



Fronius Green Plus



Product advantages



01 Emergency power supply

When connected to a battery storage system, the Fronius Verto Plus provides a fully functional three-phase emergency power supply* for the entire building. Even large consumers such as heat pumps, cooling systems, and fans or mills can be in emergency power mode

This makes the Fronius

Verto Plus is a reliable solution to ensure power supply even in critical

situations and with large consumers to ensure.

02 High design flexibility

The Fronius Verto Plus offers three powerful MPP trackers and a

wide voltage range maximum Flexibility. This makes the inverter

It's also ideally suited for complex system designs and your individual requirements. Even in shady conditions, the Fronius Verto Plus, with its integrated Dynamic Peak Manager algorithm, ensures optimal yields.

03 Maximum security

With integrated surge protection and

Arc detection and interruption

(Arc Guard Technology) guarantees the Fronius

Verto Plus already in its basic configuration highest safety standards – without

Costs for additional components.

Your data is also in the best possible condition at Fronius

Hands: This is ensured by our certified information security system as well as our servers and cloud storage in Europe.

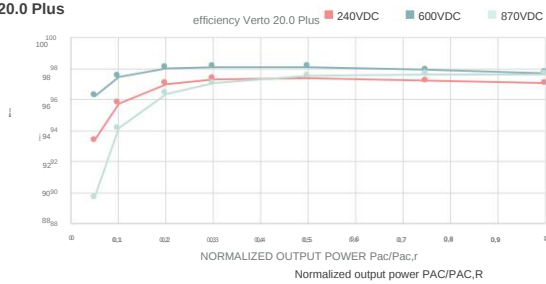
* Only available in combination with a mains switching device.

Fronius

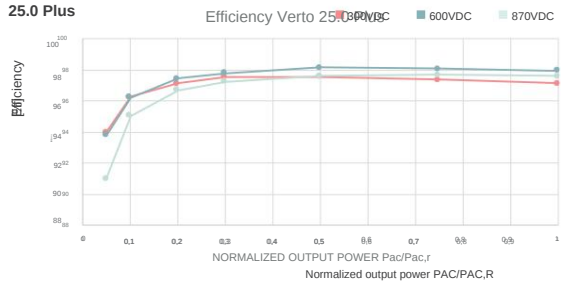
Turn More

Efficiency

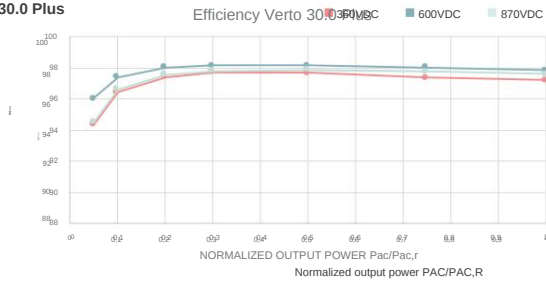
Fronius Verto
20.0 Plus



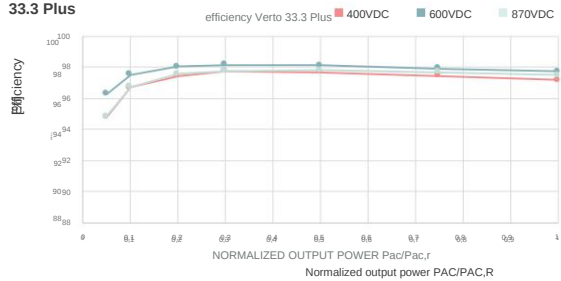
Fronius Verto
25.0 Plus



Fronius Verto
30.0 Plus

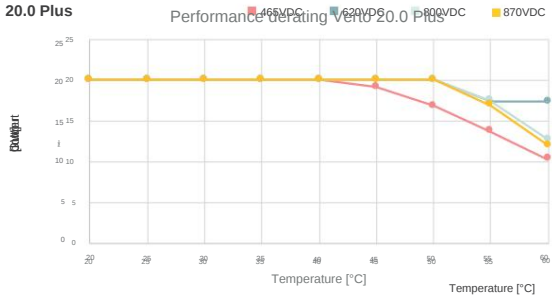


Fronius Verto
33.3 Plus

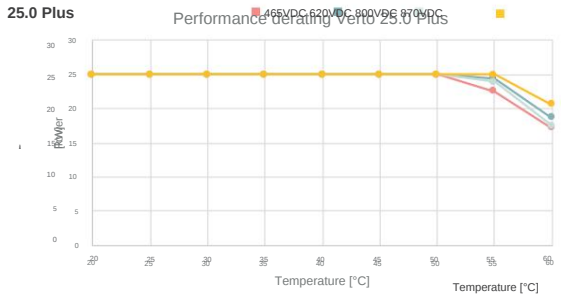


Performance derating

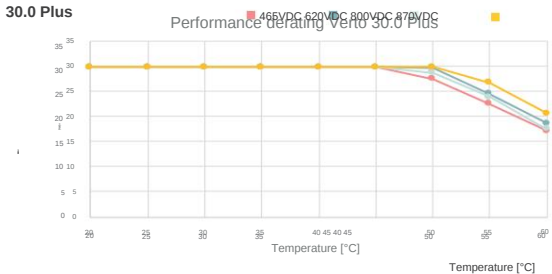
Fronius Verto
20.0 Plus



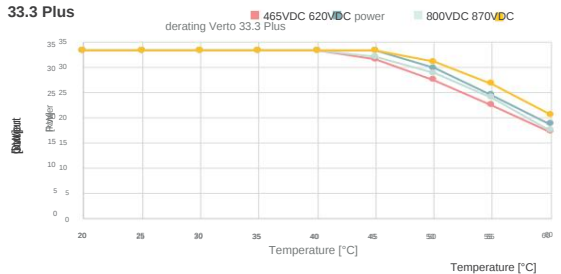
Fronius Verto
25.0 Plus



Fronius Verto
30.0 Plus



Fronius Verto
33.3 Plus



Technical data

Turn 15.0 - 20.0 Plus

			Fronius Verto Plus					
			Verto 15.0 Plus		Turn 17.5 Plus		Verto 20.0 Plus	
Input	Number of MPP trackers		3		3		3	
	Number of DC connections per MPPT		2		2		2	
	Max. usable input current per MPPT (Idc max, MPPT)	A	28		28		28	
	Max. usable input current per Strang (Idc max, Strang) 1	A	28		28		28	
	Max. short-circuit current module field per MPPT (Isc pv, MPPT) 2	A	50		50		50	
	Max. short-circuit current module field per Strang (Isc pv, Strang) 2	A	50		50		50	
	Max. short-circuit current module field - Inverter (Isc pv, inverter) 2	A	150		150		150	
	Nominal input voltage (Udc,r)	In	600		600		600	
	DC input voltage range (Output min. - UDC max)	In	150 - 1.000		150 - 1.000		150 - 1.000	
	Feed-in starting voltage (Udc start)	In	150		150		150	
	Usable MPP voltage range (Ump min - Ump max)	In	150 - 870		150 - 870		150 - 870	
	MPP voltage range (at rated power (Ump min - Ump max)	In	180 - 870		210 - 870		240 - 870	
	Max. usable DC power - MPPT W		13.000		13.000		13.000	
	Max. usable DC power inverter 3	IN	22.500		26.250		30.000	
	Max. PV-Generatorleistung - MPPT Wpeak		20.000		20.000		20.000	
	Max. PV generator power - Inverter	Wpeak	22.500		26.250		30.000	
Output	AC rated power (Pac,r)	IN	15.000		17.500		20.000	
	Max. output power	AND	15.000		17.500		20.000	
		VAC	380	400	380	400	380	400
	AC output current (Iac, r)	A	22,7	21,7	26,5	25,4	30,3	29,0
	Mains connection (Uac, r)	In	3~ (N)PE 380/220; 3~ (N)PE 400/230;		3~ (N)PE 380/220; 3~ (N)PE 400/230;		3~ (N)PE 380/220; 3~ (N)PE 400/230;	
	Frequency (frequency range)	Hz	50/60 (45 - 65)		50/60 (45 - 65)		50/60 (45 - 65)	
	Distortion factor	%	< 3		< 3		< 3	
	Power factor (cos φac,r)		0–1 ind./cap.		0–1 ind./cap.		0–1 ind./cap.	
Full Backup	Nom. Output Power Full Backup VA		15.000		17.500		20.000	
	Peak output power 5	AND	30.000		30.000		30.000	
	Nominal phase power Full Backup	AND	7.000	7.300	7.000	7.300	7.000	7.300
	Supported phase unbalance Full Backup 5	A	25.0 / 32.0 peak		25.0 / 32.0 peak		25.0 / 32.0 peak	
	Mains connection Full Backup	In	380 VAC	400 VAC	380 VAC	400 VAC	380 VAC	400 VAC
	Switchover time	Sek.	~11		~11		~11	

1 A single string is technically capable of handling the full/ usable MPPT current. The maximum current per MPPT is limited to 28A.

2 Isc pv = Isc max ŷ Isc (STC) x 1.25 gemäß z.B.: IEC 60364-7-712, NEC 2020, AS/ NZS 5033:2021.

3 Maximum combined power that can be used in parallel for AC output and DC battery charging.

4 For full backup, additional external components for network switching are required. For more detailed information, see the Operating instructions.

5 Sufficient PV and battery power required. Duration max. 10s, 400 VAC symmetrical, depending on ambient conditions.

Technical data

Turn 15.0 - 20.0 Plus

			Fronius Verto Plus		
			Verto 15.0 Plus	Turn 17.5 Plus	Verto 20.0 Plus
Battery	Number of DC inputs		1	1	1
	Max. input current (Idc max)	A	50	50	50
	DC input voltage range (Udc min - Udc max)	In	150 - 700	150 - 700	150 - 700
	DC battery connection technology		DC-connectors Stäubli MC4 Evo Large	DC-connectors Stäubli MC4 Evo Large	DC-connectors Stäubli MC4 Evo Large
	Max. charging power ⁶	IN	22.500	26.250	30.000
	Max. discharge power ⁶	IN	15.000	17.500	20.000
	Max. charging power with AC coupling ⁶	IN	15.000	17.500	20.000
	Compatible batteries ⁷		Fronius Reserva, BYD Battery-Box Premium HVM, HVSy7		
General	Dimensions (Height × Width × Depth)	mm	865 x 574 x 279		
	Weight (inverter)	kg	43		
	Protection class		IP66		
	Protection class		1		
	Overvoltage category (DC / AM) ⁸		2/3		
	Night consumption	IN	< y16		
	cooling		Active air cooling		
	Montage		Indoor and outdoor installation, 90° - 10° inclination		
	Ambient temperature range	°C	-25 to +60		
	Permissible humidity	%	0-100		
	Noise emissions	dB (A)	< 50,3		
	Max. altitude above sea level	m	3,000 / 4,000 (unrestricted / restricted voltage range)		
	DC connection technology		DC direct connection Stäubli Multi Contact MC4		
	AC connection technology		Cable cross-section: 4 - 35 mm² (Al & Cu) Cable gland: M32 (Ø12-24.5 mm) Prepared for option 1: M50 cable gland (Ø10-35 mm) Option 2: 1.5" Conduit connection		
	Certificates and compliance with standards		IEC 62109-1/-2; VDE-AR-N 4105:2018; R25;		
	Country of manufacture		Austria		
Effectiveness	Max. efficiency	%	98,03	98,06	98,15
	European efficiency (ȳEU)	%	97,35	97,54	97,95
	MPPT adjustment efficiency	%	> 99,9	> 99,9	> 99,9
Protective	Arc detection - Arc Guard Technology		And		
	DC-Isolationsmessung		And		
	Overload behavior		Operating point adjustment. Power limitation		
	DC disconnect switch		And		
	Reverse polarity protection		And		
	RCMU		And		
	DC/AC surge protection		DC Typ 1+2 (IEC 61643-31) / AC Typ 2 (IEC 61643-11)		

⁶ Depends on the current and voltage of the connected battery.

⁷ Except for BYD Battery-Box Premium HVM 8.3 and 3xHVM 22.1. When combining multiple BYD battery towers, the maximum permissible currents must be observed.

⁸ According to IEC 62109-1. DIN rail available for optional surge protection Type 1 + 2 or Type 2. For further information on the availability of You can find inverters in your country at www.fronius.com.

Technical data

Turn 15.0 - 20.0 Plus

			Fronius Verto Plus		
			Verto 15.0 Plus	Turn 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 (third-party) / Fronius Smart Meter / Battery		
	6 digital inputs 6 digital inputs/outputs		Connection to ripple control receiver, Energy management, load management		
	Data logger and web server		Integrated		

Technical data

Turn 25.0 - 33.3 Plus

			Fronius Verto Plus		
			Verto 25.0 Plus	Verto 30.0 Plus	Turn 33.3 Plus
Input	Number of MPP trackers		3	3	3
	Number of DC connections per MPPT		2	2	2
	Max. usable input current per MPPT (Idc max, MPPT)	A	28	28	28
	Max. usable input current per Strang (Idc max, Strang) 1	A	28	28	28
	Max. short-circuit current module field per MPPT (Isc pv, MPPT) 2	A	50	50	50
	Max. short-circuit current module field per Strang (Isc pv, Strang) 2	A	50	50	50
	Max. short-circuit current module field - Inverter (Isc pv, inverter) 2	A	150	150	150
	Nominal input voltage (Udc,r)	In	600	600	600
	DC input voltage range (Udc, min. - UDC max)	In	150 - 1.000	150 - 1.000	150 - 1.000
	Feed-in starting voltage (Udc start)	In	150	150	150
	Usable MPP voltage range (Ump my - Umpp max)	In	150 - 870	150 - 870	150 - 870
	MPP voltage range (at rated power (Umpp min - Umpp max)	In	300 - 870	360 - 870	410 - 870
	Max. usable DC power - MPPT W		13.000	13.000	13.000
	Max. usable DC power inverter 3 W		33.250	39.000	39.000
	Max. PV-Generatorleistung - MPPT Wpeak		20.000	20.000	20.000
	Max. PV generator power - Inverter	Wpeak	37.500	45.000	50.000

main	AC rated power (Pac,r)	IN	25.000		29.990		33.300	
	Max. output power	AND	25.000		29.990		33.300	
		VAC	380	400	380	400	380	400
	AC output current (Iac, r)	A	37,90	36,2	45,4	43,5	50,5	48,3
	Mains connection (Uac, r)	In	3~ (N)PE 380/220; 3~ (N)PE 400/230;		3~ (N)PE 380/220; 3~ (N)PE 400/230;		3~ (N)PE 380/220; 3~ (N)PE 400/230;	
	Frequency (frequency range)	Hz	50/60 (45 - 65)		50/60 (45 - 65)		50/60 (45 - 65)	
	Distortion factor	%	< 3		< 1		< 1	
	Power factor (cos ϕac,r)		0–1 ind./cap.		0–1 ind./cap.		0–1 ind./cap.	

1 A single string is technically capable of handling the full/ usable MPPT current. The maximum current per MPPT is limited to 28A.
2 Isc pv = Isc max ÷ Isc (STC) x 1.25 gemäß z.B.: IEC 60364-7-712, NEC 2020, AS/ NZS 5033:2021.
3 Maximum combined power that can be used in parallel for AC output and DC battery charging.

Technical data

Turn 25.0 - 33.3 Plus

			Fronius Verto Plus					
			Verto 25.0 Plus		Verto 30.0 Plus		Turn 33.3 Plus	
	Nom. Output Power Full Backup VA		25.000		29.990		33.300	
	Peak output power 5	AND	50.000		50.000		50.000	
	Nominal phase power Full Backup	AND	11.100	11.100	11.100	11.100	11.100	11.100
	Supported phase unbalance Full Backup ⁵	A	50.0 / 72.5 peak		50.0 / 72.5 peak		50.0 / 72.5 peak	
	Mains connection Full Backup	In	380 VAC	400 VAC	380 VAC	400 VAC	380 VAC	400 VAC
	Switchover time	Sek.	~11		~11		~11	
Battery	Number of DC inputs		1		1		1	
	Max. input current (Idc max)	A	50		50		50	
	DC input voltage range (Udc min - Udc max)	In	150 - 700		150 - 700		150 - 700	
	DC battery connection technology		DC-connectors Stäubli MC4 Evo Large		DC-connectors Stäubli MC4 Evo Large		DC-connectors Stäubli MC4 Evo Large	
	Max. charging power ⁶	IN	33.250		35.000		35.000	
	Max. discharge power ⁶	IN	25.000		29.990		33.300	
	Max. charging power with AC coupling ⁶	IN	25.000		29.990		33.300	
	Compatible batteries ⁷		Fronius Reserva, BYD Battery-Box Premium HVM, HVS ⁷					
General	Dimensions (Height × Width × Depth)	mm	865 x 574 x 279					
	Weight (inverter)	kg	43					
	Protection class		IP66					
	Protection class		1					
	Overvoltage category (DC / AM) ⁸		2/3					
	Night consumption	IN	<16					
	cooling		Active air cooling					
	Montage		Indoor and outdoor installation, 90° - 10° inclination					
	Ambient temperature range	°C	-25 to +60					
	Relative humidity	%	0–100					
	Noise emissions	dB (A)	< 56,7					
	Max. altitude above sea level	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) Cable gland: M32 (Ø12-24.5 mm) Prepared for option 1: M50 cable gland (Ø10-35 mm) Option 2: 1.5" Conduit connection					
	Certificates and compliance with standards		IEC 62109-1/-2; VDE-AR-N 4105:2018; R25;					
	Country of manufacture		Austria					

⁴ Full backup requires additional external components for network switching. For more detailed information, please refer to the user manual.

⁵ Sufficient PV and battery power required. Duration max. 10s, 400 VAC symmetrical, depending on ambient conditions.

⁶ Depends on the current and voltage of the connected battery.

⁷ Except for BYD Battery-Box Premium HVM 8.3 and 3xHVM 22.1. When combining multiple BYD battery towers, the maximum permissible currents must be observed.

⁸ According to IEC 62109-1. DIN rail available for optional Type 1 + 2 or Type 2 surge protection. Further information on availability of inverters in your country can be found at www.fronius.com.

Technical data

Turn 25.0 - 33.3 Plus

			Fronius Verto Plus		
			Verto 25.0 Plus	Verto 30.0 Plus	Turn 33.3 Plus
Effectiveness	Max. efficiency	%	98,16	98,15	98,15
	European efficiency (η _{EU})	%	97,74	97,96	97,95
	MPP adjustment efficiency	%	> 99,9	> 99,9	> 99,9
Protective	Arc detection - Arc Guard Technology		And		
	DC-Isolationmessung		And		
	Overload behavior		Operating point adjustment. Power limitation		
	DC disconnect switch		And		
	Reverse polarity protection		And		
	RCMU		And		
	DC/AC surge protection		DC Typ 1+2 (IEC 61643-31) / AC Typ 2 (IEC 61643-11)		
Interface	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 (third-party) / Fronius Smart Meter / Battery		
	6 digital inputs 6 digital inputs/outputs		Connection to ripple control receiver, Energy management, load management		
	Data logger and web server		Integrated		

Your photovoltaic System can do more

Fronius Verto Plus, the adaptable hybrid inverter for small businesses, agriculture, and multi-family homes. Its flexibility makes it the perfect choice for both the construction of a new PV system and an expansion. With integrated safety features and innovative shading management, the Fronius Verto Plus ensures optimal operation. Sector coupling enables our

flexible inverter with its open interfaces. Charging boxes

such as Fronius Wattpilot Flex or consumption controllers such as Fronius Ohmpilot can be easily integrated.

More information at

fronius.com/verto-plus

Fronius Switzerland AG
Oberglatterstrasse 11 8153
Rümlang
Switzerland
pv-sales-swiss@fronius.com
www.fronius.ch

Fronius Deutschland GmbH
Fronius Straße 1
36119 Neuhoof-Dorfborn
Germany pv-sales-
germany@fronius.com www.fronius.de

Fronius International GmbH Froniusplatz
1 4600 Wels Austria
pv-
sales@fronius.com
www.fronius.com