

# Designed to transform.



Fronius Verto

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## Product advantages

- 01 Total flexibility
- 02 Maximum safety
- 03 Optimal use

# Product advantages

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## **01 Total flexibility**

The Fronius Verto offers maximum flexibility with four 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 uses an integrated Dynamic Peak Manager algorithm that enables users to achieve optimal yields even in shady conditions.

## **02 Maximum safety**

With an integrated surge protection device and an Arc Fault Circuit Interrupter (Fronius Arc Guard), the Fronius Verto 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.

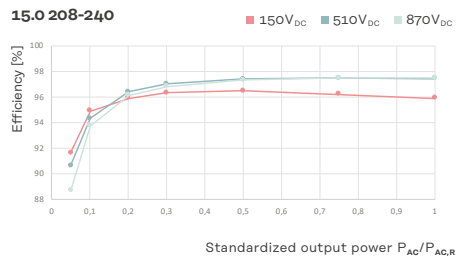
## **03 Optimal use**

Use excess solar energy for other PV applications such as e-mobility or heat, save costs, and ensure faster amortization for your system. Thanks to its open interfaces, the Fronius Verto enables easy integration of consumption regulators, such as the Fronius Ohmpilot or Fronius Wattpilot. A perfect addition to your PV system: Our Fronius EMIL software solution supplies your e-fleet with electricity in a fully automated process across all locations. Heat pumps or smarthome systems are easy to integrate and work well with the Fronius Verto.

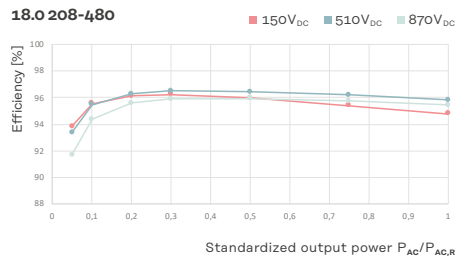
# Fronius Verto

## Efficiency

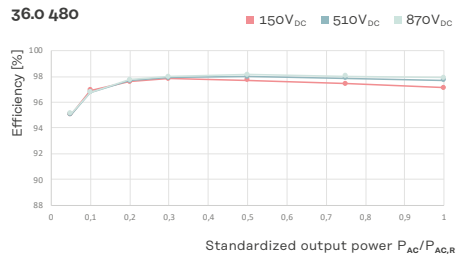
**Fronius Verto**  
**15.0 208-240**



**Fronius Verto**  
**18.0 208-480**

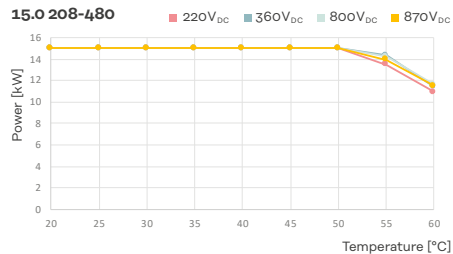


**Fronius Verto**  
**36.0 480**

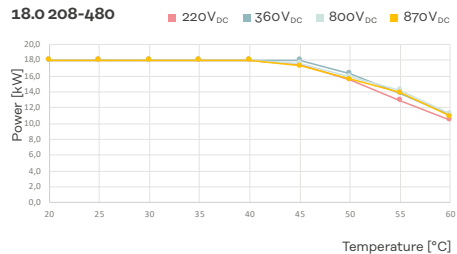


## Power derating

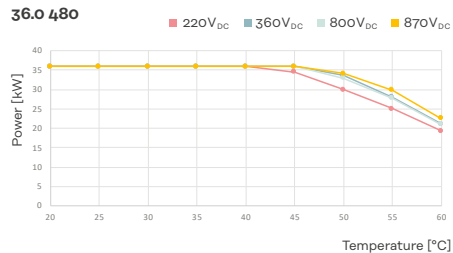
**Fronius Verto**  
**15.0 208-480**



**Fronius Verto**  
**18.0 208-480**



**Fronius Verto**  
**36.0 480**



# Technical data

## Verto 15.0 - 36.0

			Fronius Verto								
			Verto 15.0 208-240			Verto 18.0 208-240			Verto 36.0 480		
Input data	Number of MPP trackers		4			4			4		
	Number of DC connections 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 per 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	360			360			720		
	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 ( $U_{mpp\ min}-U_{mpp\ max}$ ) <sup>1</sup>	V	150–870			150–870			150–870		
	MPP voltage range (at rated power) ( $U_{mpp\ min}-U_{mpp\ max}$ )	V	180–870			220–870			440–870		
	Max. usable DC power—MPPT ( $P_{dc\ max,\ PV}$ )	W	13.000			13.000			13.000		
	Max. PV generator output—MPPT ( $P_{PV\ max}$ )	W <sub>peak</sub>	20.000			20.000			20.000		
	Max. PV generator output—inverter ( $P_{PV\ max}$ )	W <sub>peak</sub>	22.500			27.000			50.000		
Output data	AC rated power ( $P_{ac,r}$ )	W	15.000			18.000			36.000		
	Max. output power	VA	15.000			18.000			36.000		
		V <sub>CA</sub>	208	220	240	208	220	240	440	480	
	AC output current ( $I_{ac,r}$ )	A	41.7	39.4	36.0	50.0	47.2	43.2	47.2	43.3	
	Mains connection ( $U_{ac,r}$ )	V	3~ (N)PE 208/120; 3~ (N)PE 220/127; 3~ (N)PE 240/139			3~ (N)PE 208/120; 3~ (N)PE 220/127; 3~ (N)PE 240/139			3~ (N)PE 440/254; 3~ (N)PE 480/277		
	Frequency (frequency range $f_{min}-f_{max}$ )	Hz	50/60 (45–65)			50/60 (45–65)			50/60 (45–65)		
	Total harmonic distortion	%	< 3			< 3			< 1		
	Power factor ( $\cos\ \varphi_{ac,r}$ )		0–1 ind./cap.			0–1 ind./cap.			0–1 ind./cap.		

<sup>1</sup> A single string is technically capable of processing the full/usable MPPT current. The max. current per MPPT is always limited to 28 A.  
<sup>2</sup>  $I_{sc\ pv} = I_{sc\ max} \geq I_{sc\ (STC)} \times 1.25$  according to e.g.: IEC 60364-7-712, NEC 2020, AS/NZS 5033:2021.

# Technical data

## Verto 15.0 - 36.0

			Fronius Verto		
			Verto 15.0 208-240	Verto 18.0 208-240	Verto 36.0 480
General data	Dimensions (height × width × depth)	mm	865 x 574 x 279		
	Weight (inverter)	kg	41.75		
	Protection class		IP 66		
	Safety class		1		
	Over-voltage category (DC/AC)		2/3		
	Night consumption	W	< 16		
	Cooling		Active air cooling		
	Installation		Indoor and outdoor installation		
	Ambient temperature range	°C	-40 to +60		
	Permissible humidity	%	0–100		
	Noise emissions	dB (A)	< 54.6		
	Max. altitude above sea level	m	3,000/4,000 (unrestricted/restricted voltage range)		
	Certificates and compliance with standards		IEC62109-1/-2; VDE-AR-N 4105:2018; R25; UNE 217002:2020; IEC 62116; EN 50549-1/-2		

Connection technology	AC	Cable cross-section	mm²	4–35	
		Conductive material		Al and Cu	
		Connection ports		AC: M32 (Ø12–24.5 mm) Prepared for option 1: M50 cable gland (Ø10–35 mm) Option 2: 1.5" conduit connection PE & data communication: 2 × M32 (3 xØ 4.9–5.5 mm + 3 xØ 6.7–8.5 mm)	
	DC	Connection ports		DC direct connection Stäubli Multi Contact MC4	
		Conductive material		Al and Cu	

Efficiency	Max. efficiency	%	97.50	96.49	98.13
	Europ. efficiency (ηEU)	%	96.87	96.14	97.85
	MPP adaptation efficiency	%	> 99.9		

Protection devices	DC isolation measurement		Integrated		
	DC disconnect		Integrated		
	RCMU		Integrated		
	Arc Fault Circuit Interrupter—Arc Guard		Integrated		
	Reverse polarity protection		Integrated		
	DC/AC surge protection device		Type 1+2 or type 2		

Interfaces	WLAN		Fronius Solar.web, Modbus TCP, JSON, 802.11b/g		
	Ethernet LAN RJ45		10/100 Mbit; max. 100 m Fronius Solar.web, Modbus TCP, JSON		
	Wired shutdown (WSD)		Integrated		
	2 × RS485		Modbus RTU SunSpec (third-party provider)/Fronius Smart Meter		
	6 digital inputs 6 digital inputs/outputs		Connection to ripple control receiver, energy management, load management		
	Datalogger and web server		Integrated		



# Your photovoltaic system can do more

Fronius Verto, the adaptable 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 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 Watto pilot and consumption regulators such as Fronius Ohmpilot.

For more information about the product, visit:

[www.fronius.com/verto-en](http://www.fronius.com/verto-en)

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