Designed to empower.



Fronius Primo GEN24 and GEN24 Plus

Product advantages

01 Backup power for every situation
02 Built-in freedom
03 Versatility as standard
04 Maximum independence

The heart of the photovoltaic system



01 Backup power for every situation

A reliable energy supply: the Fronius GEN24 offers just that with an integrated basic backup power function, the PV Point. With the Fronius GEN24 Plus, you can choose between the PV Point and the Full Backup option, which provides backup power for the entire home.

02 Built-in freedom

The Fronius GEN24 and Fronius GEN24 Plus have open interfaces. This makes it easy to integrate components from Fronius or third-party suppliers for a tailor-made photovoltaic system.

03 Versatility as standard

More functions. More control. More power. Thanks to their energy management functions, the Fronius GEN24 and Fronius GEN24 Plus continuously save time and money. What's more, the integrated active cooling extends the service life of the inverter, protecting your investment for many years to come.

04 Maximum independence

By combining the Fronius GEN24 Plus with a battery, you can get even more out of your photovoltaic system, even at night. Use more of your own electricity and become more independent of electricity providers and prices.

2

The Fronius GEN24 is available in two versions:

– As an inverter: Fronius GEN24

integrated backup power function

– As a hybrid inverter: Fronius GEN24 Plus

battery connection

two backup power options



Sustainable, reliable, future-proof:

With our Fronius GEN24 inverter at the heart of the photovoltaic system, energy can be generated flexibly and inexpensively. The Fronius GEN24 Plus hybrid inverter even allows a battery storage system to be connected, so the solar energy generated can be used for electricity, heating, cooling, and e-mobility even at night. Full solar power for the private energy revolution with the Fronius GEN24 and the Fronius GEN24 Plus. Designed to empower.

Technical data

3.0/3.6/4.0 kW

			Primo GEN24/GEN24 Plus								
			3.0			3.6			4.0		
Input data	Number of MPP trackers		2			2			2		
	DC input voltage range (Udc min - Udc max)	V	65 - 600			65 - 600			65 - 600		
	Nominal input voltage (Udc,r)	V	400			400			400		
	Feed-in start-up input voltage (Udc start)	V	80			80			80		
	Usable MPP voltage range	V	65 - 530			65 - 530			65 - 530		
	MPP voltage range (at rated power) (Umpp min - Umpp max)	V	190 - 530			200 - 530			210 - 530		
			MPPT1	MPPT2		MPPT1	MPPT2		MPPT1	MPPT2	
	Max. usable input current (Idc max)	A	22	12		22	12		22	12	
	Max. array short circuit current (Isc pv) [1]	A	41.25	22		41.25	22		41.25	22	
	Number of DC connections		2	2		2	2		2	2	
			MPPT1	MPPT2	Total	MPPT1	MPPT2	Total	MPPT1	MPPT2	Total
	Max. usable DC power	W	3,110	3,110	3,110	3,810	3,810	3,810	4,140	4,140	4,140
	Max. PV generator output	Wpeak	3,750	3,110	4,500	4,600	3,810	5,520	5,000	4,140	6,000

Output data	AC rated power (Pac,r)	W	3,000		3,680		4,000	
	Apparent power	VA	3,000		3,680		4,000	
	Max. output power	VA	3,000		3,680		4,000	
			220 Vac	230 Vac	220 Vac	230 Vac	220 Vac	230 Vac
	Nom. AC output current	A	13.6	13	16.7	16	18.2	17.4
	Grid connection (Uac,r)	V	1~ NPE 220/230 (+20%/-30%)					
	Frequency (frequency range fmin - fmax)	Hz	50/60 (45 - 65)					
	Total harmonic distortion	%	< 2		< 2		< 2	
	Power factor (cos φac,r)		0,8 - 1 ind. / cap.					

Output data PV Point	Nom. output power PV Point	VA	3,000	3,000	3,000
	Grid connection PV Point	V	1~ NPE 220/230		
	Switching time	sec.	< 23	< 23	< 23

Full Backup power and battery function only available with GEN24 Plus

			Primo GEN24 Plus		
			3.0	3.6	4.0
Output data Full Backup [2]	Nom. output power Full Backup	VA	3,000	3,600	4,000
	Grid connection Full Backup	V	1~ NPE 220/230		
	Switching time	sec.	< 35	< 35	< 35

Battery connection	Number of DC inputs		1	1	1
	Max. input current (Idc max)	A	22	22	22
	DC input voltage range (Udc min - Udc max) [3]	V	150 - 455	150 - 455	150 - 455
	DC battery connection technology		1x BATT+ and 1x BATT- push-in spring terminals 2.5 - 10 mm²		
	Max. DC input/output power [4]	W	3,110	3,810	4,140
	Max. charging power for AC coupling [4]	W	3,000	3,680	4,000
	Compatible batteries [5]		BYD Battery-Box Premium HVS/HVM, LG FLEX [6]		

[1] *Isc pv = Isc max >= Isc (STC) x 1,25 according to e.g. IEC 60364-7-712, NEC 2020, AS/NZS 5033:2021.*

[2] *The Full Backup option is available for the Primo GEN24 3.0–10.0 Plus. Additional external components for grid switchover are required for the Full Backup. See the Operating Instructions for further details.*

[3] *AC power derating of the inverter occurs with a DC battery input voltage of 419.7 V and higher*

[4] *Depending on connected battery*

[5] *Depending on the country-specific certification and availability*

[6] *Excluding BYD Battery-Box Premium HVS 10.2, HVS 12.8, HVM 8.3, HVM 22.1 & LG FLEX 17.2*

			Primo GEN24/GEN24 Plus		
			3.0	3.6	4.0
General data	Dimensions (height × width × depth)	mm	530 × 474 × 165		
	Weight (inverter/with packaging)	kg	15.4/19	15.4/19	15.4/19
	Protection class		IP 66	IP 66	IP 66
	Safety class		1	1	1
	Night consumption	W	< 10	< 10	< 10
	Overvoltage category (DC/AC) [7]		2/3	2/3	2/3
	Inverter concept		Transformerless		
	Cooling		Active Cooling technology		
	Installation		Indoor and outdoor installation		
	Ambient temperature range	°C	-40 to +60	-40 to +60	-40 to +60
	Permissible humidity	%	0 - 100	0 - 100	0 - 100
	Noise emissions	dB (A)	< 42	< 42	< 42
	Max. altitude above sea level	m	4,000	4,000	4,000
	DC connection technology PV		4x DC+ and 4x DC- push-in spring terminals 2.5 - 10 mm²		
	AC connection technology		3-pin AC push-in spring terminals 2.5 - 10 mm² 3-pin backup power push-in spring terminals 1.5 - 10 mm² 2x PE screw terminals 2.5–16 mm² and 3x 2.5 - 10 mm²		
	Certificates and compliance with standards [8]		IEC 62109, IEC 62909, AS/NZS 4777.2, CEI 0-21, ABNT BNR 16149 und 16150, IEC 62116, IEC 61727, G98/G99		
	Backup power functions [9]		PV Point or Full Backup		
	Country of manufacture		Austria		
	Life cycle analysis		In accordance with ÖNORM EN ISO 14040 and 14044 (checked by employees from Fraunhofer IZM)		
Efficiency	Max. efficiency	%	97.6	97.6	97.6
	Euro. efficiency (ηEU)	%	96.8	97.0	97.1
	MPP adaptation efficiency	%	> 99.9	> 99.9	> 99.9
Protection devices	DC isolation measurement		Integrated		
	Overload performance		Operating point shift, power limiter		
	DC disconnector		Integrated		
	Reverse polarity protection		Integrated		
Interfaces	WLAN/2 × Ethernet LAN		Fronius Solar.web, Modbus TCP SunSpec, Fronius Solar API (JSON)		
	6 digital inputs 6 digital inputs/outputs		Connection to ripple control receiver, energy management		
	Emergency shut-off (WSD)		Integrated		
	Datalogger and web server		Integrated		
	2 × RS485		Modbus RTU SunSpec (third-party provider)/Fronius Smart Meter, battery (GEN24 Plus), Fronius Ohmpilot		

[7] *In line with IEC 62109-1. Option to retrofit surge protection device DC SPD type 1+2 for 2 MPP trackers available under the following item number: 4,240,313,CK*

[8] *You can find the current certificates under www.fronius.com/primo-gen24-plus-cert*

[9] *Full Backup power and battery function only available with GEN24 Plus*

For further information on the availability of the inverters in your country, please visit www.fronius.com.

Technical data

4.6/5.0/6.0 kW

			Primo GEN24/GEN24 Plus								
			4.6		5.0		6.0				
Input data	Number of MPP trackers		2		2		2				
	DC input voltage range (Udc min - Udc max)	V	65 - 600		65 - 600		65 - 600				
	Nominal input voltage (Udc,r)	V	400		400		400				
	Feed-in start-up input voltage (Udc start)	V	80		80		80				
	Usable MPP voltage range	V	65 - 530		65 - 530		65 - 480				
	MPP voltage range (at rated power) (Umpp min - Umpp max)	V	230 - 530		230 - 530		230 - 480				
			MPPT1	MPPT2	MPPT1	MPPT2	MPPT1	MPPT2			
	Max. usable input current (Idc max)	A	22	12	22	12	22	12			
	Max. array short circuit current (Isc pv) [1]	A	41.25	22	41.25	22	41.25	22			
	Number of DC connections		2	2	2	2	2	2			
			MPPT1	MPPT2	Total	MPPT1	MPPT2	Total	MPPT1	MPPT2	Total
	Max. usable DC power	W	4,750	4,750	4,750	5,170	5,170	5,170	6,200	5,760	6,200
	Max. PV generator output	Wpeak	5,750	4,750	6,900	6,250	5,170	7,500	7,500	5,760	9,000

Output data	AC rated power (Pac,r)	W	4,600		5,000		6,000	
	Apparent power	VA	4,600		5,000		6,000	
	Max. output power	VA	4,600		5,000		6,000	
			220 Vac	230 Vac	220 Vac	230 Vac	220 Vac	230 Vac
	Nom. AC output current	A	20.9	20	22.7	21.7	27.3	26.1
	Grid connection (Uac,r)	V	1~ NPE 220/230 (+20%/-30%)					
	Frequency (frequency range fmin - fmax)	Hz	50/60 (45 - 65)					
	Total harmonic distortion	%	< 2		< 2		< 2	
	Power factor (cos φac,r)		0,8 - 1 ind. / cap.					

Output data PV Point	Nom. output power PV Point	VA	3,000	3,000	3,000
	Grid connection PV Point	V	1~ NPE 220/230		
	Switching time	sec.	< 23	< 23	< 23

Full Backup power and battery function only available with GEN24 Plus

			Primo GEN24 Plus		
			4.6	5.0	6.0
Output data Full Backup [2]	Nom. output power Full Backup	VA	4,600	5,000	6,000
	Grid connection Full Backup	V	1~ NPE 220/230		
	Switching time	sec.	< 35	< 35	< 35

Battery connection	Number of DC inputs		1	1	1
	Max. input current (Idc max)	A	22	22	22
	DC input voltage range (Udc min - Udc max) [3]	V	150 - 455	150 - 455	150 - 455
	DC battery connection technology		1x BATT+ and 1x BATT- push-in spring terminals 2.5 - 10 mm²		
	Max. DC input/output power [4]	W	4,750	5,170	6,200
	Max. charging power for AC coupling [4]	W	4,600	5,000	6,000
	Compatible batteries [5]		BYD Battery-Box Premium HVS/HVM, LG FLEX [6]		

[1] *Isc pv = Isc max >= Isc (STC) x 1,25 according to e.g. IEC 60364-7-712, NEC 2020, AS/NZS 5033:2021.*

[2] *The Full Backup option is available for the Primo GEN24 3.0–10.0 Plus. Additional external components for grid switchover are required for the Full Backup. See the Operating Instructions for further details.*

[3] *AC power derating of the inverter occurs with a DC battery input voltage of 419.7 V and higher*

[4] *Depending on connected battery*

[5] *Depending on the country-specific certification and availability*

[6] *Excluding BYD Battery-Box Premium HVS 10.2, HVS 12.8, HVM 8.3, HVM 22.1 & LG FLEX 17.2*

			Primo GEN24/GEN24 Plus		
			4.6	5.0	6.0
General data	Dimensions (height × width × depth)	mm	530 × 474 × 165		
	Weight (inverter/with packaging)	kg	15.4/19	15.4/19	15.4/19
	Protection class		IP 66	IP 66	IP 66
	Safety class		1	1	1
	Night consumption	W	< 10	< 10	< 10
	Overvoltage category (DC/AC) [7]		2/3	2/3	2/3
	Inverter concept		Transformerless		
	Cooling		Active Cooling technology		
	Installation		Indoor and outdoor installation		
	Ambient temperature range	°C	-40 to +60	-40 to +60	-40 to +60
	Permissible humidity	%	0 - 100	0 - 100	0 - 100
	Noise emissions	dB (A)	< 42	< 42	< 42
	Max. altitude above sea level	m	4,000	4,000	4,000
	DC connection technology PV		4x DC+ and 4x DC- push-in spring terminals 2.5 - 10 mm²		
	AC connection technology		3-pin AC push-in spring terminals 2.5 - 10 mm² 3-pin backup power push-in spring terminals 1.5 - 10 mm² 2x PE screw terminals 2.5–16 mm² and 3x 2.5 - 10 mm²		
	Certificates and compliance with standards [8]		IEC 62109, IEC 62909, AS/NZS 4777.2, CEI 0-21, ABNT BNR 16149 und 16150, IEC 62116, IEC 61727, G98/G99		
	Backup power functions [9]		PV Point or Full Backup		
	Country of manufacture		Austria		
	Life cycle analysis		In accordance with ÖNORM EN ISO 14040 and 14044 (checked by employees from Fraunhofer IZM)		
Efficiency	Max. efficiency	%	97.6	97.6	97.6
	Euro. efficiency (ηEU)	%	97.2	97.2	97.1
	MPP adaptation efficiency	%	> 99.9	> 99.9	> 99.9
Protection devices	DC isolation measurement		Integrated		
	Overload performance		Operating point shift, power limiter		
	DC disconnector		Integrated		
	Reverse polarity protection		Integrated		
Interfaces	WLAN/2 × Ethernet LAN		Fronius Solar.web, Modbus TCP SunSpec, Fronius Solar API (JSON)		
	6 digital inputs 6 digital inputs/outputs		Connection to ripple control receiver, energy management		
	Emergency shut-off (WSD)		Integrated		
	Datalogger and web server		Integrated		
	2 × RS485		Modbus RTU SunSpec (third-party provider)/Fronius Smart Meter, battery (GEN24 Plus), Fronius Ohmpilot		

[7] *In line with IEC 62109-1. Option to retrofit surge protection device DC SPD type 1+2 for 2 MPP trackers available under the following item number: 4,240,313,CK*

[8] *You can find the current certificates under www.fronius.com/primo-gen24-plus-cert*

[9] *Full Backup power and battery function only available with GEN24 Plus*

For further information on the availability of the inverters in your country, please visit www.fronius.com.

Technical data

8.0/10.0 kW

			Primo GEN24/GEN24 Plus					
			8.0			10.0		
Input data	Number of MPP trackers		2			2		
	DC input voltage range (Udc min - Udc max)	V	65 - 600			65 - 600		
	Nominal input voltage (Udc,r)	V	400			400		
	Feed-in start-up input voltage (Udc start)	V	80			80		
	Usable MPP voltage range	V	65 - 480			65 - 480		
	MPP voltage range (at rated power) (Umpp min - Umpp max)	V	260 - 480			260 - 480		
			MPPT1	MPPT2		MPPT1	MPPT2	
	Max. usable input current (Idc max)	A	22	22		22	22	
	Max. array short circuit current (Isc pv) [1]	A	41.25	41.25		41.25	41.25	
	Number of DC connections		2	2		2	2	
			MPPT1	MPPT2	Total	MPPT1	MPPT2	Total
	Max. usable DC power	W	8,260	8,260	8,260	10,360	10,360	10,360
	Max. PV generator output	Wpeak	10,000	10,000	12,000	12,500	12,500	15,000
Output data	AC rated power (Pac,r)	W	8,000			10,000		
	Apparent power	VA	8,000			10,000		
	Max. output power	VA	8,000			10,000		
			220 Vac	230 Vac		220 Vac	230 Vac	
	Nom. AC output current	A	36.4	34.8		45.5	43.5	
	Grid connection (Uac,r)	V	1~ NPE 220/230 (+20 %/-30 %)					
	Frequency (frequency range fmin - fmax)	Hz	50/60 (45 - 65)					
	Total harmonic distortion	%	< 3			< 3		
	Power factor (cos φac,r)		0,8 - 1 ind. / cap.					
Output data PV Point	Nom. output power PV Point	VA	3,000			3,000		
	Grid connection PV Point	V	1~ NPE 220/230					
	Switching time	sec.	< 35			< 35		

Full Backup power and battery function only available with GEN24 Plus

			Primo GEN24 Plus	
			8.0	10.0
Output data Full Backup [2]	Nom. output power Full Backup	VA	8,000	10,000
	Grid connection Full Backup	V	1~ NPE 220/230	
	Switching time	sec.	< 45	< 45
Battery connection	Number of DC inputs		1	1
	Max. input current (Idc max)	A	22	22
	DC input voltage range (Udc min - Udc max) [3]	V	150 - 455	150 - 455
	DC battery connection technology		1x BATT+ and 1x BATT- push-in spring terminals 2.5 - 10 mm²	
	Max. DC input/output power [4]	W	8,260	10,360
	Max. charging power for AC coupling [4]	W	8,000	10,000
	Compatible batteries [5]		BYD Battery-Box Premium HVS/HVM, LG FLEX [6]	

[1] *Isc pv = Isc max >= Isc (STC) x 1,25 according to e.g. IEC 60364-7-712, NEC 2020, AS/NZS 5033:2021.*

[2] *The Full Backup option is available for the Primo GEN24 3.0–10.0 Plus. Additional external components for grid switchover are required for the Full Backup. See the Operating Instructions for further details.*

[3] *AC power derating of the inverter occurs with a DC battery input voltage of 419.7 V and higher*

[4] *Depending on connected battery*

[5] *Depending on the country-specific certification and availability*

[6] *Excluding BYD Battery-Box Premium HVS 10.2, HVS 12.8, HVM 8.3, HVM 22.1 & LG FLEX 17.2*

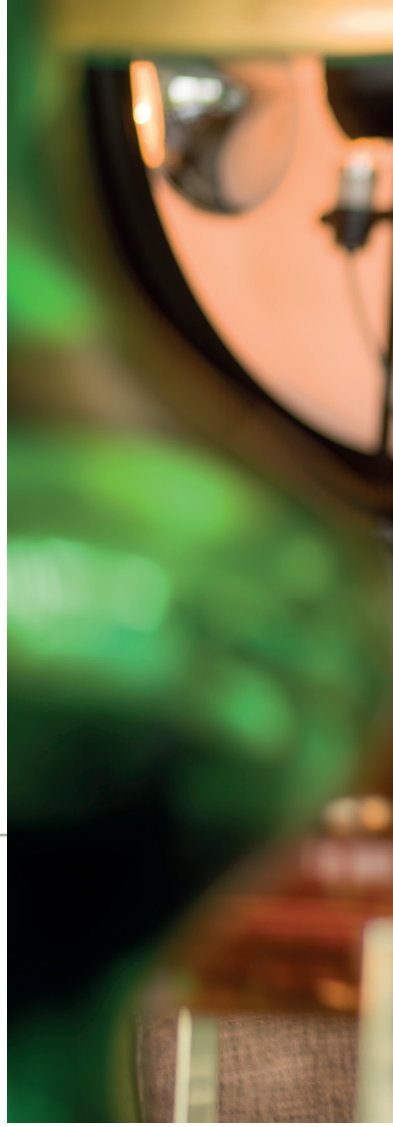
			Primo GEN24/GEN24 Plus	
			8.0	10.0
General data	Dimensions (height × width × depth)	mm	595 x 529 x 180	
	Weight (inverter/with packaging)	kg	21 / 26	21 / 26
	Protection class		IP 66	IP 66
	Safety class		1	1
	Night consumption	W	<10	<10
	Overvoltage category (DC/AC) [7]		2/3	2/3
	Inverter concept		Transformerless	
	Cooling		Active Cooling technology	
	Installation		Indoor and outdoor installation	
	Ambient temperature range	°C	-40 to +60	-40 to +60
	Permissible humidity	%	0 - 100	0 - 100
	Noise emissions	dB (A)	< 51	< 51
	Max. altitude above sea level	m	4,000	4,000
	DC connection technology PV		4x DC+ and 4x DC- push-in spring terminals 2.5 - 10 mm²	
	AC connection technology		3-pin AC push-in spring terminals 2.5 - 10 mm² 3-pin backup power push-in spring terminals 1.5 - 10 mm² 2x PE screw terminals 2.5–16 mm² and 3x 2.5 - 10 mm²	
	Certificates and compliance with standards [8]		IEC 62109, IEC 62909, AS/NZS 4777.2, IEC 62116, IEC 61727 ABNT BNR 16149 und 16150, IEC 62116, IEC 61727	
	Backup power functions [9]		PV Point or Full Backup	
	Country of manufacture		Austria	
	Life cycle analysis		In accordance with ÖNORM EN ISO 14040 and 14044 (checked by employees from Fraunhofer IZM)	
Efficiency	Max. efficiency	%	97.3	97.3
	Euro. efficiency (ηEU)	%	96.9	97.0
	MPP adaptation efficiency	%	> 99.9	> 99.9
Protection devices	DC isolation measurement		Integrated	
	Overload performance		Operating point shift, power limiter	
	DC disconnector		Integrated	
	Reverse polarity protection		Integrated	
Interfaces	WLAN/2 × Ethernet LAN		Fronius Solar.web, Modbus TCP SunSpec, Fronius Solar API (JSON)	
	6 digital inputs 6 digital inputs/outputs		Connection to ripple control receiver, energy management	
	Emergency shut-off (WSD)		Integrated	
	Datalogger and web server		Integrated	
	2 × RS485		Modbus RTU SunSpec (third-party provider)/Fronius Smart Meter, battery (GEN24 Plus), Fronius Ohmpilot	

[7] *In line with IEC 62109-1. Option to retrofit surge protection device DC SPD type 1+2 for 2 MPP trackers available under the following item number: 4,240,313,CK*

[8] *You can find the current certificates under www.fronius.com/primo-gen24-plus-cert*

[9] *Full Backup power and battery function only available with GEN24 Plus*

For further information on the availability of the inverters in your country, please visit www.fronius.com.

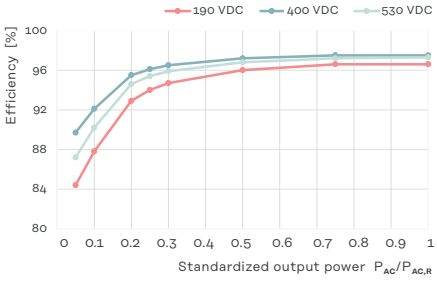


Impressive Power Data

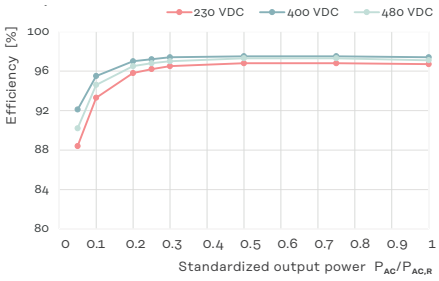
The Fronius GEN24 and Fronius GEN24 Plus impress with premium efficiency and maximum power at high temperatures.

Efficiency

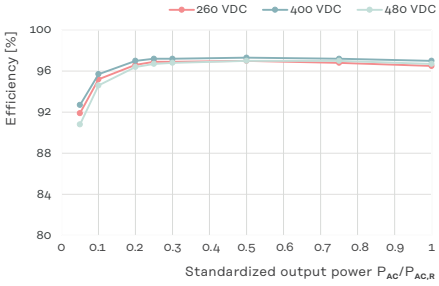
Fronius Primo GEN24 3.0 Plus — Efficiency curve



Fronius Primo GEN24 6.0 Plus — Efficiency curve

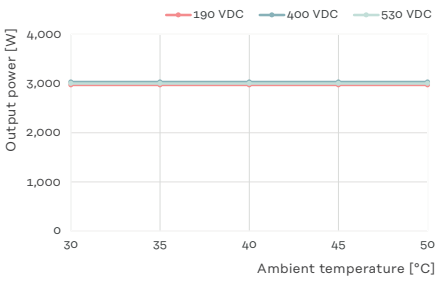


Fronius Primo GEN24 10.0 Plus — Efficiency curve

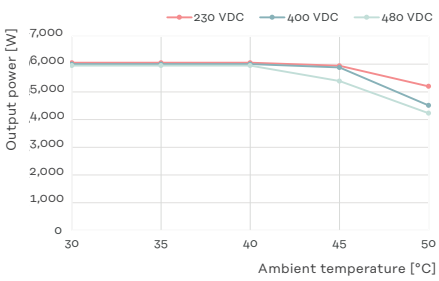


Power derating

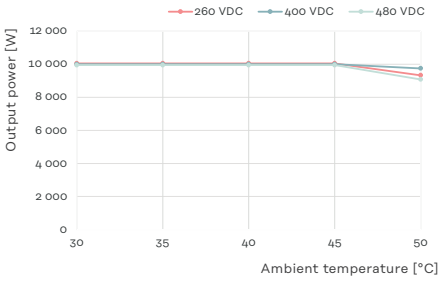
Fronius Primo GEN24 3.0 Plus — Temperature derating



Fronius Primo GEN24 6.0 Plus — Temperature derating



Fronius Primo GEN24 10.0 Plus — Temperature derating







Multi-award-winning

First-class Efficiency
Praised by HTW Berlin: The Fronius GEN24 Plus achieved a top spot in the Energy Storage Inspection for the fourth time in a row in 2023, confirming its excellent efficiency when used in combination with energy storage systems.

reddot award 2019
winner

GERMAN DESIGN AWARD WINNER 2021

GERMAN INNOVATION AWARD '21 WINNER

ENERGY STORAGE Inspection 2023

Fronius Primo GEN24 and GEN24 Plus



Designed to empower.

For further information, please visit
www.fronius.com/gen24-inverter

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