



# Fronius Verto Plus



# Product advantages



## **01 Full Backup Capability**

When combined with a battery storage system, the Fronius Verto Plus provides a powerful, fully-fledged three-phase backup power supply\* for the entire building. It is capable of handling even large loads such as heat pumps, cooling systems, fans or grinders. This makes the Fronius Verto Plus a reliable and safe solution for securing the power supply even in critical situations.

## **02 Total flexibility**

The Fronius Verto Plus offers maximum flexibility with three high-current MPP Trackers and a wide voltage range. This makes the inverter ideally suited to complex system designs and all your individual requirements. What's more, the Fronius Verto Plus uses an integrated Dynamic Peak Manager algorithm that enables users to achieve optimal yields even in shady conditions.

## **03 Maximum safety**

With an integrated surge protection device and an Arc Fault Circuit Interrupter (Fronius Arc Guard), the Fronius Verto Plus guarantees the very highest safety standards even in its basic configuration, without the need to pay for additional components. With Fronius, you can also rest assured that your data is in the best hands. This is ensured by our certified information security system and our servers and cloud storage in Europe.

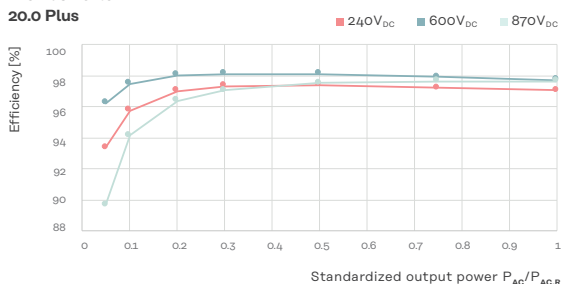
\* Available only in combination with external grid switchover components.

# Fronius

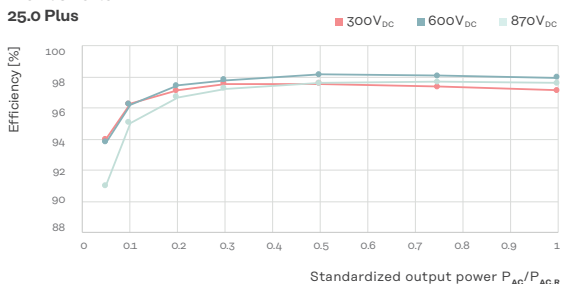
# Verto Plus

## Efficiency

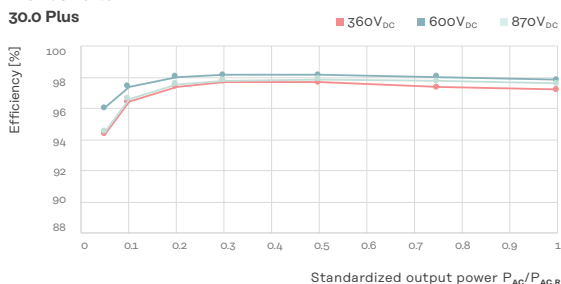
Fronius Verto  
20.0 Plus



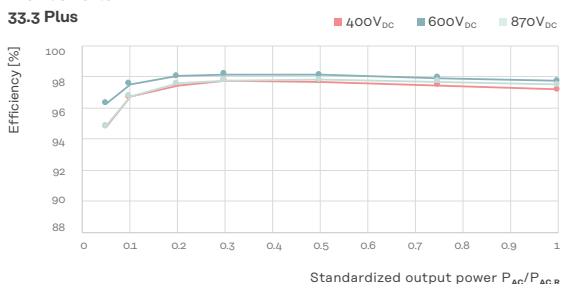
Fronius Verto  
25.0 Plus



Fronius Verto  
30.0 Plus

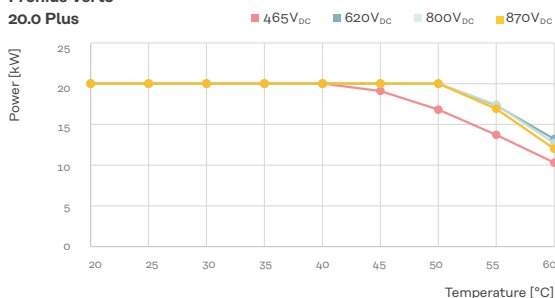


Fronius Verto  
33.3 Plus

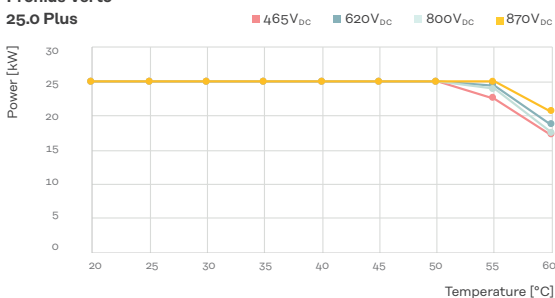


## Power derating

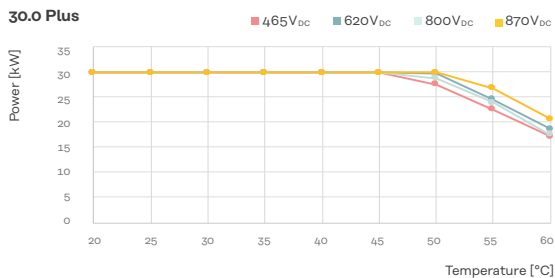
Fronius Verto  
20.0 Plus



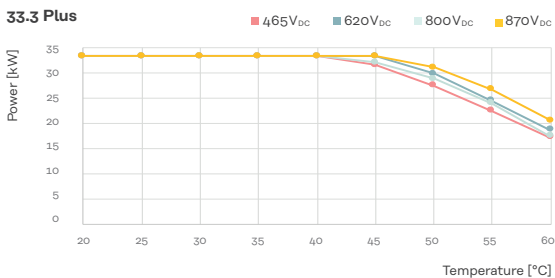
Fronius Verto  
25.0 Plus



Fronius Verto  
30.0 Plus



Fronius Verto  
33.3 Plus



# Technical data

## Verto 15.0 - 20.0 Plus

|                                      |                                                                                            |                 | Fronius Verto Plus                     |         |                                        |         |                                        |         |
|--------------------------------------|--------------------------------------------------------------------------------------------|-----------------|----------------------------------------|---------|----------------------------------------|---------|----------------------------------------|---------|
|                                      |                                                                                            |                 | Verto 15.0 Plus                        |         | Verto 17.5 Plus                        |         | Verto 20.0 Plus                        |         |
| Input data                           | Number of MPPT trackers                                                                    |                 | 3                                      |         | 3                                      |         | 3                                      |         |
|                                      | Inputs Per MPPT / Number of DC connection per MPPT                                         |                 | 2                                      |         | 2                                      |         | 2                                      |         |
|                                      | Max. usable input current per MPPT ( $I_{dc\ max, MPPT}$ )                                 | A               | 28                                     |         | 28                                     |         | 28                                     |         |
|                                      | Max. usable input current per string ( $I_{dc\ max, string}$ ) <sup>1</sup>                | A               | 28                                     |         | 28                                     |         | 28                                     |         |
|                                      | Max. module array short circuit current - MPPT ( $I_{sc\ pv, MPPT}$ ) <sup>2</sup>         | A               | 50                                     |         | 50                                     |         | 50                                     |         |
|                                      | Max. module array short circuit current - per string ( $I_{sc\ pv, string}$ ) <sup>2</sup> | A               | 50                                     |         | 50                                     |         | 50                                     |         |
|                                      | Max. module array short circuit current - inverter ( $I_{sc\ pv, inverter}$ ) <sup>2</sup> | A               | 150                                    |         | 150                                    |         | 150                                    |         |
|                                      | Nominal input voltage ( $U_{dc,r}$ )                                                       | V               | 600                                    |         | 600                                    |         | 600                                    |         |
|                                      | DC input voltage range ( $U_{dc\ min} - U_{dc\ max}$ )                                     | V               | 150–1,000                              |         | 150–1,000                              |         | 150–1,000                              |         |
|                                      | Feed-in start-up input voltage ( $U_{dc\ start}$ )                                         | V               | 150                                    |         | 150                                    |         | 150                                    |         |
|                                      | Usable MPP voltage range ( $U_{mpp\ min} - U_{mpp\ max}$ )                                 | V               | 150–870                                |         | 150–870                                |         | 150–870                                |         |
|                                      | MPP voltage range (full power) ( $U_{mpp\ min} - U_{mpp\ max}$ )                           | V               | 210–870                                |         | 245–870                                |         | 275–870                                |         |
|                                      | Max. usable DC power - MPPT                                                                | W               | 13,000                                 |         | 13,000                                 |         | 13,000                                 |         |
|                                      | Max. usable DC power - Inverter <sup>3</sup>                                               | W               | 22,500                                 |         | 26,250                                 |         | 30,000                                 |         |
|                                      | Max. PV generator output - MPPT                                                            | Wpeak           | 20,000                                 |         | 20,000                                 |         | 20,000                                 |         |
|                                      | Max. PV generator output - Inverter                                                        | Wpeak           | 22,500                                 |         | 26,250                                 |         | 30,000                                 |         |
| Output data                          | AC rated power ( $P_{ac,r}$ )                                                              | W               | 15,000                                 |         | 17,500                                 |         | 20,000                                 |         |
|                                      | Max. output power / rated apparent power                                                   | VA              | 15,000                                 |         | 17,500                                 |         | 20,000                                 |         |
|                                      |                                                                                            | V <sub>AC</sub> | 380                                    | 400     | 380                                    | 400     | 380                                    | 400     |
|                                      | Nominal AC output current ( $I_{ac,r}$ )                                                   | A               | 22.7                                   | 21.7    | 26.5                                   | 25.4    | 30.3                                   | 29.0    |
|                                      | Grid connection (voltage range)                                                            | V               | 3~ (N)PE 380/220;<br>3~ (N)PE 400/230; |         | 3~ (N)PE 380/220;<br>3~ (N)PE 400/230; |         | 3~ (N)PE 380/220;<br>3~ (N)PE 400/230; |         |
|                                      | Frequency (frequency range)                                                                | Hz              | 50/60 (45–65)                          |         | 50/60 (45–65)                          |         | 50/60 (45–65)                          |         |
|                                      | Total harmonic distortion                                                                  | %               | < 3                                    |         | < 3                                    |         | < 3                                    |         |
|                                      | Power factor ( $\cos \varphi_{ac,r}$ )                                                     |                 | 0–1 ind./cap.                          |         | 0–1 ind./cap.                          |         | 0–1 ind./cap.                          |         |
| Output data Full Backup <sup>4</sup> | Nominal Full Backup output power                                                           | VA              | 15,000                                 |         | 17,500                                 |         | 20,000                                 |         |
|                                      | Peak output power <sup>5</sup>                                                             | VA              | 30,000                                 |         | 30,000                                 |         | 30,000                                 |         |
|                                      | Nominal Full Backup phase power                                                            | VA              | 7,000                                  | 7,300   | 7,000                                  | 7,300   | 7,000                                  | 7,300   |
|                                      | Supported phase asymmetry Full Backup <sup>5</sup>                                         | A               | 25.0 / 32.0 peak                       |         | 25.0 / 32.0 peak                       |         | 25.0 / 32.0 peak                       |         |
|                                      | Grid connection Full Backup                                                                | V               | 380 VAC                                | 400 VAC | 380 VAC                                | 400 VAC | 380 VAC                                | 400 VAC |
|                                      | Switching time                                                                             | sec.            | ~11                                    |         | ~11                                    |         | ~11                                    |         |

<sup>1</sup> Individual string is technically capable to handle full / usable MPPT current. However Max. Current per MPPT is limited to 28A.

<sup>2</sup>  $I_{sc\ pv} = I_{sc\ max} \geq I_{sc\ (STC)} \times 1.25$  according e.g.: IEC 60364-7-712, NEC 2020, AS/NZS 5033:2021.

<sup>3</sup> Max power that can be utilized in parallel for output power (AC) and battery charging power (DC).

<sup>4</sup> Additional external components for grid switchover are required for the Full Backup. See the Operating Instructions for further details.

<sup>5</sup> Sufficient PV and battery power required. Duration max. 10s, 400 VAC symmetric, depending on environmental conditions.

# Technical data

## Verto 15.0 - 20.0 Plus

|                    |                                                        |   | Fronius Verto Plus                                                      |                                    |                                    |
|--------------------|--------------------------------------------------------|---|-------------------------------------------------------------------------|------------------------------------|------------------------------------|
|                    |                                                        |   | Verto 15.0 Plus                                                         | Verto 17.5 Plus                    | Verto 20.0 Plus                    |
| Battery connection | Number of DC inputs                                    |   | 1                                                                       | 1                                  | 1                                  |
|                    | Max. nominal dis-/charging current ( $I_{dc\ max}$ )   | A | 50                                                                      | 50                                 | 50                                 |
|                    | DC input voltage range ( $U_{dc\ min} - U_{dc\ max}$ ) | V | 150–700                                                                 | 150–700                            | 150–700                            |
|                    | DC battery connection technology                       |   | DC-connectors Stäubli MC4 Evo Stor                                      | DC-connectors Stäubli MC4 Evo Stor | DC-connectors Stäubli MC4 Evo Stor |
|                    | Max. charging power <sup>6</sup>                       | W | 22,500                                                                  | 26,250                             | 30,000                             |
|                    | Max. discharging power <sup>6</sup>                    | W | 15,000                                                                  | 17,500                             | 20,000                             |
|                    | Max. charging power for AC coupling <sup>6</sup>       | W | 15,000                                                                  | 17,500                             | 20,000                             |
|                    | Compatible batteries <sup>7</sup>                      |   | Fronius Reserva, Reserva Pro, BYD Battery-Box HVM, HVS, HVM+, HVS+, HVB |                                    |                                    |

|              |                                                         |        |                                                                                                                                                                                     |  |  |
|--------------|---------------------------------------------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| General data | Dimensions (height x width x depth)                     | mm     | 865 x 574 x 279                                                                                                                                                                     |  |  |
|              | Weight (Inverter)                                       | kg     | 43                                                                                                                                                                                  |  |  |
|              | Degree of protection                                    |        | IP66                                                                                                                                                                                |  |  |
|              | Protection class                                        |        | 1                                                                                                                                                                                   |  |  |
|              | Overvoltage category (DC / AC) <sup>8</sup>             |        | 2/3                                                                                                                                                                                 |  |  |
|              | Night time consumption                                  | W      | <16                                                                                                                                                                                 |  |  |
|              | Cooling                                                 |        | Regulated air cooling                                                                                                                                                               |  |  |
|              | Installation                                            |        | Indoor and outdoor installation, 90° - 10° tilt                                                                                                                                     |  |  |
|              | Ambient temperature range                               | °C     | -25 to +60                                                                                                                                                                          |  |  |
|              | Permitted humidity                                      | %      | 0–100                                                                                                                                                                               |  |  |
|              | Noise emissions                                         | dB (A) | < 50.3                                                                                                                                                                              |  |  |
|              | Max. Altitude (unrestricted / restricted voltage range) | m      | 3,000 / 4,000                                                                                                                                                                       |  |  |
|              | DC connection technology                                |        | DC-connectors Stäubli Multi Contact MC4                                                                                                                                             |  |  |
|              | AC connection technology                                |        | Cable cross section: 4 - 35 mm <sup>2</sup> (Al & Cu)<br>Cable gland: M32 (Ø12-24.5 mm)<br>Prepared for option 1: M50 Cable gland (Ø10-35 mm)<br>Option 2: 1.5" conduit connection  |  |  |
|              | Certificates and compliance with standards              |        | IEC 62109-1/-2; VDE-AR-N 4105:2018; VDE-AR-N 4110:2023-09; R25; EN 50549-1/-2; CEI 0-16; CEI 0-21; UNE 217002:2020; IEC 62116; IEC 61727; AS/NZS 4777.2:2020+A1; IEC63027:2023; G99 |  |  |
|              | Country of manufacture                                  |        | Austria                                                                                                                                                                             |  |  |

|            |                                   |   |       |       |       |
|------------|-----------------------------------|---|-------|-------|-------|
| Efficiency | Max. efficiency                   | % | 98.03 | 98.06 | 98.15 |
|            | Europ. efficiency ( $\eta_{EU}$ ) | % | 97.35 | 97.54 | 97.95 |
|            | MPP adaptation efficiency         | % | >99.9 | >99.9 | >99.9 |

|                    |                                        |  |                                                       |  |  |
|--------------------|----------------------------------------|--|-------------------------------------------------------|--|--|
| Protective Devices | AFCI - Arc Fault Detection (Arc Guard) |  | Yes                                                   |  |  |
|                    | DC insulation measurement              |  | Yes                                                   |  |  |
|                    | Overload behaviour                     |  | Operating point adjustment. Power limitation          |  |  |
|                    | DC disconnecter                        |  | Yes                                                   |  |  |
|                    | Reverse polarity protection            |  | Yes                                                   |  |  |
|                    | RCMU                                   |  | Yes                                                   |  |  |
|                    | DC/AC overvoltage protection           |  | DC Type 1+2 (IEC 61643-31) / AC Type 2 (IEC 61643-11) |  |  |

<sup>6</sup> Depending on current and voltage of connected battery.

<sup>7</sup> Excluding BYD Battery-Box Premium HVM 8.3 and 3xHVM 22.1. When combining multiple BYD battery towers current ratings need to be considered.

<sup>8</sup> According to IEC 62109-1. DIN rail for optional type 1 + 2 or type 2 surge protection device available. Further information regarding the availability of the inverters in your country can be found at [www.fronius.com](http://www.fronius.com).

## Technical data

### Verto 15.0 - 20.0 Plus

|            |                                           |  | Fronius Verto Plus                                                        |                 |                 |
|------------|-------------------------------------------|--|---------------------------------------------------------------------------|-----------------|-----------------|
|            |                                           |  | Verto 15.0 Plus                                                           | Verto 17.5 Plus | Verto 20.0 Plus |
| Interfaces | WLAN                                      |  | Fronius Solar.web, Modbus TCP SunSpec, JSON, 802.11b/g                    |                 |                 |
|            | Ethernet LAN RJ45                         |  | 10/100Mbit; max. 100m, Fronius Solar.web, Modbus TCP SunSpec, JSON        |                 |                 |
|            | Wired Shutdown (WSD)                      |  | Integrated                                                                |                 |                 |
|            | 2 x RS485                                 |  | Modbus RTU SunSpec (3rd party) / Fronius Smart Meter / Battery            |                 |                 |
|            | 6 digital inputs<br>6 digital in-/outputs |  | Connection to ripple control receiver, energy management, load management |                 |                 |
|            | Datalogger & Webserver                    |  | Integrated                                                                |                 |                 |

## Technical data

### Verto 25.0 - 33.3 Plus

|             |                                                                                            |                   | Fronius Verto Plus                     |      |                                        |      |                                        |      |
|-------------|--------------------------------------------------------------------------------------------|-------------------|----------------------------------------|------|----------------------------------------|------|----------------------------------------|------|
|             |                                                                                            |                   | Verto 25.0 Plus                        |      | Verto 30.0 Plus                        |      | Verto 33.3 Plus                        |      |
| Input data  | Number of MPP trackers                                                                     |                   | 3                                      |      | 3                                      |      | 3                                      |      |
|             | Inputs Per MPPT / Number of DC connection per MPPT                                         |                   | 2                                      |      | 2                                      |      | 2                                      |      |
|             | Max. usable input current per MPPT ( $I_{dc\ max, MPPT}$ )                                 | A                 | 28                                     |      | 28                                     |      | 28                                     |      |
|             | Max. usable input current per string ( $I_{dc\ max, string}$ ) <sup>1</sup>                | A                 | 28                                     |      | 28                                     |      | 28                                     |      |
|             | Max. module array short circuit current - MPPT ( $I_{sc\ pv, MPPT}$ ) <sup>2</sup>         | A                 | 50                                     |      | 50                                     |      | 50                                     |      |
|             | Max. module array short circuit current - per string ( $I_{sc\ pv, string}$ ) <sup>2</sup> | A                 | 50                                     |      | 50                                     |      | 50                                     |      |
|             | Max. module array short circuit current - inverter ( $I_{sc\ pv, inverter}$ ) <sup>2</sup> | A                 | 150                                    |      | 150                                    |      | 150                                    |      |
|             | Nominal input voltage ( $U_{dc,r}$ )                                                       | V                 | 600                                    |      | 600                                    |      | 600                                    |      |
|             | DC input voltage range ( $U_{dc\ min} - U_{DC\ max}$ )                                     | V                 | 150–1,000                              |      | 150–1,000                              |      | 150–1,000                              |      |
|             | Feed-in start-up input voltage ( $U_{dc\ start}$ )                                         | V                 | 150                                    |      | 150                                    |      | 150                                    |      |
|             | Usable MPP voltage range ( $U_{mpp\ min} - U_{mpp\ max}$ )                                 | V                 | 150–870                                |      | 150–870                                |      | 150–870                                |      |
|             | MPP voltage range (full power) ( $U_{mpp\ min} - U_{mpp\ max}$ )                           | V                 | 350–870                                |      | 400–870                                |      | 410–870                                |      |
|             | Max. usable DC power - MPPT                                                                | W                 | 13,000                                 |      | 13,000                                 |      | 13,000                                 |      |
|             | Max. usable DC power - Inverter <sup>3</sup>                                               | W                 | 33,250                                 |      | 39,000                                 |      | 39,000                                 |      |
|             | Max. PV generator output - MPPT                                                            | W <sub>peak</sub> | 20,000                                 |      | 20,000                                 |      | 20,000                                 |      |
|             | Max. PV generator output - Inverter                                                        | W <sub>peak</sub> | 37,500                                 |      | 45,000                                 |      | 50,000                                 |      |
| Output data | AC rated power ( $P_{ac,r}$ )                                                              | W                 | 25,000                                 |      | 29,990                                 |      | 33,300                                 |      |
|             | Max. output power / rated apparent power                                                   | VA                | 25,000                                 |      | 29,990                                 |      | 33,300                                 |      |
|             |                                                                                            | V <sub>AC</sub>   | 380                                    | 400  | 380                                    | 400  | 380                                    | 400  |
|             | Nominal AC output current ( $I_{ac,r}$ )                                                   | A                 | 37.90                                  | 36.2 | 45.4                                   | 43.5 | 50.5                                   | 48.3 |
|             | Grid connection (voltage range)                                                            | V                 | 3~ (N)PE 380/220;<br>3~ (N)PE 400/230; |      | 3~ (N)PE 380/220;<br>3~ (N)PE 400/230; |      | 3~ (N)PE 380/220;<br>3~ (N)PE 400/230; |      |
|             | Frequency (frequency range)                                                                | Hz                | 50/60 (45–65)                          |      | 50/60 (45–65)                          |      | 50/60 (45–65)                          |      |
|             | Total harmonic distortion                                                                  | %                 | < 3                                    |      | < 1                                    |      | < 1                                    |      |
|             | Power factor ( $\cos\varphi_{ac,r}$ )                                                      |                   | 0–1 ind./cap.                          |      | 0–1 ind./cap.                          |      | 0–1 ind./cap.                          |      |

<sup>1</sup> Individual string is technically capable to handle full / usable MPPT current. However Max. Current per MPPT is limited to 28A.

<sup>2</sup>  $I_{sc\ pv} = I_{sc\ max} \geq I_{sc\ (STC)} \times 1.25$  according e.g.: IEC 60364-7-712, NEC 2020, AS/NZS 5033:2021.

<sup>3</sup> Max power that can be utilized in parallel for output power (AC) and battery charging power (DC).

# Technical data

## Verto 25.0 - 33.3 Plus

|                                         |                                                                     |        | Fronius Verto Plus                                                                                                                                                                  |         |                                    |         |                                    |         |
|-----------------------------------------|---------------------------------------------------------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------------------------------------|---------|------------------------------------|---------|
|                                         |                                                                     |        | Verto 25.0 Plus                                                                                                                                                                     |         | Verto 30.0 Plus                    |         | Verto 33.3 Plus                    |         |
| Output data<br>Full Backup <sup>4</sup> | Nominal Full Backup output power                                    | VA     | 25,000                                                                                                                                                                              |         | 29,990                             |         | 33,300                             |         |
|                                         | Peak output power <sup>5</sup>                                      | VA     | 50,000                                                                                                                                                                              |         | 50,000                             |         | 50,000                             |         |
|                                         | Nominal Full Backup phase power                                     | VA     | 11,100                                                                                                                                                                              | 11,100  | 11,100                             | 11,100  | 11,100                             | 11,100  |
|                                         | Supported phase asymmetry Full Backup <sup>5</sup>                  | A      | 50.0 / 72.5 peak                                                                                                                                                                    |         | 50.0 / 72.5 peak                   |         | 50.0 / 72.5 peak                   |         |
|                                         | Grid connection Full Backup                                         | V      | 380 VAC                                                                                                                                                                             | 400 VAC | 380 VAC                            | 400 VAC | 380 VAC                            | 400 VAC |
|                                         | Switching time                                                      | sec.   | ~11                                                                                                                                                                                 |         | ~11                                |         | ~11                                |         |
| Battery connection                      | Number of DC inputs                                                 |        | 1                                                                                                                                                                                   |         | 1                                  |         | 1                                  |         |
|                                         | Max. nominal dis-/charging current (I <sub>dc max</sub> )           | A      | 50                                                                                                                                                                                  |         | 50                                 |         | 50                                 |         |
|                                         | DC input voltage range (U <sub>dc min</sub> - U <sub>dc max</sub> ) | V      | 150–700                                                                                                                                                                             |         | 150–700                            |         | 150–700                            |         |
|                                         | DC battery connection technology                                    |        | DC-connectors Stäubli MC4 Evo Stor                                                                                                                                                  |         | DC-connectors Stäubli MC4 Evo Stor |         | DC-connectors Stäubli MC4 Evo Stor |         |
|                                         | Max. charging power <sup>6</sup>                                    | W      | 33,250                                                                                                                                                                              |         | 35,000                             |         | 35,000                             |         |
|                                         | Max. discharging power <sup>6</sup>                                 | W      | 25,000                                                                                                                                                                              |         | 29,990                             |         | 33,300                             |         |
|                                         | Max. charging power for AC coupling <sup>6</sup>                    | W      | 25,000                                                                                                                                                                              |         | 29,990                             |         | 33,300                             |         |
|                                         | Compatible batteries <sup>7</sup>                                   |        | Fronius Reserva, Reserva Pro, BYD Battery-Box HVM, HVS, HVM+, HVS+, HVB                                                                                                             |         |                                    |         |                                    |         |
| General data                            | Dimensions (height x width x depth)                                 | mm     | 865 x 574 x 279                                                                                                                                                                     |         |                                    |         |                                    |         |
|                                         | Weight (Inverter)                                                   | kg     | 43                                                                                                                                                                                  |         |                                    |         |                                    |         |
|                                         | Degree of protection                                                |        | IP66                                                                                                                                                                                |         |                                    |         |                                    |         |
|                                         | Protection class                                                    |        | 1                                                                                                                                                                                   |         |                                    |         |                                    |         |
|                                         | Overvoltage category (DC / AC) <sup>8</sup>                         |        | 2/3                                                                                                                                                                                 |         |                                    |         |                                    |         |
|                                         | Night time consumption                                              | W      | <16                                                                                                                                                                                 |         |                                    |         |                                    |         |
|                                         | Cooling                                                             |        | Regulated air cooling                                                                                                                                                               |         |                                    |         |                                    |         |
|                                         | Installation                                                        |        | Indoor and outdoor installation, 90° - 10° tilt                                                                                                                                     |         |                                    |         |                                    |         |
|                                         | Ambient temperature range                                           | °C     | -25 to +60                                                                                                                                                                          |         |                                    |         |                                    |         |
|                                         | Permitted humidity                                                  | %      | 0–100                                                                                                                                                                               |         |                                    |         |                                    |         |
|                                         | Noise emissions                                                     | dB (A) | < 56.7                                                                                                                                                                              |         |                                    |         |                                    |         |
|                                         | Max. Altitude (unrestricted / restricted voltage range)             | m      | 3,000 / 4,000                                                                                                                                                                       |         |                                    |         |                                    |         |
|                                         | DC connection technology                                            |        | DC-connectors Stäubli Multi Contact MC4                                                                                                                                             |         |                                    |         |                                    |         |
|                                         | AC connection technology                                            |        | Cable cross section: 4 - 35 mm² (Al & Cu)<br>Cable gland: M32 (Ø12-24.5 mm)<br>Prepared for option 1: M50 Cable gland (Ø10-35 mm)<br>Option 2: 1.5" conduit connection              |         |                                    |         |                                    |         |
|                                         | Certificates and compliance with standards                          |        | IEC 62109-1/-2; VDE-AR-N 4105:2018; VDE-AR-N 4110:2023-09; R25; EN 50549-1/-2; CEI 0-16; CEI 0-21; UNE 217002:2020; IEC 62116; IEC 61727; AS/NZS 4777.2:2020+A1; IEC63027:2023; G99 |         |                                    |         |                                    |         |
|                                         | Country of manufacture                                              |        | Austria                                                                                                                                                                             |         |                                    |         |                                    |         |

<sup>4</sup> Additional external components for grid switchover are required for the Full Backup. See the Operating Instructions for further details.

<sup>5</sup> Sufficient PV and battery power required. Duration max. 10s, 400 VAC symmetric, depending on environmental conditions.

<sup>6</sup> Depending on current and voltage of connected battery.

<sup>7</sup> Excluding BYD Battery-Box Premium HVM 8.3 and 3xHVM 22.1. When combining multiple BYD battery towers current ratings need to be considered.

<sup>8</sup> According to IEC 62109-1. DIN rail for optional type 1 + 2 or type 2 surge protection device available. Further information regarding the availability of the inverters in your country can be found at [www.fronius.com](http://www.fronius.com).

## Technical data

### Verto 25.0 - 33.3 Plus

|            |                                   |   | Fronius Verto Plus |                 |                 |
|------------|-----------------------------------|---|--------------------|-----------------|-----------------|
|            |                                   |   | Verto 25.0 Plus    | Verto 30.0 Plus | Verto 33.3 Plus |
| Efficiency | Max. efficiency                   | % | 98.16              | 98.15           | 98.15           |
|            | Europ. efficiency ( $\eta_{EU}$ ) | % | 97.74              | 97.96           | 97.95           |
|            | MPP adaptation efficiency         | % | > 99.9             | > 99.9          | > 99.9          |

| Protective Devices | AFCI - Arc Fault Detection (Arc Guard) |  | Yes                                                   |
|--------------------|----------------------------------------|--|-------------------------------------------------------|
|                    | DC insulation measurement              |  | Yes                                                   |
|                    | Overload behaviour                     |  | Operating point adjustment. Power limitation          |
|                    | DC disconnect                          |  | Yes                                                   |
|                    | Reverse polarity protection            |  | Yes                                                   |
|                    | RCMU                                   |  | Yes                                                   |
|                    | DC/AC overvoltage protection           |  | DC Type 1+2 (IEC 61643-31) / AC Type 2 (IEC 61643-11) |

| Interfaces | WLAN                                      |  | Fronius Solar.web, Modbus TCP SunSpec, JSON, 802.11b/g                    |
|------------|-------------------------------------------|--|---------------------------------------------------------------------------|
|            | Ethernet LAN RJ45                         |  | 10/100Mbit; max. 100m, Fronius Solar.web, Modbus TCP SunSpec, JSON        |
|            | Wired Shutdown (WSD)                      |  | Integrated                                                                |
|            | 2 x RS485                                 |  | Modbus RTU SunSpec (3rd party) / Fronius Smart Meter / Battery            |
|            | 6 digital inputs<br>6 digital in-/outputs |  | Connection to ripple control receiver, energy management, load management |
|            | Datalogger & Webserver                    |  | Integrated                                                                |

# Your photovoltaic system can do more

Fronius Verto Plus, the adaptable hybrid inverter for small businesses, agricultural applications, and apartment buildings. Its flexibility makes it the perfect choice, both for constructing a new PV system and expanding an existing one. Featuring integrated safety features and innovative shade management, the Fronius Verto Plus ensures optimum operation. Our flexible inverter facilitates energy sector integration thanks to its open interfaces. This means that it is easy to integrate charging stations such as Fronius Wattpilot Flex and consumption regulators such as Fronius Ohmpilot.

For more information about the product, visit:

[fronius.com/verto-plus-en](https://fronius.com/verto-plus-en)

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