



Designed to empower.



Fronius Symo
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:

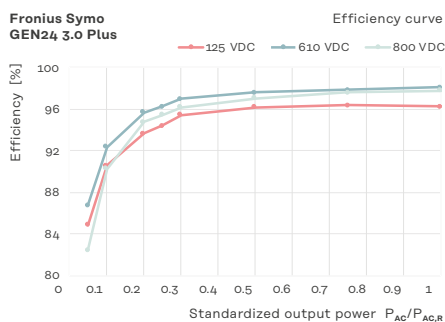
- As an inverter: **Fronius GEN24**
integrated backup power function
- As a hybrid inverter: **Fronius GEN24 Plus**
battery connection
two backup power options

Impressive power data

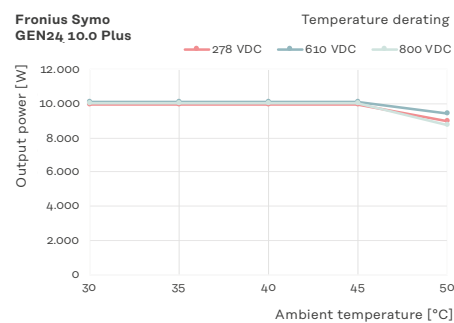
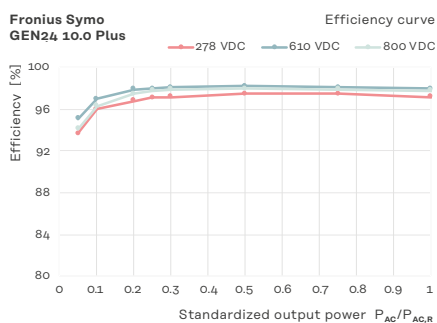
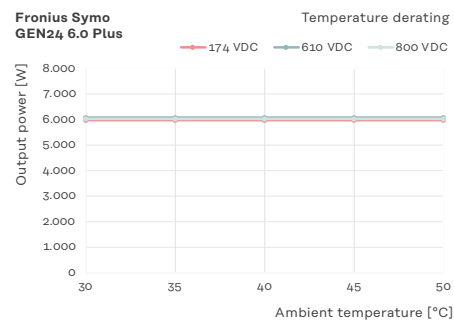
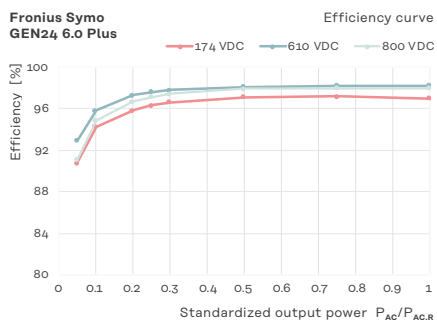
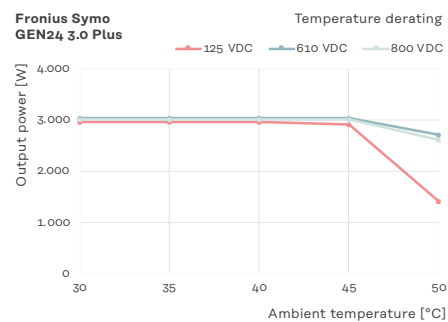
The Fronius GEN24 Plus impress with premium efficiency and maximum power at high temperatures.



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 (Udc min - Udc max)	V	80 - 1,000			80 - 1,000			80 - 1,000		
	Nominal input voltage (Udc,r)	V	610			610			610		
	Feed-in start-up input voltage (Udc start)	V	80			80			80		
	Usable MPP voltage range	V	80 - 800			80 - 800			80 - 800		
	MPP voltage range (at rated power) (Umpp min - Umpp max)	V	125 - 800			170 - 800			210 - 800		
			MPPT1		MPPT2	MPPT1		MPPT2	MPPT1		MPPT2
	Max. usable input current (Idc max)	A	12.5		12.5	12.5		12.5	12.5		12.5
	Max. array short circuit current (Isc 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 (Pac,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	A	4.5	4.3	6.1	5.8	7.6	7.2
	Grid connection (Uac,r)	V	3~ NPE 400/230 or 3~ NPE 380/220 (+20%/-30%)					
	Frequency (frequency range fmin - fmax)	Hz	50/60 (45 - 65)					
	Total harmonic distortion	%	< 3.0		< 3.0		< 3.0	
	Power factor (cos φac,r)		0.7 - 1 ind. / cap.					

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



Full Backup power and battery function only available with GEN24 Plus

 Full Backup power and battery function only available with GEN24 Plus			Symo GEN24 Plus		
			3.0	4.0	5.0
Output data Full Backup ²	Nom. output power Full Backup	VA	The Full Backup power function is available for the Symo GEN24 6.0-10.0 Plus.		
	Grid connection Full Backup	V			
	Switching time	sec.			

Battery connection	Number of DC inputs		1	1	1
	Max. input current (Idc max)	A	12,5	12,5	12,5
	DC input voltage range (Udc min - Udc max)	V	160 - 700	160 - 700	160 - 700
	DC battery connection technology		1 × BATT+ and 1 × 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 & LG FLEX ⁵		

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 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, 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
	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		3 × DC+ and 3 × 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 5 × PPE 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		
			PV Point (Comfort)		
			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 (η _{EU})	%	96.7	97.2	97.5
	MPP adaptation efficiency	%	> 99.9	> 99.9	> 99.9
Protection devices	DC isolation measurement		Integrated		
	DC disconnect		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		

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 (Udc min - Udc max)	V	80 - 1,000			80 - 1,000			80 - 1,000		
	Nominal input voltage (Udc,r)	V	610			610			610		
	Feed-in start-up input voltage (Udc start)	V	80			80			80		
	Usable MPP voltage range	V	80 - 800			80 - 800			80 - 800		
	MPP voltage range (at rated power) (Umpp min - Umpp max)	V	174 - 800			224 - 800			278 - 800		
			MPPT1		MPPT2	MPPT1		MPPT2	MPPT1		MPPT2
	Max. usable input current (Idc max)	A	25		12.5	25		12.5	25		12.5
	Max. array short circuit current (Isc 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 (Pac,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	A	9.1	8.7	12.1	11.6	15.2	14.5
	Grid connection (Uac,r)	V	3~ NPE 400/230 or 3~ NPE 380/220 (+20%/-30%)					
	Frequency (frequency range fmin - fmax)	Hz	50/60 (45 - 65)					
	Total harmonic distortion	%	< 3		< 3		< 3	
	Power factor (cos φac,r)		0.7 - 1 ind. / cap.					

Output data PV Point	Nom. output power PV Point (Comfort)	VA	3.000	3.000	3.000
	Grid connection PV Point (Comfort)	V	1~ NPE 220/230		
	Switching time	sec.	< 23	< 23	< 23



Full Backup power and battery function only available with GEN24 Plus

 Full Backup power and battery function only available with GEN24 Plus			Symo GEN24 Plus		
			6.0	8.0	10.0
Output data Full Backup ²	Nom. output power Full Backup	VA	6.000	8.000	10.000
	Nominal Full Backup phase power	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	< 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)	V	160 - 700	160 - 700	160 - 700
	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 & LG FLEX 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 Depending on connected battery

⁴ Depending on the country-specific certification and availability

⁵ Excluding BYD Battery-Box Premium, HVM 8.3

			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
	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		3 × DC+ and 3 × 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 5 × PPE 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		
Efficiency	Backup power functions ⁸		PV Point (Comfort) or Full Backup		
	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 (η _{EU})	%	97.7	97.8	97.9
	MPP adaptation efficiency	%	> 99.9	> 99.9	> 99.9
Protection devices	DC isolation measurement		Integrated		
	DC disconnect		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		

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 power ist only available with GEN24 Plus.

Fronius Symo GEN24 and GEN24 Plus



Designed to empower.

For further information, please visit

www.fronius.com/gen24-inverter

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