



Designed to empower.

Product advantages

- 01 Maximum flexibility
- 02 Backup power for every situation
- 03 Easy to install
- 04 Support & tools

Sustainable, reliable, future-proof: using our Fronius GEN24 Plus inverter as the heart of a photovoltaic system lets you flexibly and economically produce energy yourself. You can connect a battery system to the hybrid inverter to use the solar energy that you produce for electricity, heating, cooling and e-mobility. Full solar power for your private energy revolution with the **Fronius GEN24 Plus**. **Designed to empower.**

The heart of the photovoltaic system

01 Maximum flexibility

With the Fronius GEN24 Plus as the heart of the photovoltaic system, you will do a whole lot more than launch your own personal energy revolution; you will also gain access to all the possibilities and benefits of solar energy.

02 Backup power for every situation

Your energy supply must be reliable: with the Fronius GEN24 Plus, you can choose either "PV Point" or "Full Backup", a backup power supply for the entire household.

03 Easy installation

Saves time and money: quick and reliable installation with 180° quick release screws, push-in spring-loaded terminals and a well thought-out wall mounting system.

04 Support & tools

Endless support: efficient Fronius solutions are available free of charge to help with planning, installation and system monitoring. This increases customer satisfaction and minimises maintenance expense.

Fronius GEN24 Plus* | Backup power versions | Battery connection

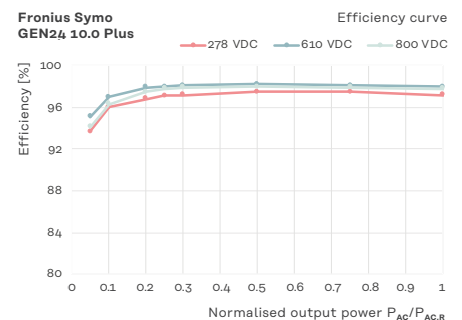
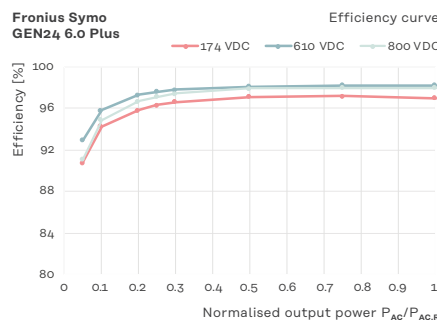
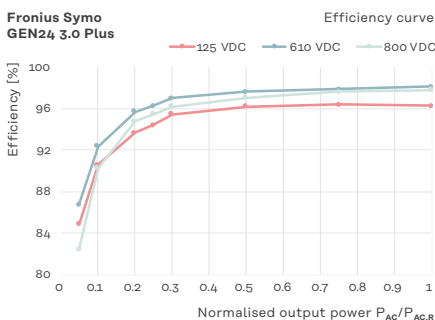
*The Full Backup option is available for the Primo GEN24 3.0–6.0 Plus and the Symo GEN24 6.0–10.0 Plus.



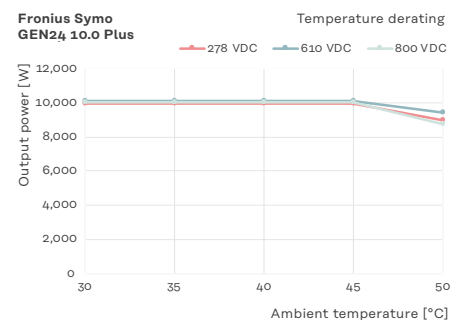
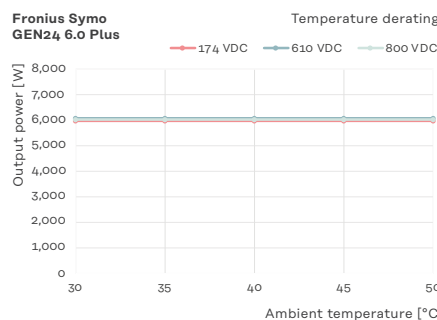
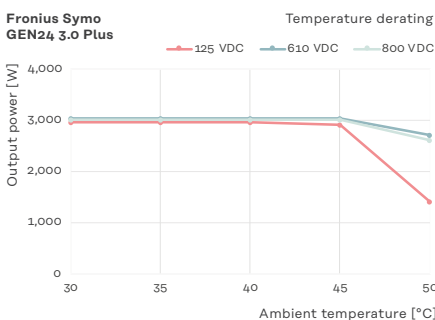
Impressive power data

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

Efficiency



Power derating



Technical data

3.0 / 4.0 / 5.0 kW

			Symo GEN24 Plus								
			3.0			4.0			5.0		
Input data	Number of MPP trackers		2			2			2		
	DC input voltage range ($V_{dc\ min} - V_{dc\ max}$)	V	80 - 1,000			80 - 1,000			80 - 1,000		
	Nominal input voltage ($U_{dc,r}$)	V	610			610			610		
	Feed-in start-up input voltage ($V_{dc\ start}$)	V	80			80			80		
	Usable MPP voltage range	V	80 - 800			80 - 800			80 - 800		
	MPP voltage range (at rated power) ($U_{mpp\ min} - U_{mpp\ max}$)	V	125 - 800			170 - 800			210 - 800		
			MPPT1	MPPT2	Total	MPPT1	MPPT2	Total	MPPT1	MPPT2	Total
	Max. usable input current ($I_{dc\ max}$)	A	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
	Max. module array short circuit current ($I_{sc\ pv}$) ¹	A	20	20	20	20	20	20	20	20	20
	Number of DC connections		2	1	2	1	2	1	2	1	2
			MPPT1	MPPT2	Total	MPPT1	MPPT2	Total	MPPT1	MPPT2	Total
	Max. usable DC output	W	3,150	3,150	3,150	4,180	4,180	4,180	5,200	5,200	5,200
	Max. PV generator output	W _{peak}	4,500	4,500	4,500	6,000	6,000	6,000	6,500	6,500	7,500
Output data	AC rated power ($P_{ac,r}$)	W	3,000			4,000			5,000		
	Apparent power	VA	3,000			4,000			5,000		
	Max. output power	VA	3,000			4,000			5,000		
			380 VAC	400 VAC	380 VAC	400 VAC	380 VAC	400 VAC	380 VAC	400 VAC	
	Nominal AC output current	A	4.5	4.3	6.1	5.8	7.6	7.2			
	Grid connection ($V_{ac,r}$)	V	3~ NPE 400/230 or 3~ NPE 380/220 (+20%/-30%)								
	Frequency (frequency rang $f_{min} - f_{max}$)	Hz	50/60 (45 - 65)								
	Total harmonic distortion	%	< 3								
Power factor ($\cos \varphi_{ac,r}$)		0,7 - 1 ind./cap.									
Output data PV Point	Nominal output power PV Point	VA	3,000			3,000			3,000		
	PV Point grid connection	V	1- EN 220/230								
	Switchover time	sec.	< 23								
Output data Full Backup ²	Nom. output power Full Backup	VA	The Full Backup emergency power function is available for the Symo GEN24 6.0-10.0 Plus.								
	Nominal phase power Full Backup	VA									
	Full Backup grid connection	V									
	Switchover time	sec.									
Battery connection	Number of DC inputs		1			1			1		
	Max. input current ($I_{dc\ max}$)	A	12.5			12.5			12.5		
	DC input voltage range ($U_{dc\ min} - U_{dc\ max}$)	V	160 - 531			160 - 531			160 - 531		
	DC battery connection technology		1x BATT+ and 1x BATT- push-in spring-loaded terminals 2.5 - 10 mm ²								
	Max. DC input/output power ³	W	3,150			4,180			5,200		
	Max. charging power for AC coupling ³	W	3,000			4,000			5,000		
	Compatible batteries ⁴		BYD Battery-Box Premium HVS/HVM ⁵ , LG RESU FLEX								

¹ $I_{sc\ pv} = I_{sc\ max} \geq I_{sc\ (STC)} \times 1.25$ according to e.g. IEC 60364-7-712, NEC 2020, AS/NZS 5033:2021.

² The Full Backup option is available for the Symo GEN24 6.0-10.0 Plus. Additional external components for grid switchover are required for the Full Backup. See the Operating Instructions for further details.

³ Depending on the connected battery

⁴ Depending on country-specific certification and availability

⁵ Excluding BYD Battery-Box Premium HVS 12.8 and HVM 8.3

			Symo GEN24 Plus		
			3.0	4.0	5.0
General data	Dimensions (height x width x depth)	mm	530 × 474 × 165		
	Weight (inverter/with packaging)	kg	15.6/19.4	15.6/19.4	15.6/19.4
	Degree of protection		IP 66	IP 66	IP 66
	Safety class		1	1	1
	Night-time consumption	W	<10	<10	<10
	Overvoltage category (DC/AC) ⁶		2/3	2/3	2/3
	Inverter concept		Transformerless		
	Cooling		Active Cooling Technology		
	Installation		Indoor and outdoor installation		
	Ambient temperature range	°C	-25 to +60	-25 to +60	-25 to +60
	Permissible humidity	%	0 - 100	0 - 100	0 - 100
	Noise emissions	dB (A)	< 36	< 36	< 36
	Max. altitude	m	3,000/4,000 (unrestricted/restricted voltage range)		
	DC PV connection technology		3x DC+ and 3x DC- push-in spring-loaded terminals 2.5 - 10 mm ²		
	AC connection technology		5-pin AC push-in spring-loaded terminals 1.5 - 10 mm ² 3-pin backup power push-in spring-loaded terminals 1.5 - 10 mm ² 5 × PE screw terminals 2.5 - 16 mm ²		
	Certificates and compliance with standards ⁷		IEC 62109, IEC 62116, IEC 61727, IEC 62909, VDE 0126, VDE AR-N4105, AS/NZS 4777.2, EN 50549, CEI 0-21, G98/G99, R25		
Backup power functions		PV Point			
Country of manufacture		Austria			
Life cycle analysis		In accordance with ÖNORM EN ISO 14040 and 14044 (checked by Fraunhofer IZM)			
Efficiency	Maximum efficiency	%	98.1	98.2	98.2
	European efficiency (η _{EU})	%	96.7	97.2	97.5
	MPP adjustment efficiency	%	> 99.9	> 99.9	> 99.9
Protection devices	DC isolation measurement		Integrated		
	Overload performance		Operating point adjustment, power limitation		
	DC disconnecter		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		Interface to ripple control receiver, energy management		
	Emergency shutdown (WSD)		Integrated		
	Datalogger and web server		Integrated		
	2 × RS485		Modbus RTU SunSpec (third-party provider) / Fronius Smart Meter, Battery, Fronius Ohmpilot		

⁶ 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

⁷ You can find the current certificates under www.fronius.com/symo-gen24-plus-cert

Technical data

6.0 / 8.0 / 10.0 kW

			Symo GEN24 Plus								
			6.0			8.0			10.0		
Input data	Number of MPP trackers		2			2			2		
	DC input voltage range (V _{dc min} - V _{dc max})	V	80 - 1,000			80 - 1,000			80 - 1,000		
	Nominal input voltage (V _{dc,r})	V	610			610			610		
	Feed-in start-up input voltage (V _{dc start})	V	80			80			80		
	Usable MPP voltage range	V	80 - 800			80 - 800			80 - 800		
	MPP voltage range (at rated power) (U _{mpp min} - U _{mpp max})	V	174 - 800			224 - 800			278 - 800		
			MPPT1	MPPT2		MPPT1	MPPT2		MPPT1	MPPT2	
	Max. usable input current (I _{dc max})	A	25	12,5		25	12,5		25	12,5	
	Max. module array short circuit current (I _{sc pv}) ¹	A	40	20		40	20		40	20	
	Number of DC connections		2	1		2	1		2	1	
			MPPT1	MPPT2	Total	MPPT1	MPPT2	Total	MPPT1	MPPT2	Total
	Max. usable DC output	W	6,220	6,000	6,220	8,260	6,000	8,260	10,300	6,000	10,300
	Max. PV generator output	W _{peak}	7,500	6,500	9,000	10,000	7,000	12,000	12,500	7,500	15,000
Output data	AC rated power (P _{ac,r})	W	6,000			8,000			10,000		
	Apparent power	VA	6,000			8,000			10,000		
	Max. output power	VA	6,000			8,000			10,000		
			380 VAC	400 VAC		380 VAC	400 VAC		380 VAC	400 VAC	
	Nominal AC output current	A	9.1	8.7		12.1	11.6		15.2	14.5	
	Grid connection (V _{ac,r})	V	3~ NPE 400/230 or 3~ NPE 380/220 (+20%/-30%)								
	Frequency (frequency range f _{min} - f _{max})	Hz	50/60 (45 - 65)								
	Total harmonic distortion	%	< 3								
Power factor (cos φ _{ac,r})		0.7 - 1 ind./cap.									
Output data PV Point	Nominal output power PV Point	VA	3,000			3,000			3,000		
	PV Point grid connection	V	1~ NPE 220/230								
	Switchover time	sec.	< 23								
Output data Full Backup ²	Nominal Full Backup output power	VA	6,000			8,000			10,000		
	Nominal Full Backup phase power	VA	3,680			3,680			3,680		
	Full Backup grid connection	V	3~ NPE 400/230 or 3~ NPE 380/220								
	Switchover time	sec.	< 35								
Battery connection	Number of DC inputs		1			1			1		
	Max. input current (I _{dc max})	A	22			22			22		
	DC input voltage range (U _{dc min} - U _{dc max})	V	160 - 531			160 - 531			160 - 531		
	DC battery connection technology		1x BATT+ and 1x BATT- push-in spring-loaded terminals 2.5 - 10 mm ²								
	Max. DC input/output power ³	W	6,220			8,260			10,300		
	Max. charging power with AC coupling ³	W	6,000			8,000			10,000		
	Compatible batteries ⁴		BYD Battery-Box Premium HVS/HVM ⁵ , LG RESU FLEX								

¹ I_{sc pv} = I_{sc max}. ≥ I_{sc (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 Symo GEN24 6.0–10.0 Plus. Additional external components for grid switchover are required for the Full Backup. See the Operating Instructions for further details.

³ Depending on the connected battery

⁴ Depending on country-specific certification and availability

⁵ Excluding BYD Battery-Box Premium HVS 12.8 and HVM 8.3

			Symo GEN24 Plus		
			6.0	8.0	10.0
General data	Dimensions (height x width x depth)	mm	595 × 529 × 180		
	Weight (inverter/with packaging)	kg	23.4/28.5	23.4/28.5	23.4/28.5
	Degree of protection		IP 66	IP 66	IP 66
	Safety class		1	1	1
	Night-time consumption	W	< 10	< 10	< 10
	Overvoltage category (DC/AC) ⁶		2/3	2/3	2/3
	Inverter concept		Transformerless		
	Cooling		Active Cooling Technology		
	Installation		Indoor and outdoor installation		
	Ambient temperature range	°C	-25 to +60	-25 to +60	-25 to +60
	Permissible humidity	%	0 - 100	0 - 100	0 - 100
	Noise emissions	dB (A)	< 47	< 47	< 47
	Max. altitude	m	3,000/4,000 (unrestricted/restricted voltage range)		
	DC PV connection technology		3x DC+ and 3x DC- push-in spring-loaded terminals 2.5 - 10 mm ²		
	AC connection technology		5-pin AC push-in spring-loaded terminals 1.5 - 10 mm ² 3-pin backup power push-in spring-loaded terminals 1.5 - 10 mm ² 5 × PE screw terminals 2.5 - 16 mm ²		
	Certificates and compliance with standards ⁷		IEC 62109, IEC 62116, IEC 61727, IEC 62909, VDE 0126, VDE AR-N4105, AS/NZS 4777.2, EN 50549, CEI 0-21, G98/G99, R25		
Backup power functions		PV Point or Full Backup			
Country of manufacture		Austria			
Life cycle analysis		In accordance with ÖNORM EN ISO 14040 and 14044 (checked by Fraunhofer IZM)			

Efficiency	Maximum efficiency	%	98.2	98.2	98.2
	European efficiency (η _{EU})	%	97.7	97.8	97.9
	MPP adjustment efficiency	%	> 99.9	> 99.9	> 99.9

Protection devices	DC isolation measurement		Integrated		
	Overload performance		Operating point adjustment, power limitation		
	DC disconnecter		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		Interface to ripple control receiver, energy management		
	Emergency shutdown (WSD)		Integrated		
	Datalogger and web server		Integrated		
	2 × RS485		Modbus RTU SunSpec (third-party provider) / Fronius Smart Meter, Battery, Fronius Ohmpilot		

⁶ 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

⁷ You can find the current certificates under www.fronius.com/symo-gen24-plus-cert

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

For more information, visit: www.fronius.com/gen24-inverter

EN_LUK_V04_Jun 2023
Text and illustrations were accurate at the time of printing. Fronius reserves the right to make changes. All information published in this document, despite exercising the greatest of care in its preparation, is subject to change. No legal liability is accepted. Copyright © 2023 Fronius™. All rights reserved.