

/ Perfect Welding / Solar Energy / Perfect Charging



William Petsén
Fronius Sweden

FRONIUS
NYHETER 2021

Introduction Fronius

FRONIUS TEAM FOR NORTHERN EU

Team Sweden



William Petsén



Nima Badri

Team Denmark



Vinot Jayaraman

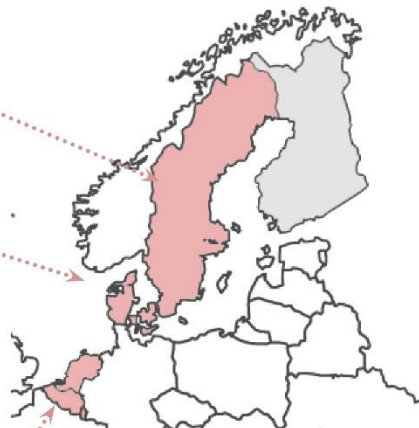
Team Benelux



Sjef Zijlmans



Jaap van Eijk



Team Fronius International



Christoph Staudinger
Area Sales Manager



Marianne Kordovan
Sales Backoffice



Laura Nachbauer
Sales Marketing

STABILITY FOR GENERATIONS





INVERTERS DESIGNED & PRODUCED IN AUSTRIA



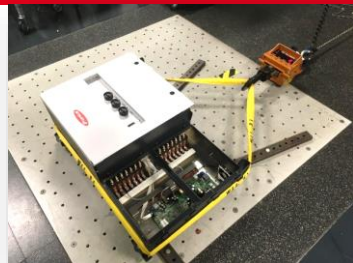
PRODUCTION SITE SATTLEDT - AUSTRIA

- / Actual area 45.000 m²
- / + ~ 30.000 m² extension in northward direction
- / Start: autumn 2019



TESTED ABOVE NORM

Mechanical load test



Salt spray test



Infrared test



Shipping test



Freezing test



Reliability test



FRONIUS PRODUCT DEVELOPMENT



INVERTER FOR RESIDENTIAL

Fronius Primo



- / 3.0 – 8.2 kW – 1-phase
- / 2 MPPT

Fronius Symo - Small



- / 3.0 – 8.2 kW – 3-phase
- / S / M variant (1 or 2 MPPT)

Fronius Symo - Large



- / 10 – 20 kW – 3-phase
- / 2 MPPT

HYBRID INVERTER OF FRONIUS

Fronius Symo Hybrid



- / **3.0, 4.0 and 5.0 kW** – 3-phase
- / Direct battery connection
- / 3-phase **back-up power**

Fronius Primo GEN24



- / **3.0 – 6.0 kW** – 1-phase
- / Direct battery connection + 2 MPPT
- / 1-phase **back-up power**
- / **PV-Point**

Fronius Symo GEN24



- / **6.0, 8.0 and 10.0 kW** – 3-phase
- / Direct battery connection + 2 MPPT
- / 3-phase **back-up power**
- / **PV-Point**

INVERTER FOR COMMERCIAL

Fronius Symo „big“



- / 10 – 20 kW – 3-phase
- / 2 MPPT

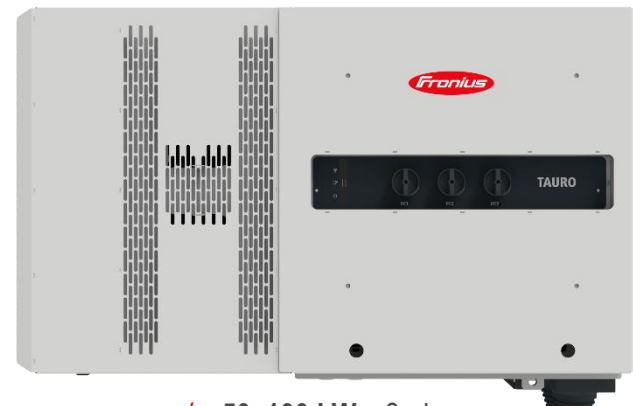
Fronius Eco



- / 25, 27 kW – 3-phase
- / Weight- and cost optimized
- / 1 MPPT

Fronius Tauro

SÄLJSTART VECKA 21



- / 50, 100 kW – 3-phase
- / 1 / 3 MPPT



FRONIUS GEN24 PLUS

FRONIUS SYMO GEN24 PLUS

3-PHASE HYBRID INVERTER

Fronius Symo GEN24 Plus

3-phase

2 MPPT

Power classes: 6 / 8 / 10 kW

MPPT 1: 25 A / 2 inputs

1 battery input: 22 A

MPPT 2: 12,5 A / 1 input



THE GEN24 PLUS

FOR MAXIMUM YIELDS DESPITE SHADING



DYNAMIC PEAK MANAGER

- / Shadow-tolerant algorithm that always finds the **BEST OPERATING POINT** (Global Maximum Power Point)
- / **HIGHEST YIELDS** even with partial shading
- / Efficient shading management can make **POWER OPTIMISER REDUNDANT**



THE GEN24 PLUS

FOR MAXIMUM FLEXIBILITY IN SYSTEM DESIGN



SUPERFLEX DESIGN

- / **2 MPP Tracker + extra battery input**
- / **Broad DC input voltage range**
 - / Symo GEN24 Plus (3-phase): **80-1000V DC**
 - / Primo GEN24 Plus (1-phase): **65-600V DC**
- / **High current carrying capacity of the MPP Tracker**
 - / Symo GEN24 Plus (3-phase): **25A / 12,5A (MPPT 1 / 2)**
 - / Primo GEN24 Plus (1-phase): **22A / 12A (MPPT 1 / 2)**

**150% *Over
dimensioning
possible***



**STRINGS FROM 3 MODULES ON
CAN BE REALISED**

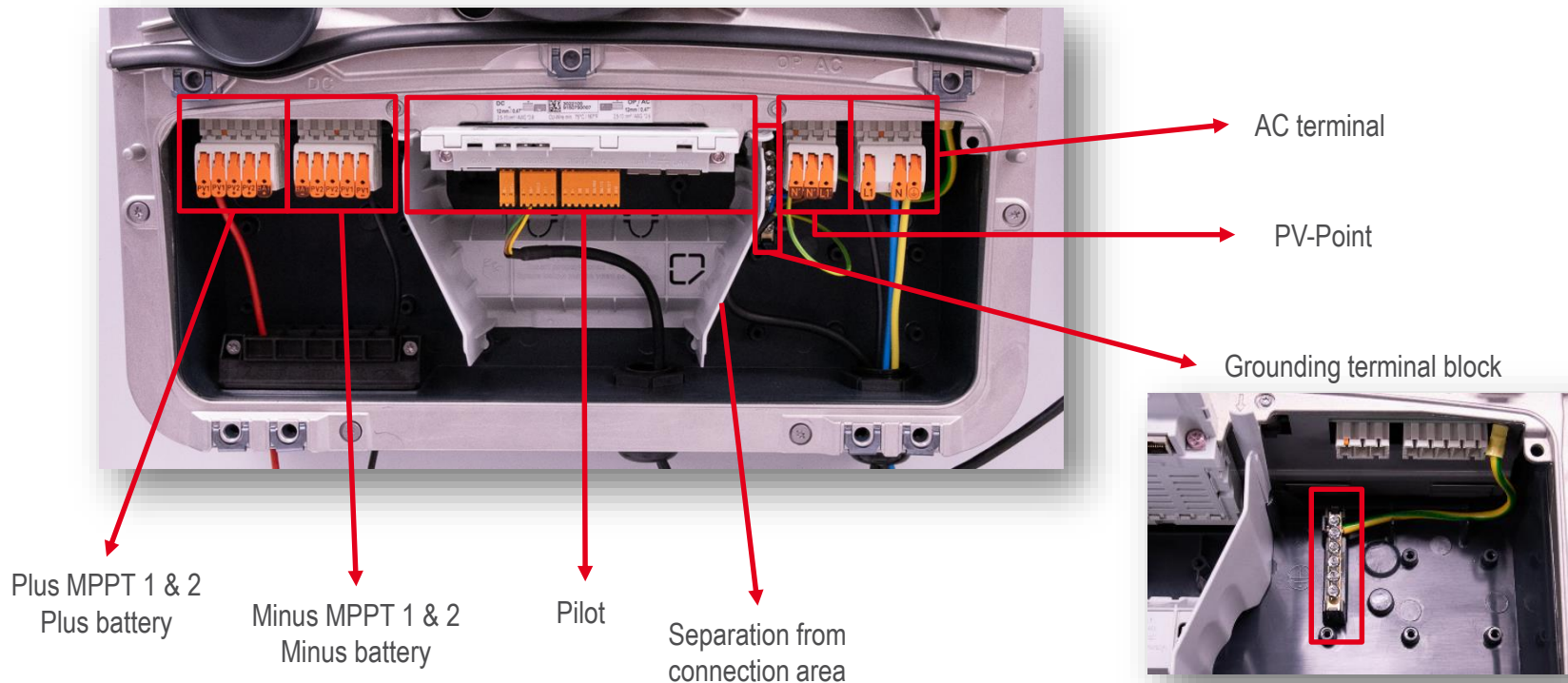
180° QUICK LOCKING SCREWS

Fastest access with 180° quick locking screws

- / Torx screwdriver **TX20**
- / 180° turning to the left
- / DC-switch in switch position “Off” when removing the cover of the connection area
- / No cordless screwdriver allowed



CABLE CONNECTIONS FRONIUS PRIMO GEN24 PLUS



THE GEN24 PLUS

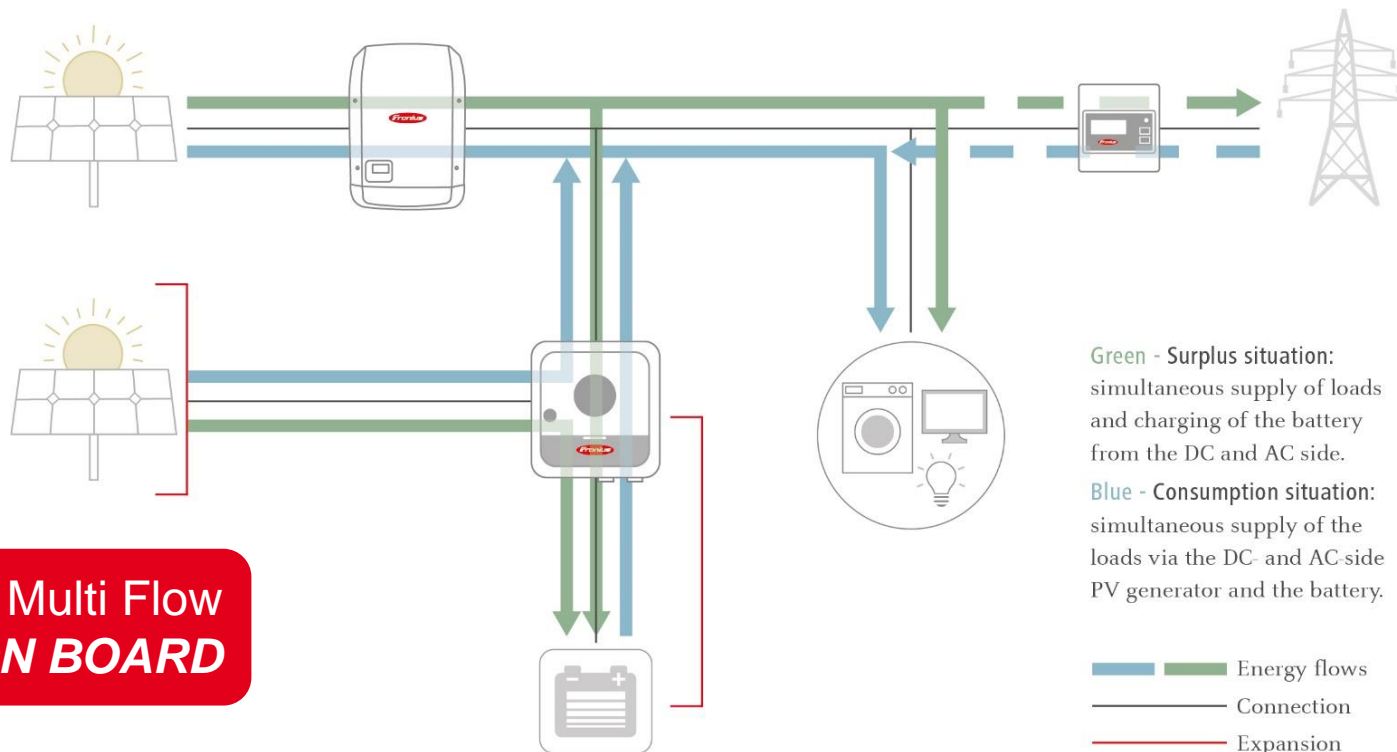
FOR THE FASTEST SERVICE AND THE HIGHEST DEGREE OF SUSTAINABILITY



EASY AND FAST EXCHANGE
OF THE POWER STAGE

NO NEED TO EXCHANGE
THE WHOLE INVERTER

MULTI FLOW TECHNOLOGY



**Multi Flow
ON BOARD**

Technical topics - Fronius GEN24 Plus

Backup options and battery compatibility

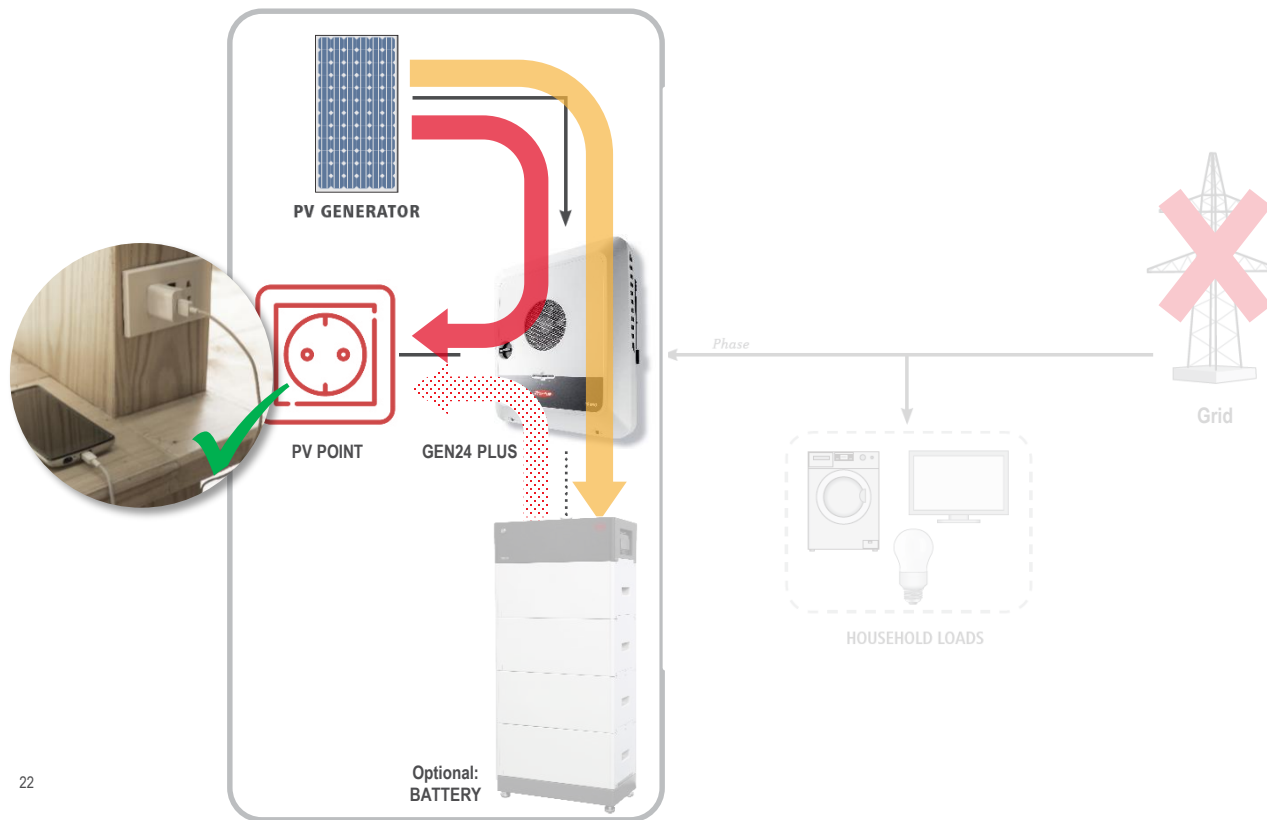
BASIC BACKUP POWER FUNCTION: PV POINT

PV Point

- / Integrated as standard
- / **3 kW / 13 A** – single phase (nominal power)
 - / **4,1 kW for 5 seconds**
- / Only supplied in case of grid failure
- / Own terminal on the inverter
- / **No additional switching components** necessary
- / **Functionality without battery**
- / Combination with battery possible



BASIC GRID BACK-UP: PV POINT



MAXIMUM BACK-UP POWER: FULL-BACKUP



3-PHASE* BACK-UP POWER

Overall supply.
Of entire household

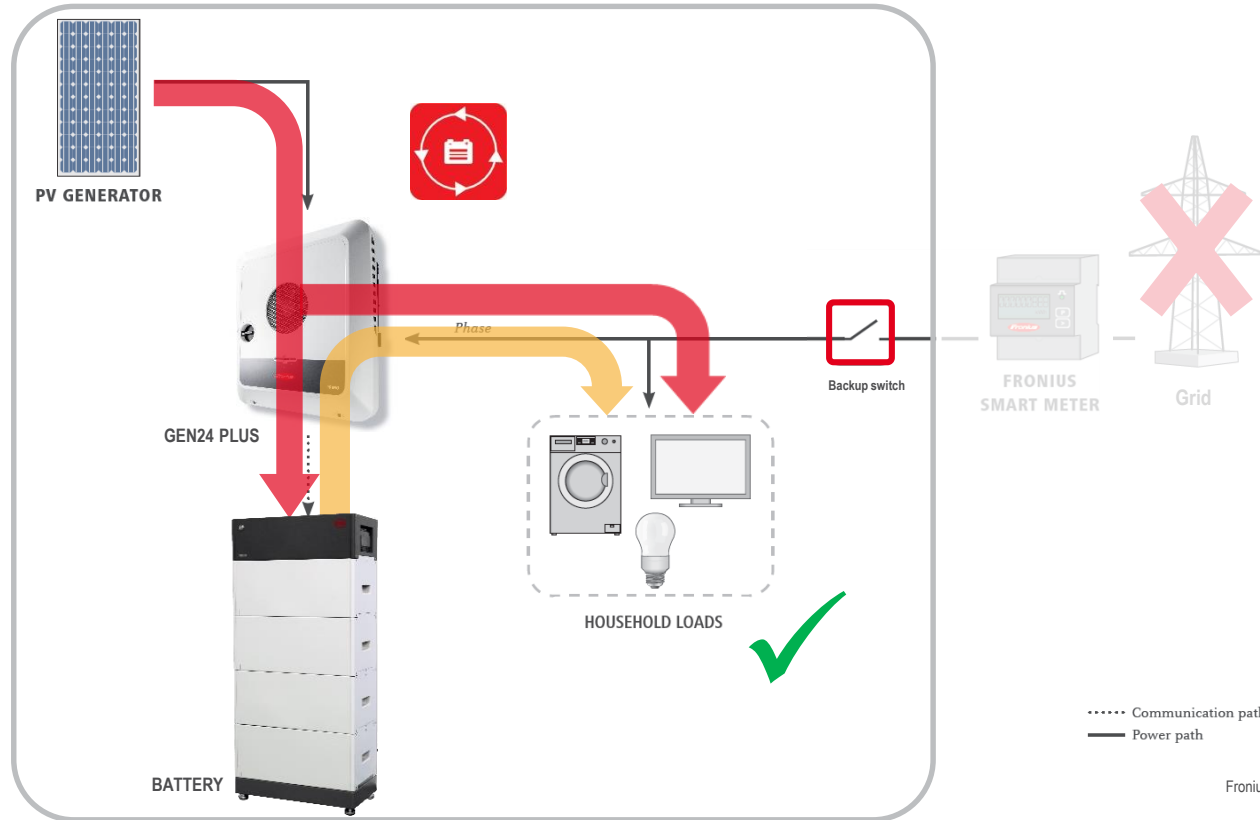
Maximum supply.
Automatic switch-over < 90 sec.

Electric loads.
Single-phase and three-phase

Maximum energy consumption.
Parallel (dis)charging (Multi Flow)

** With Fronius Symo GEN24 Plus*

MAXIMUM BACK-UP POWER: FULL-BACKUP



GEN24 PLUS STORAGE SOLUTION



BYD BATTERY-BOX PREMIUM HVS/HVM

Secure.

- / Lithium iron phosphate (LiFePO₄)

Modular.

- / HVS 5.1 - 10.2 kWh (2-4 modules)*
- / HVM 11.0 – 22.1 kWh (4-8 modules)*

Retrofittable.

- / 2.6 (HVS) / 2.8 (HVM) kWh steps

Easy installation.

- / Ground mount
- / Easy commissioning

** Compatibilities depending on type of GEN24 Plus (Primo/Symo)*

THE GEN24 PLUS

FOR MAXIMUM SYSTEM EFFICIENCY WITH BYD

- / **94% system efficiency**
confirmed by the HTW Berlin (University of Applied Sciences)
- / Battery input with **22 AMP**
- / Maximum **charging/discharging power up to 9 kW**

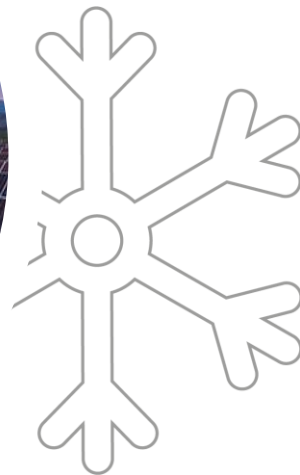
**MOST EFFICIENT USE OF THE PV POWER
ALSO DURING WINTER MONTHS
OR SHORT PERIODS OF INSOLATION**



/ Perfect Welding / Solar Energy / Perfect Charging



Fronius TAURO



Hard shell, smart core.

FRONIUS TAURO

POWER CLASS

50 kW

MPPT VOLTAGE RANGE

400 – 870 V

MPP TRACKERS

3



FRONIUS TAURO ECO

POWER CLASSES

50 / 100 kW

MPPT VOLTAGE RANGE

580 – 930 V

MPP-TRACKER

1



FRONIUS **TAURO**

RELIABLE PRODUCT DESIGN

/ Durable materials and
electronics

SPACIOUS PRODUCT DESIGN

/ More space for possibilities

COMPACT PRODUCT DESIGN

/ On-board features, power stage
system

SMART PRODUCT DESIGN

/ Double-wall system



**Good performance
requires strong devices**

SAVE BOS COSTS WITH AC DAISY CHAINING

Unique system design
with AC Daisy Chaining option

UP TO 200 kW

/ 2 x 100 kW Tauro / 4 x 50 kW Tauro

**FEWER
COMPONENTS REQUIRED***

/ No AC combiner and just 1 AC disconnector

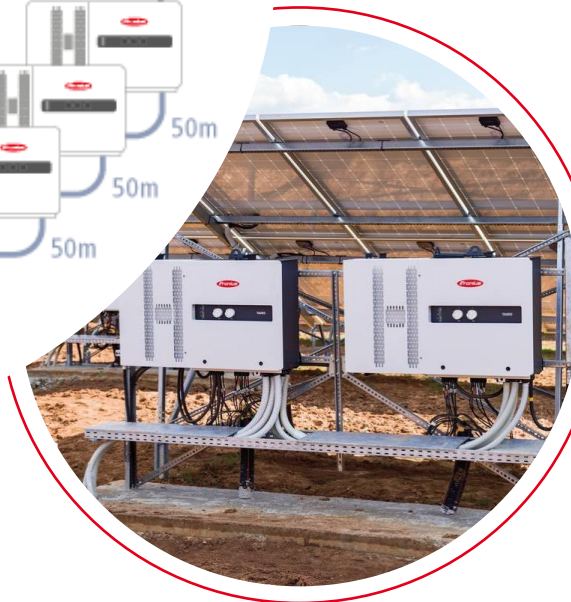
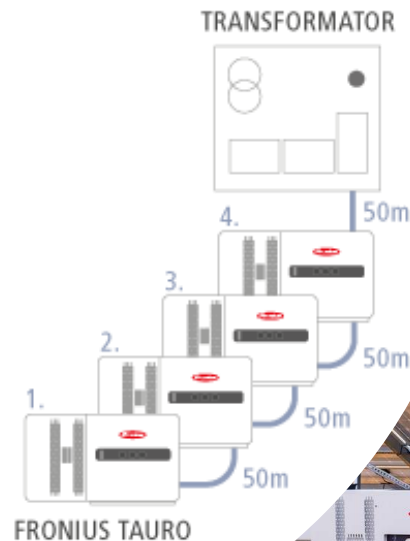
* 200 kW each

CABLE SAVINGS

/ Fewer AC cables required

MORE YIELD

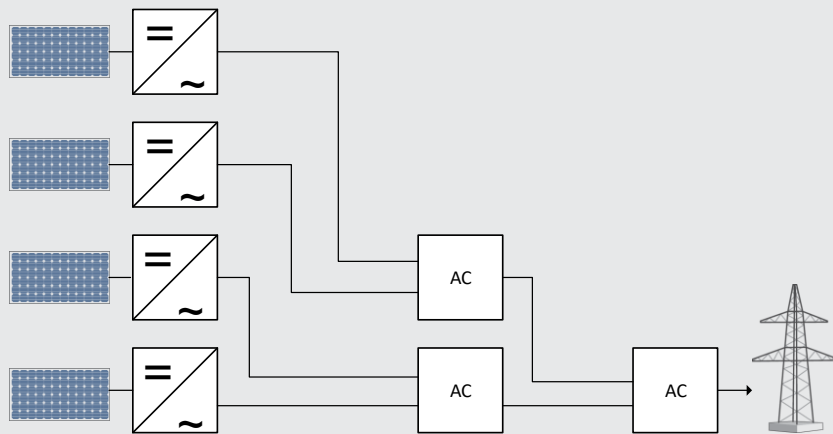
/ Due to less cable losses



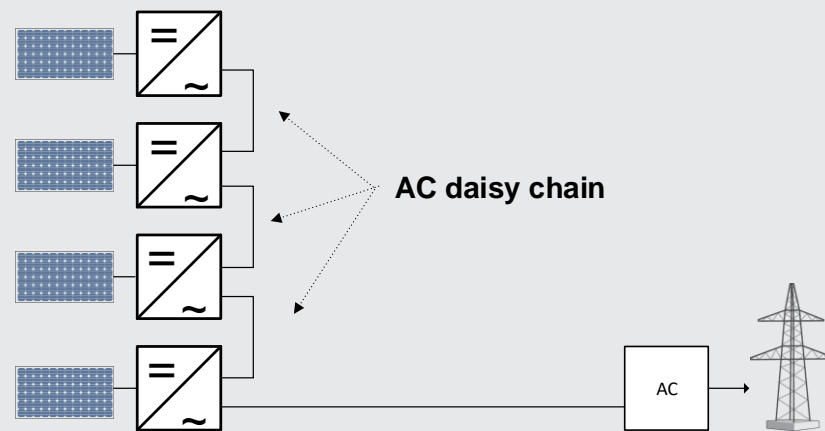
BOS COST REDUCTION: **AC DAISY CHAINING**

- / Savings for cabling and AC connection boxes (→ AC connection integrated)
- / Up to 4 Tauro 50kW or 2 Tauro 100kW

Conventional installation



with Tauro AC Daisy Chaining

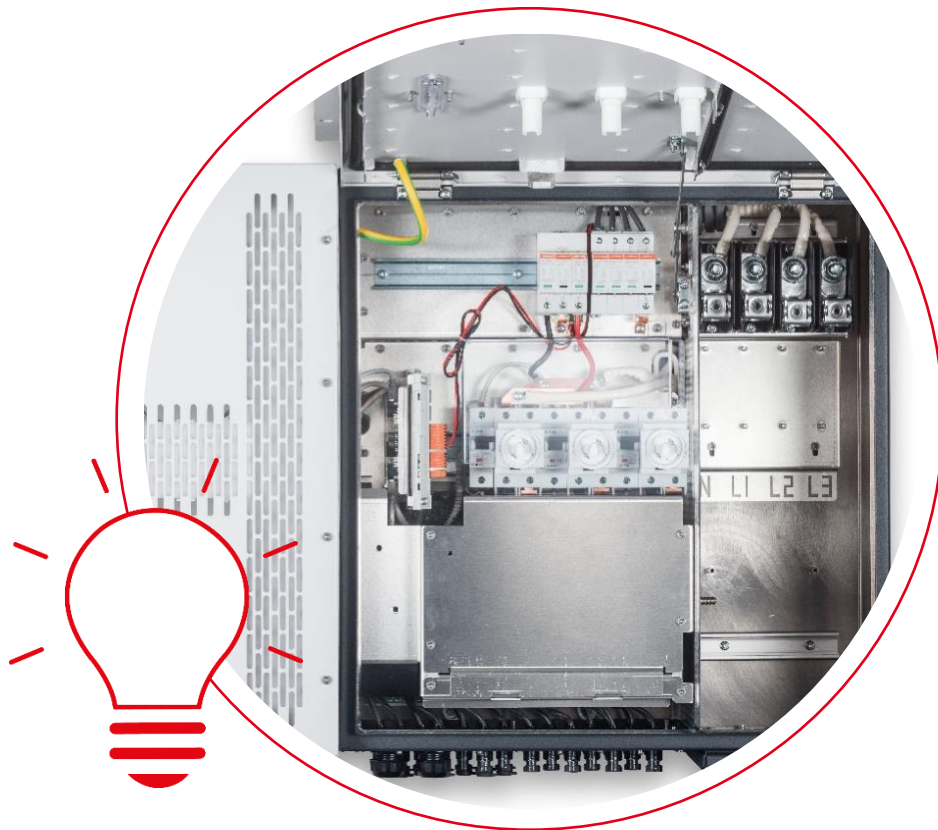


SAVE BOS COSTS WITH INTEGRATED SPD

Integrated monitored surge protective device

NO ADDITIONAL BOX REQUIRED

/ Type 1+2 (AC+DC) integrated as
standard



SAVE BOS COSTS WITH INTEGRATED MONITORING

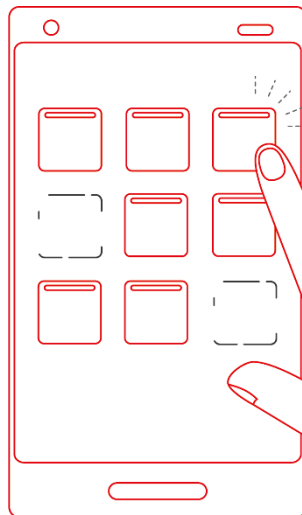
Integrated as standard

OPEN INTERFACES

/ Enable third-party provider monitoring

MONITORING HARDWARE ON BOARD

/ Fronius Solar.web integrated free of charge



SAVE OPEX COSTS WITH UNIQUE SERVICE



Faster and easier service

NO DEVICE REPLACEMENT REQUIRED

/ Replacement of power stage (~ 25 kg) instead of replacing the entire device

SIGNIFICANT TIME AND COST SAVINGS

/ Only 1 person and one journey required



MAXIMUM YIELD

WITH DOUBLE WALL AND COOLING SYSTEM

Maximum service life despite the heat

DOUBLE WALL SYSTEM

/ Front cover with double wall
insulation

FULL PERFORMANCE UP TO 50°C

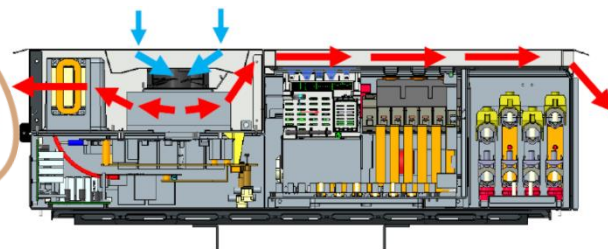
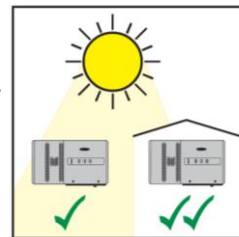
/ Late power derating

POSITION IN DIRECT SUN

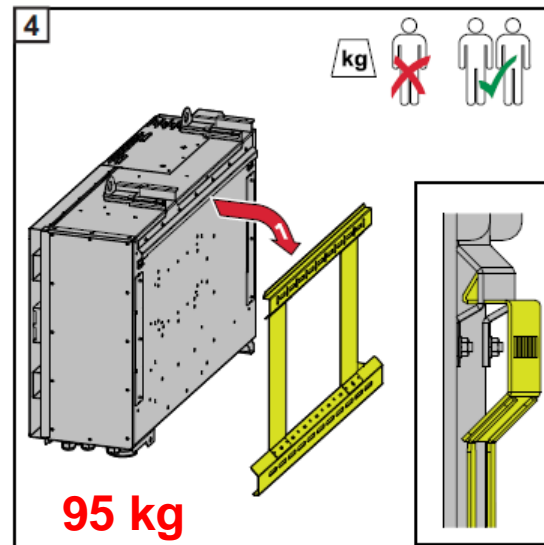
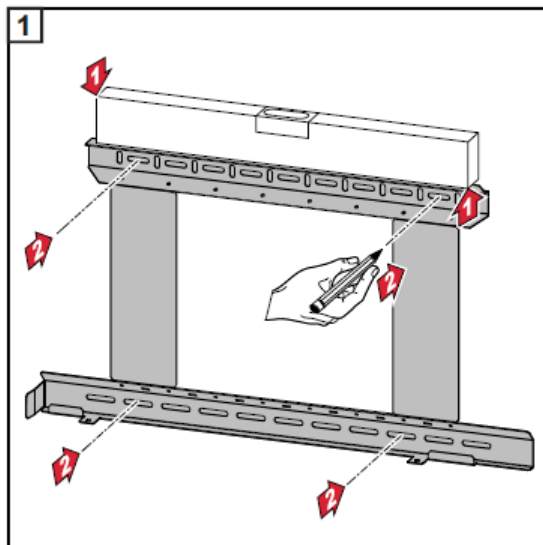
/ 13,5 °C less inside due to
active double-wall cooling

LONGER SERVICE LIFE

/ Of components and the device



WALLMOUNT



OPTION – TAURO HANDLES

For easy lifting of the device as well as stands usable for installation flat on the ground.



**FLEXIBLE
SYSTEM DESIGN**

**AC DAISY
CHAINING**

**CENTRAL &
DECENTRALIZED**

**MONITORING &
INTERFACES**

**EASY
INSTALLATION**

**SPD TYPE 1+2
INTEGRATED**

The Fronius **TAURO** offers:



**1 PERSON
SERVICE**

**DOUBLE-
WALL SYSTEM**

FRONIUS SMART METER

Energy meter at the feed-in point!

- / Bidirectional meter – measuring feed-in and consumption.
- / Measured data are sent to inverter.
- / Basis for detailed own consumption display on Fronius Solar.web.
- / Key to full monitoring and efficient energy flow control within the household.



TYPES OF NEW FRONIUS SMART METER

100A-1



/ 1-phase

65A-3



/ 3-phase
/ Residential solutions

5kA-3



/ 3-phase
/ Commercial use (up to 50 kA)
/ External current sensors

NEW FRONIUS APPS

Solar.start

/ Commissioning App



Inverter installation

Solar.SOS

/ Service App



App for service and trouble-shooting

Solar.web

/ Monitoring App



App for monitoring and visualisation

COMMISSIONING VIA FRONIUS **SOLAR.START**

Download Solar.Start App



- / Free of charge download
- / in Google Play and iOS Store

Open Solar.Start App



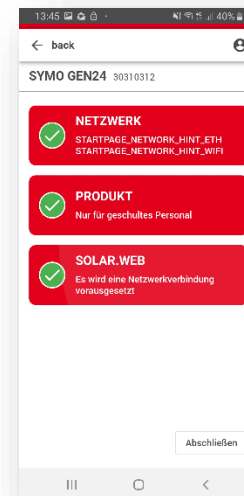
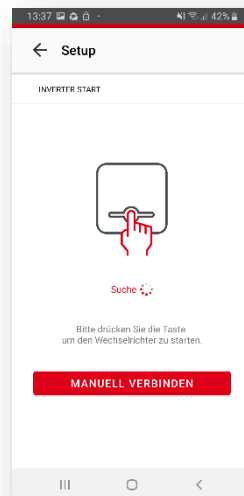
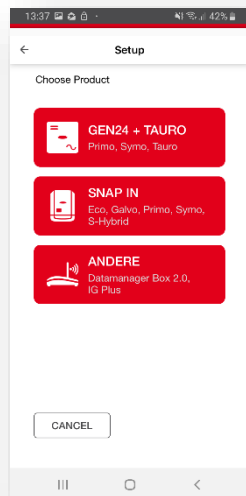
- / Step by step guidance

WiFi Access Point



- / Activate Access point
- / Flashing blue LED is showing activated Access point

EASIEST COMMISSIONING VIA **SOLAR.START**



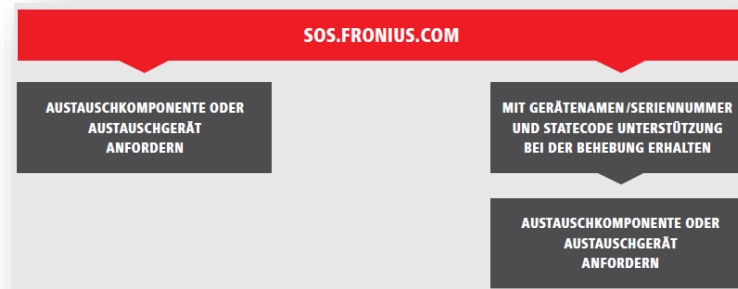
- / Choose product to what you want to connect
- / Push button on the inverter

- / Follow installation assistant through each menus and complete
- / Finish in Solar.web

WHAT IS FRONIUS **SOS**?

FAST, INFORMATIVE UND EASY TO USE

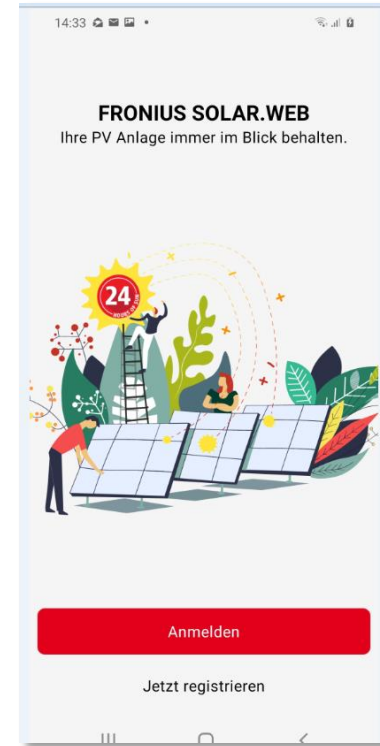
- / **Self-service tool** for technicians / customers
- / Available 24/7 without waiting periods
- / Data query and warranty information
- / Case history and troubleshooting
- / Exchange process



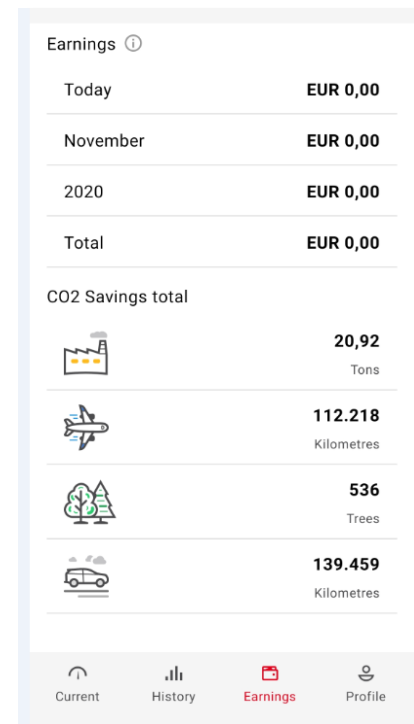
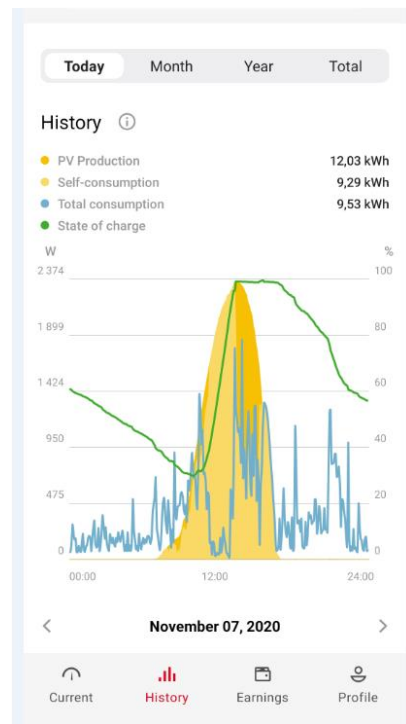
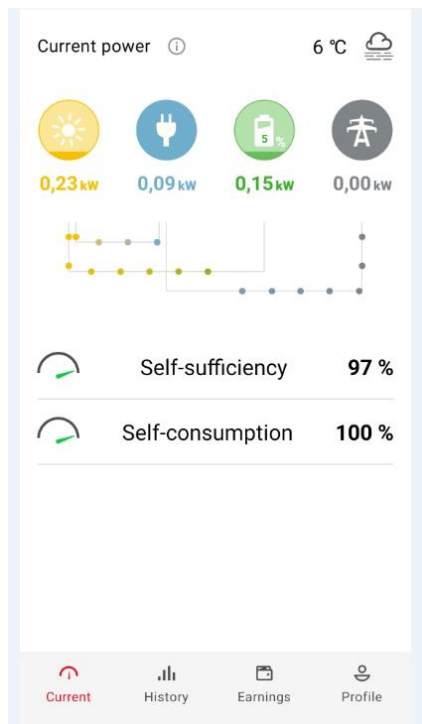
THE NEW **SOLAR.WEB** APP



- / Display of bubble chart and energy flow
- / Current and historical data, Earnings,....
- / App now available on App stores
- / Register with your Solar.web account password



SOLAR.WEB APP VISUALISATION

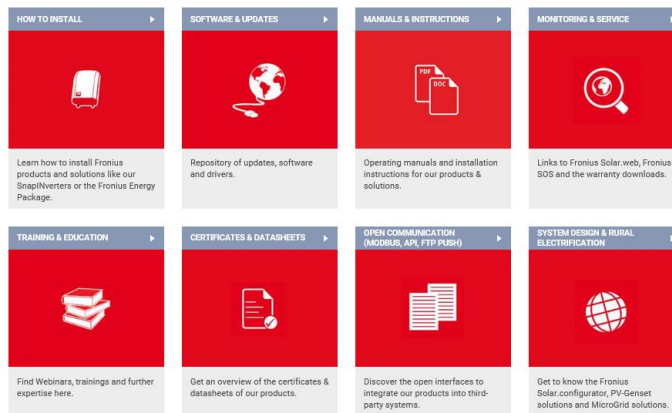


TECH-SUPPORT-AREA FOR INSTALLERS

Information supply and data management tool for installers

Compact, quick and clearly arranged!

- / Data sheets
- / Operating instructions
- / Update files
- / Trainings & webinars
- / Certificates



FRONIUS SOLH₂UB



WHY FRONIUS?

**29
YEARS**

**FRONIUS
SOLAR
ENERGY**

**QUALITY
PRODUCTS**

**EXPERIENCE
AND
TECHNICAL
KNOWHOW**

**FAMILY OWNED
BUSINESS**

**INTERNAT.
SUPPORT
AND RAPID
SERVICE**

/ Perfect Welding / Solar Energy / Perfect Charging



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