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.

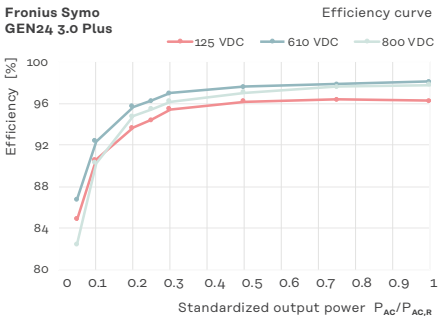
Fronius GEN24 Plus* | Backup power versions | Battery connection

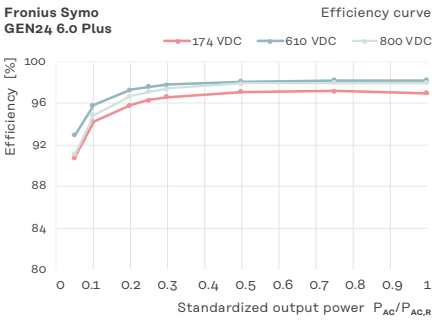
** The Full Backup option is available for the Primo GEN24 3.0–6.0 Plus and the Symo GEN24 6.0–10.0 Plus.*

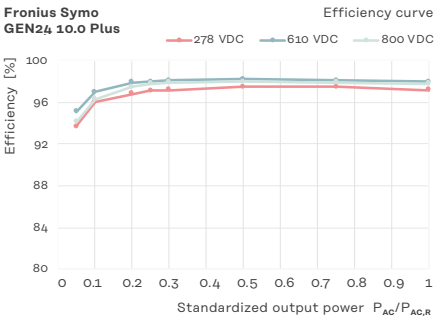
Impressive power data

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

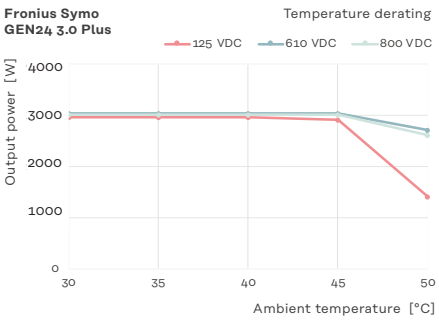
Efficiency

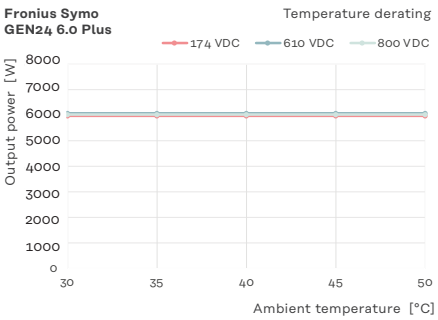


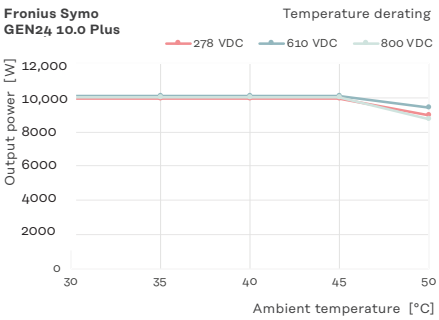




Power derating







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 ($V_{DC\ min}$ - $V_{DC\ max}$)	V	80 - 1,000			80 - 1,000			80 - 1,000		
	Nominal input voltage ($V_{DC,r}$)	V	610			610			610		
	Feed-in start voltage ($V_{DC\ start}$)	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. module 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 output	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
	Nominal AC output current (@ 220/230 V)	A	4.5	4.3	6.1	5.8	7.6	7.2
	Grid connection ($V_{AC,r}$)	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		< 3.5		< 3.5	
	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.	< 20	< 20	< 20

Full Backup emergency power and battery function only available with GEN24 Plus

			Symo GEN24 Plus		
			3.0	4.0	5.0
Output data Full Backup[2]	Nominal Full Backup output power	VA	The Full Backup emergency power function is available for the Symo GEN24 6.0-10.0 Plus.		
	Full Backup grid connection	V			
	Nominal Full Backup phase power	VA			
	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		1 × BATT+ and 1 × BATT- push-in tension clamp terminals 2.5 - 10 mm²		
	Max. DC input/output power[3]	W	3,150	4,180	5,200
	Max. charging power with AC coupling[3]	W	3,000	4,000	5,000
	Compatible batteries[4]		BYD Battery-Box Premium HVS/HVM[5]		

[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] *Dependent 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 × width × 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)	< 47	< 47	< 47
	Max. altitude	m	3,000/4,000 (unrestricted/restricted voltage range)		
	DC PV connection technology		3 × DC+ and 3 × DC- push-in tension clamp terminals 2.5 - 10 mm²		
	AC connection technology		3-pin AC push-in tension clamp terminals 1.5 - 10 mm² 3-pin backup power push-in tension clamp terminals 1.5 - 10 mm² 5 × PE screw terminals 2.5 - 16 mm²		
	Certificates and compliance with standards[7]		IEC 62109, IEC 62909, AS/NZS 4777.2, CEI 0-21, ABNT BNR 16149 und 16150, IEC 62116, IEC 61727, G98/G99, R25		
	Backup power functions[8]		PV Point and Full Backup		
	Producing country		Austria		
	Life Cycle Assessment		According to ÖNORM EN ISO 14040 and 14044 (verified by employees of Fraunhofer IZM)		
Efficiency	Maximum efficiency	%	98.2	98.2	98.2
	European efficiency (ηEU)	%	97.7	97.8	97.9
	MPP adjustment efficiency	%	> 99.9	> 99.9	> 99.9
Protective devices	DC isolation measurement		Integrated		
	Overload performance		Operating point adjustment, power limitation		
	DC disconnector		Integrated		
	Reverse polarity protection		Integrated		
Interfaces	Wi-Fi / 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 (GEN24 Plus), 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*

[8] *Full Backup emergency 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
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 voltage ($V_{DC\ start}$)	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. 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	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
	Nominal AC output current (@ 220/230 V)	A	9.1	8.7	12.1	11.6	15.2	14.5
	Grid connection ($V_{AC,r}$)	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		< 3.5		< 3.5	
	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.	< 20	< 20	< 20

⚠ **Full Backup emergency power and battery function only available with GEN24 Plus**

			Symo GEN24 Plus		
			6.0	8.0	10.0
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~ EN 400/230 OR 3~ EN 380/220		
	Switchover time	sec.	< 35	< 35	< 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		1 × BATT+ and 1 × BATT- push-in tension clamp terminals 2.5 - 10 mm²		
	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]		

[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] *Dependent 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*

Fronius GEN24. Designed to empower.

			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
	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	4,000	4,000	4,000
	DC PV connection technology		4 × DC+ and 4 × DC- push-in tension clamp terminals 2,5 - 10 mm²		
	AC connection technology		3-pin AC push-in tension clamp terminals 2.5 - 10 mm² 3-pin backup power push-in tension clamp terminals 1.5 - 10 mm² 2 × PE screw terminals 2.5 - 16 mm² and 3 × 2.5 - 10 mm²		
	Certificates and compliance with standards [7]		IEC 62109, IEC 62909, AS/NZS 4777.2, CEI 0-21, ABNT BNR 16149 und 16150, IEC 62116, IEC 61727, G98/G99, R25		
	Backup power functions [8]		PV Point and Full Backup		
	Producing country		Austria		
	Life Cycle Assessment		According to ÖNORM EN ISO 14040 and 14044 (verified by employees of Fraunhofer IZM)		
Efficiency	Maximum efficiency	%	97.6	97.6	97.6
	European efficiency (ηEU)	%	96.8	97.0	97.1
	MPP adjustment efficiency	%	> 99.9	> 99.9	> 99.9
Protective devices	DC isolation measurement		Integrated		
	Overload performance		Operating point adjustment, power limitation		
	DC disconnector		Integrated		
	Reverse polarity protection		Integrated		
Interfaces	Wi-Fi / 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 (GEN24 Plus), 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*

[8] *Full Backup emergency 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.

More information at www.fronius.com/gen24

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