

# Designed to empower.



Fronius Symo  
GEN24 SC

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## Product advantages

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

# Product advantages

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## **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 Sustainably future-proof**

For those who don't want to decide right away: Thanks to the Fronius UP.storage\* software upgrade, your device can be retrofitted with the battery connection and therefore the Full Backup power supply at any time.

## **05 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.

\* Available in the Fronius webshop in selected countries.

# Technical data

## 12.0 kW

			Symo GEN24 / GEN24 Plus SC		
			12.0		
Input data	Number of MPP trackers		2		
	DC input voltage range ( $U_{dc\ min} - U_{dc\ max}$ )	V	80 - 1,000		
	Rated input voltage ( $U_{dc,r}$ )	V	610		
	Feed-in start-up input voltage ( $U_{dc\ start}$ )	V	80		
	Usable MPP voltage range	V	80 - 800		
	MPP voltage range (at rated power) ( $U_{mpp\ min} - U_{mpp\ max}$ )	V	295 - 800		
			MPPT1	MPPT2	
	Max. usable input current ( $I_{dc\ max}$ )	A	28	14	
	Max. array short circuit current ( $I_{sc\ pv}$ ) <sup>1</sup>	A	40	20	
	Number of DC connections		2	1	
			MPPT1	MPPT2	Total
	Max. usable DC power	W	12,360	8,600	12,360
Max. PV generator output	W <sub>peak</sub>	14,000	9,000	18,000	
Output data	AC rated power ( $P_{ac,r}$ )	W	12,000		
	Apparent power	VA	12,000		
	Max. output power	VA	12,000		
			380 Vac	400 Vac	
	Rated AC output current	A	18.2	17.4	
	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	Rated output power PV Point (Comfort)	VA	3,000		
	Grid connection PV Point (Comfort)	V	1~ NPE 220/230		
	Switching time	sec.	~15		

 Full Backup power and battery function only available with GEN24 Plus

			Symo GEN24 Plus SC		
			12.0		
Output data Full Backup <sup>2</sup>	Rated output power Full Backup	VA	12,000		
	Grid connection Full Backup	V	3~ NPE 400/230 or 3~ NPE 380/220		
	Switching time	sec.	~10		
Battery connection	Number of DC inputs		1		
	Max. input current ( $I_{dc\ max}$ )	A	22		
	DC input voltage range ( $U_{dc\ min} - U_{dc\ max}$ )	V	160 - 531		
	DC battery connection technology		1x BATT+ and 1x BATT- push-in spring terminals 2.5 - 10 mm <sup>2</sup>		
	Max. DC input/output power <sup>3</sup>	W	11,682		
	Max. charging power for AC coupling <sup>3</sup>	W	11,682		
Compatible batteries <sup>4</sup>		BYD Battery-Box Premium HVS/HVM <sup>5</sup>			

<sup>1</sup>  $I_{sc\ pv} = I_{sc\ max} \geq I_{sc} (STC) \times 1,25$  according to e.g. IEC 60364-7-712, NEC 2020, AS/NZS 5033:2021.

<sup>2</sup> Additional external components for grid switchover are required for the Full Backup. See the Operating Instructions for further details.

<sup>3</sup> Depending on connected battery

<sup>4</sup> Depending on the country-specific certification and availability

<sup>5</sup> Excluding BYD Battery-Box Premium HVS 12.8, HVM 8.3

# Technical data

## 12.0 kW

			Symo GEN24 / GEN24 Plus SC
			12.0
<b>General data</b>	Dimensions (height × width × depth)	mm	595 × 529 × 180
	Weight (inverter/with packaging)	kg	22,8 / 28,0
	Protection class		IP 66
	Safety class		1
	Night consumption	W	<10
	Overvoltage category (DC/AC) <sup>6</sup>		2/3
	Cooling		Active Cooling technology
	Installation		Indoor and outdoor installation
	Ambient temperature range	°C	-25 to +60
	Permissible humidity	%	0 - 100
	Noise emissions	dB (A)	< 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 mm <sup>2</sup>
	AC connection technology		5-pin AC push-in spring terminals 1.5 - 10 mm <sup>2</sup> 3-pin backup power push-in spring terminals 1.5 - 10 mm <sup>2</sup> 5 × PPE screw terminals 2.5 - 16 mm <sup>2</sup>
	Certificates and compliance with standards <sup>7</sup>		IEC 62109, IEC 62116, IEC 61727, IEC 62909, VDE AR-N4105, AS/NZS 4777.2, EN 50549, CEI 0-21, R25
Backup power functions <sup>8</sup>		PV Point (Comfort) or Full Backup	
Life cycle analysis		In accordance with ÖNORM EN ISO 14040 and 14044 (checked by employees from Fraunhofer IZM)	
<b>Efficiency</b>	Max. efficiency	%	98.3
	Euro. efficiency (η <sub>EU</sub> )	%	98
	MPP adaptation efficiency	%	> 99.9
<b>Protection devices</b>	DC isolation measurement		Integrated
	DC disconnecter		Integrated
	Reverse polarity protection		Integrated
<b>Interfaces</b>	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

<sup>6</sup> 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

<sup>7</sup> You can find the current certificates under [www.fronius.com/symo-gen24-plus-cert](http://www.fronius.com/symo-gen24-plus-cert)

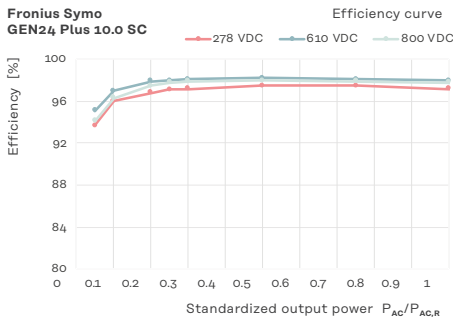
<sup>8</sup> Full Backup power is only available with GEN24 Plus.

For further information on the availability of the inverters in your country, please visit [www.fronius.com](http://www.fronius.com).

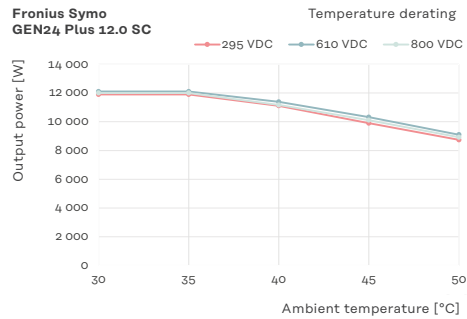
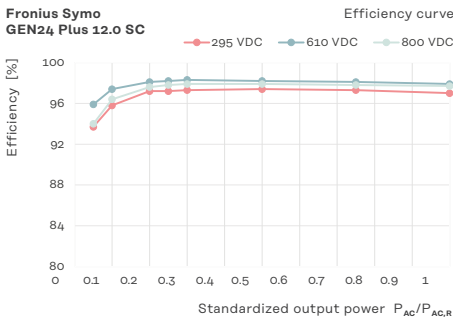
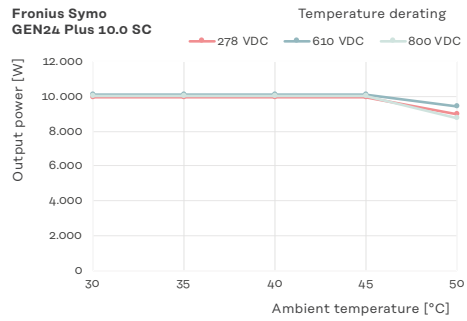
# Impressive power data

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

## Efficiency



## Power derating





# Offering proven quality with even more power for the private home

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For further information, please visit  
[www.fronius.com/gen24-inverter](http://www.fronius.com/gen24-inverter)

**Fronius Australia Pty Ltd.**  
90-92 Lambeck Drive  
Tullamarine VIC 3043  
Australia  
pv-sales-australia@fronius.com  
www.fronius.com.au

**Fronius International GmbH**  
Froniusplatz 1  
4600 Wels  
Austria  
pv-sales-austria@fronius.com  
www.fronius.com