Fronius Symo
GEN24 Plus

Designed to empower.

Product advantages

01 Maximum flexibility
02 Backup power for every situation
03 Easy installation
04 Support and 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

Save time and money: fast and safe installation with 180° quick-fastener screws, push-in spring terminals, and a well-designed wall assembly system.

04 Support and tools

Never-ending support: free and efficient Fronius solutions are available for planning, installation, and system monitoring. This increases customer satisfaction and minimizes maintenance effort.

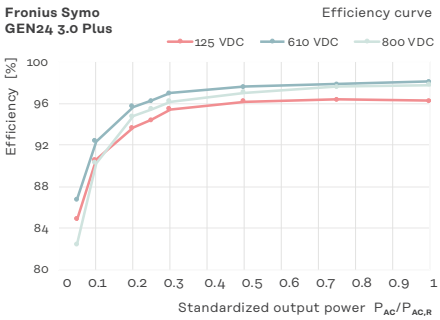
Fronius GEN24 Plus* | Backup power versions | Battery connection

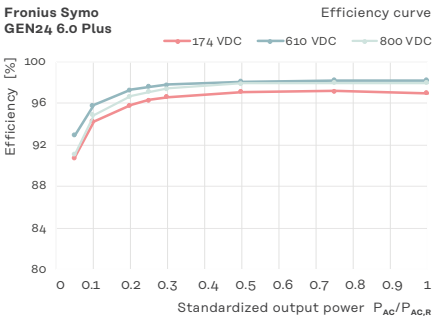
** The Full Backup option is available for the Primo GEN24 3.0–6.0 Plus and the Symo GEN24 6.0–10.0 Plus.*

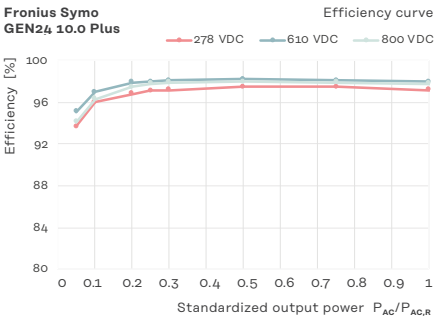
Impressive power data

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

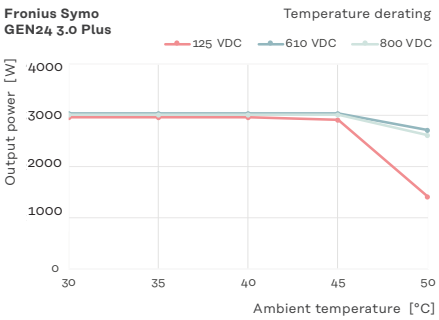
Efficiency

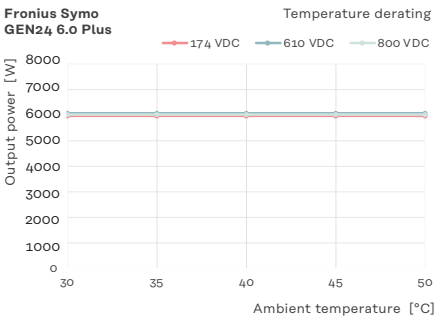


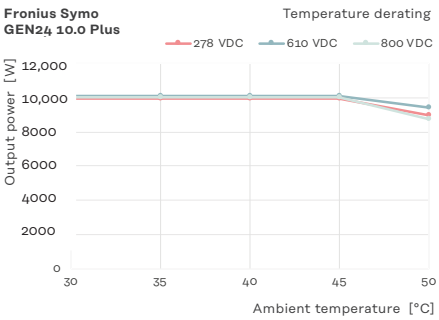




Power derating







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 ($U_{dc\ min}$ - $U_{dc\ max}$)	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 ($U_{dc\ start}$)	V	80			80			80		
	Usable MPP voltage range	V	80 - 800			80 - 800			80 - 800		
			MPPT1	MPPT2		MPPT1	MPPT2		MPPT1	MPPT2	
	Max. usable input current ($I_{dc\ max}$)	A	12.5	12.5		12.5	12.5		12.5	12.5	
	Max. array short circuit current ($I_{sc\ pv}$) [1]	A	20	20		20	20		20	20	
	Number of DC connections		2	1		2	1		2	1	
			MPPT1	MPPT2	Total	MPPT1	MPPT2	Total	MPPT1	MPPT2	Total
	Max. usable DC power	W	3,150	3,150	3,150	4,180	4,180	4,180	5,200	5,200	5,200
	Max. PV generator output	Wpeak	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
	Nom. AC output current (@ 220/230 V)	A	4.5	4.3	6.1	5.8	7.6	7.2
	Grid connection ($U_{ac,r}$)	V	3~ EN 400/230 or 3~ EN 380/220 (+20%/-30%)					
	Frequency (frequency range f_{min} - f_{max})	Hz	50/60 (45 - 65)					
	Total harmonic distortion	%	< 3.5					
	Power factor ($\cos \varphi_{ac,r}$)		0.7 - 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~ EN 220/230		
	Switching time	sec.	< 20		

Output data Full Backup[2]	Nom. output power Full Backup	VA	The Full Backup backup power function is available for the Symo GEN24 6.0-10.0 Plus.
	Nominal phase power Full Backup	VA	
	Grid connection Full Backup	V	
	Switching 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 terminals 2.5 - 10 mm²		
	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] *$I_{sc\ pv}$ = $I_{sc\ max}$ >= 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 connected battery*

[4] *Depending on the 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 × width × depth)	mm	530 × 474 × 165		
	Weight (inverter/with packaging)	kg	15.6/19.4	15.6/19.4	15.6/19.4
	Protection class		IP 66	IP 66	IP 66
	Safety class		1	1	1
	Night 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 above sea level	m	3,000/4,000 (unrestricted/restricted voltage range)		
	DC connection technology PV		3x DC+ and 3x DC- push-in spring terminals 2.5 - 10 mm²		
	AC connection technology		5-pin AC push-in spring terminals 1.5 - 10 mm² 3-pin backup power push-in spring terminals 1.5 - 10 mm² 5x PE screw terminals 2.5 - 16 mm²		
	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 employees from Fraunhofer IZM)		
Efficiency	Max. efficiency	%	98.1	98.2	98.2
	Euro. efficiency (ηEU)	%	96.7	97.2	97.5
	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, 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.

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 ($U_{dc\ min}$ - $U_{dc\ max}$)	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 ($U_{dc\ start}$)	V	80			80			80		
	Usable MPP voltage range	V	80 - 800			80 - 800			80 - 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. 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 power	W	6,220	6,000	6,220	8,260	6,000	8,260	10,300	6,000	10,300
	Max. PV generator output	Wpeak	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
	Nom. AC output current (@ 220/230 V)	A	9.1	8.7	12.1	11.6	15.2	14.5
	Grid connection ($U_{ac,r}$)	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	%	< 3.5					
	Power factor ($\cos \varphi_{ac,r}$)		0.7 - 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.	< 20		

Output data Full Backup[2]	Nom. output power Full Backup	VA	6,000	8,000	10,000
	Nominal phase power Full Backup	VA	3,680	3,680	3,680
	Grid connection Full Backup	V	3~ NPE 400/230 or 3~ NPE 380/220		
	Switching 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 terminals 2.5 - 10 mm²		
	Max. DC input/output power[3]	W	6,220	8,260	10,300
	Max. charging power for 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 connected battery*
[4] *Depending on the country-specific certification and availability*
[5] *Excluding BYD Battery-Box Premium HVS 12.8 and HVM 8.3*

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			Symo GEN24 Plus		
			6.0	8.0	10.0
General data	Dimensions (height × width × depth)	mm	595 × 529 × 180		
	Weight (inverter/with packaging)	kg	23.4/28.5	23.4/28.5	23.4/28.5
	Protection class		IP 66	IP 66	IP 66
	Safety class		1	1	1
	Night 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 above sea level	m	3,000/4,000 (unrestricted/restricted voltage range)		
	DC connection technology PV		3x DC+ and 3x DC- push-in spring terminals 2.5 - 10 mm²		
	AC connection technology		5-pin AC push-in spring terminals 1.5 - 10 mm² 3-pin backup power push-in spring terminals 1.5 - 10 mm² 5x PE screw terminals 2.5 - 16 mm²		
	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 employees from Fraunhofer IZM)		
Efficiency	Max. efficiency	%	98.2	98.2	98.2
	Euro. efficiency (ηEU)	%	97.7	97.8	97.9
	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, 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*

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

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