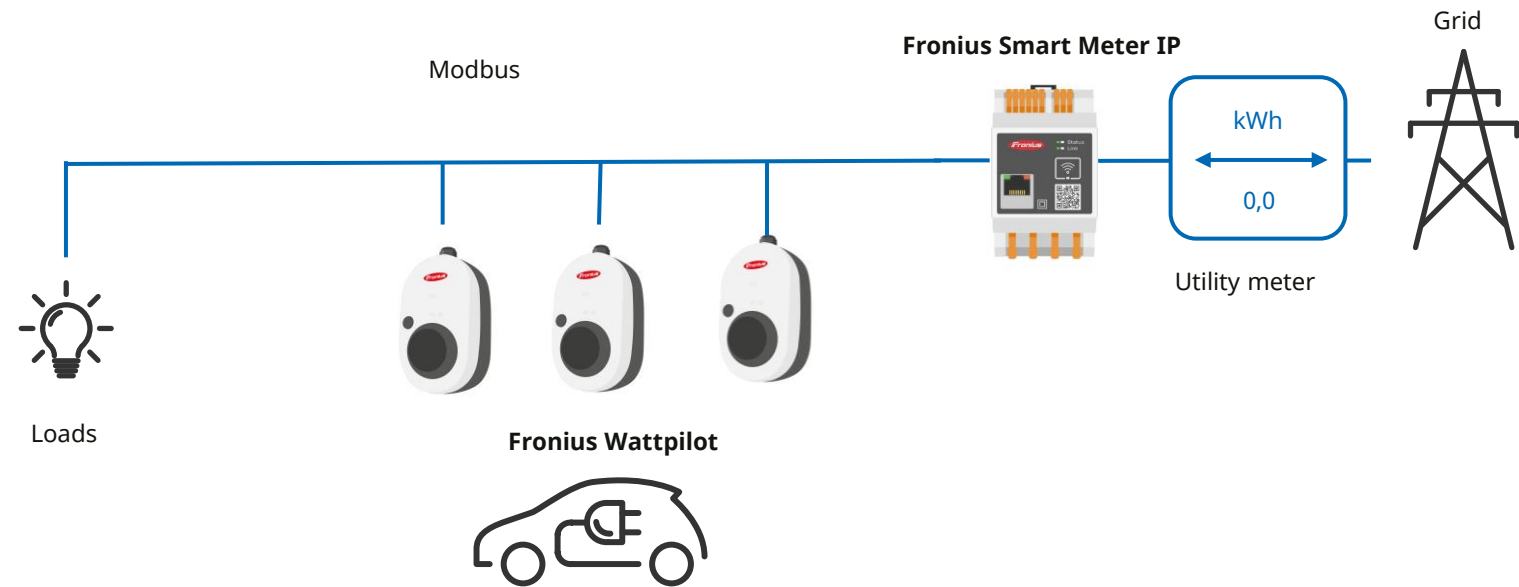


New Features

SW 1.41



Smart Meter IP compatibility



Customer Benefit:

House connection monitoring possible without Fronius inverters

Fronius Smart Meter IP

Communication via LAN (Modbus TCP)



Communication via RS485 (Modbus RTU)

Communication via WLAN (Modbus TCP)

WAGO Clamps for easy installation

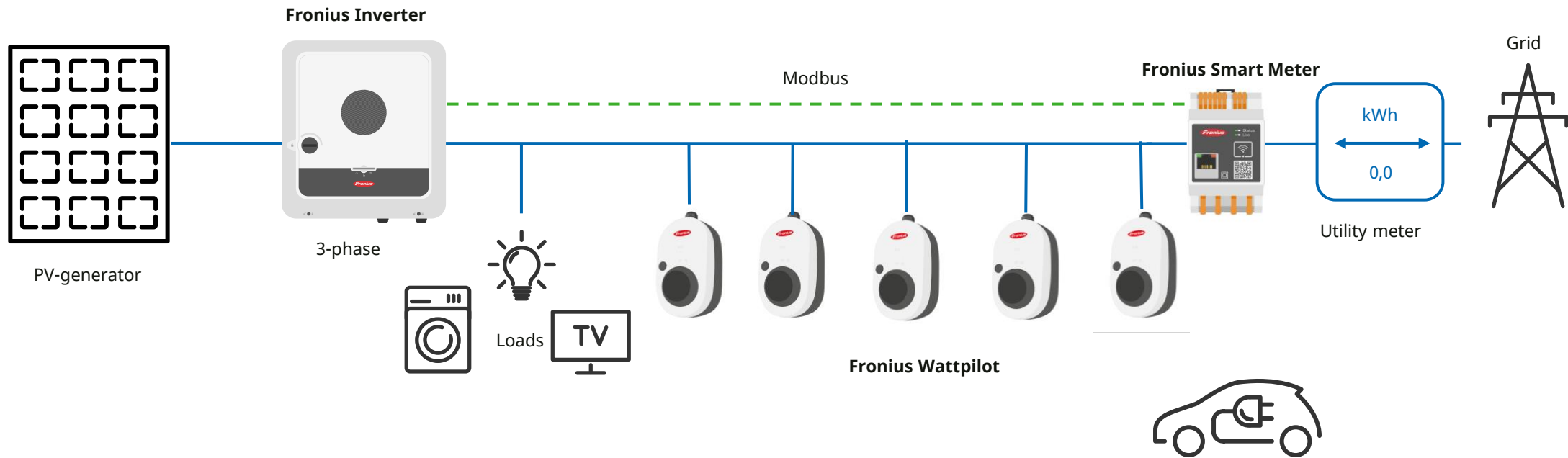
Fronius Smart Meter CT V

- Fronius Smart Meter CT V
 - Secondary 333mV
 - 100A / 250A / 400A
 - Article No.
 - 41,0010,0104 / 41,0010,0105 / 41,0010,0232

Fronius Smart Meter CT V		
100A / 333mV	250A / 333mV	400A / 333mV
1		
Split-core		
46 x 31,5 x 31,5mm	66,5 x 45 x 34,4mm	81,5 x 57 x 38,4mm
16mm	24mm	36mm
1m		
-40°C to +65°C		



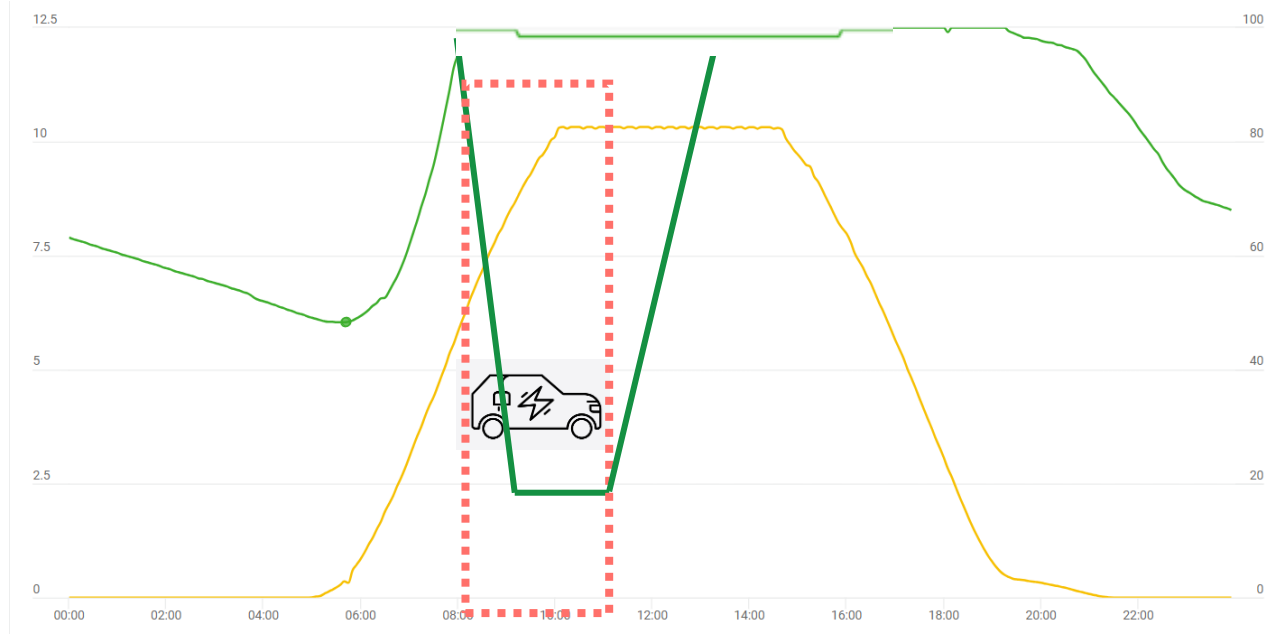
Dynamic Load Balancing



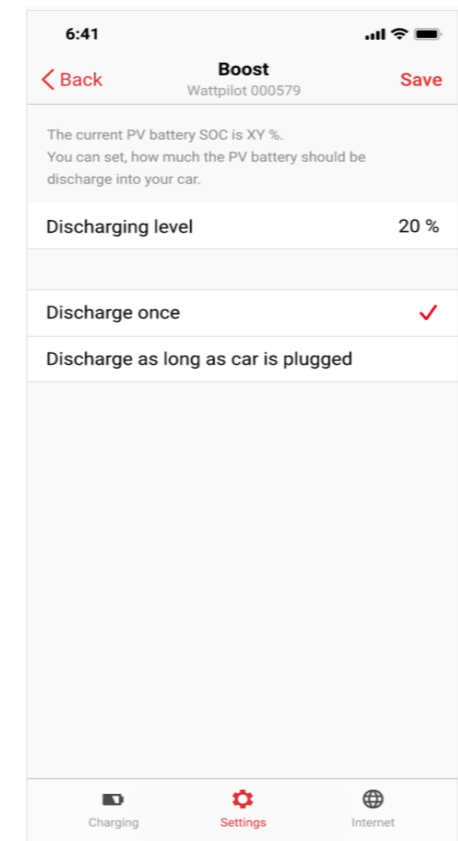
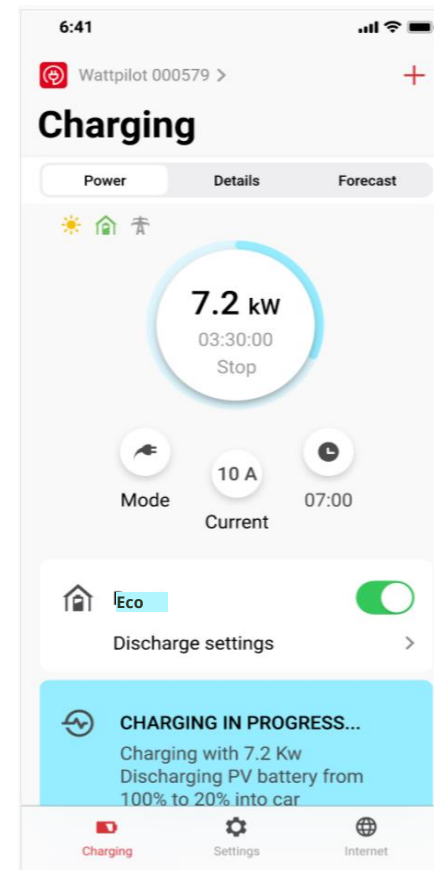
Load balancing with unlimited number of Wattpilot

ECO Boost function

Customer would like to charge from PV-battery storage.

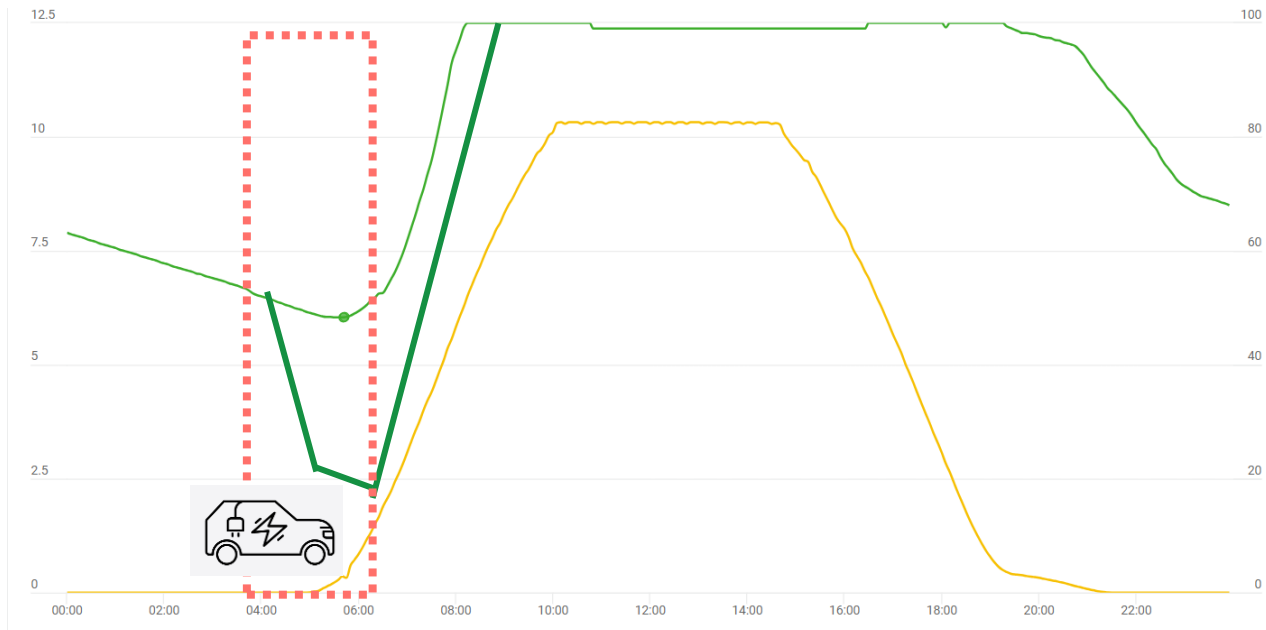


Higher degree of battery usage



Discharging threshold & timelimit

Customer would like to discharge PV-battery in the morning before leaving the house.



6:41 📶 🔋

[← Back](#) **PV battery thresholds** [Save](#)
Wattpilot 000579

PV battery charging thresholds	100 %
Discharging PV battery	<input checked="" type="checkbox"/>
PV battery discharging threshold	20 %
Discharging timelimit	<input checked="" type="checkbox"/>
Discharging start time	4:00
Discharging stop time	8:00

Note: discharging of the battery when using flexible energy tariffs possible!

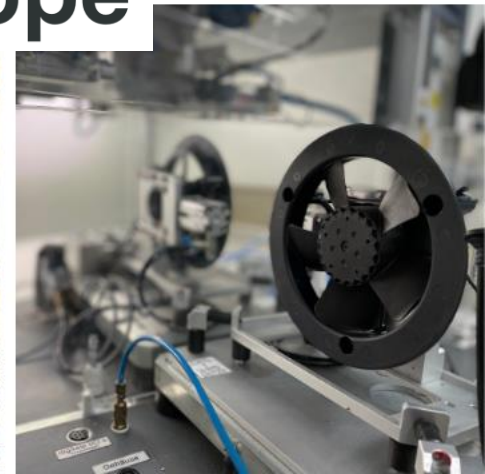
Higher degree of battery usage

European value creation

- 95% of all suppliers in Europe
- 75% of all components made in Europe
- 20% direct from Austria
- 100% green electricity at our sites
- 6000 employees
- Local support in Swedish



Made in  Europe



Data security

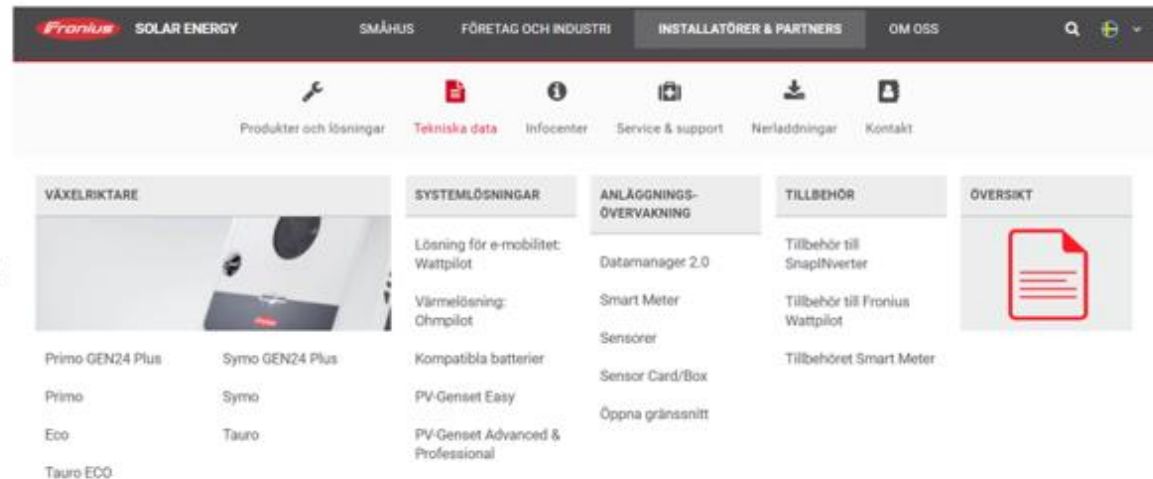
Sustainably safe with Fronius



- Data locations: Fronius uses its **own servers in Austria and European clouds** for data security
- ISO 27001 certification: Fronius has received ISO 27001 **certification for information security**
- Data protection and separation: Customer data and system data are **stored separately** to prevent cyberattacks
- Awareness: **Regular cybercrime awareness training** for employees

More information

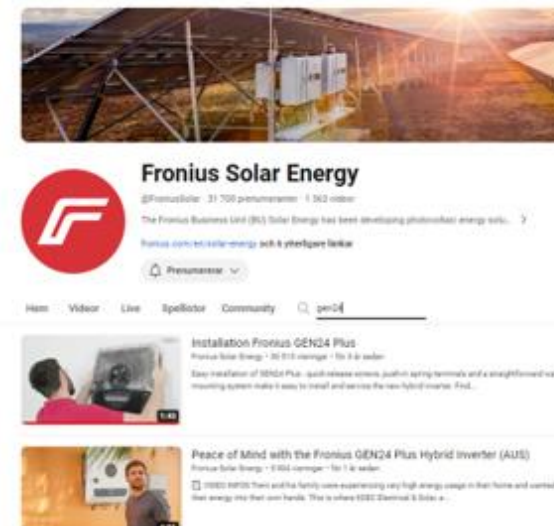
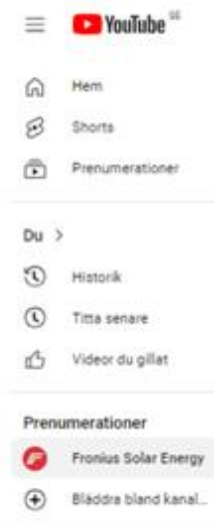
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- Webinars

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We are Fronius.

We inspire
mind-opening solutions.