



# Designed to empower.



Fronius Symo  
GEN24 and  
GEN24 Plus

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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

# 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 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.

\* The Full Backup power function is not available for the Fronius Symo GEN24 3.0-5.0 Plus.

\*\* Available in the Fronius webshop in select countries.

# 2

The Fronius GEN24 is  
available in two versions:

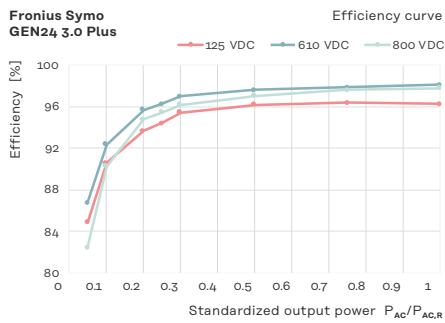
- As an inverter: **Fronius GEN24**  
integrated backup power function
- As a hybrid inverter: **Fronius GEN24 Plus**  
battery connection  
two backup power options

# Impressive power data

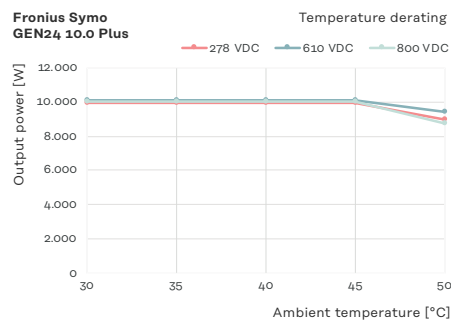
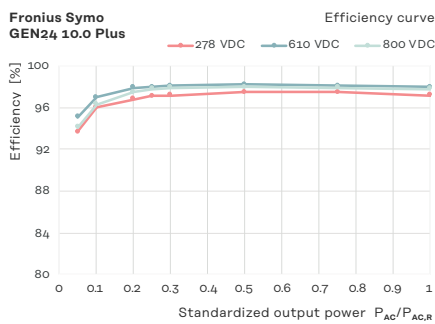
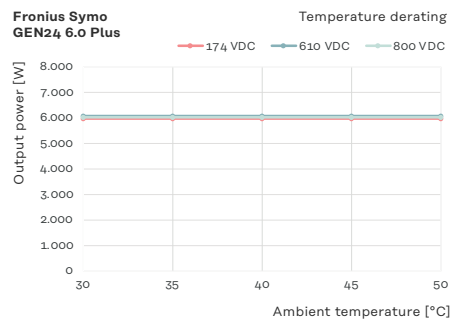
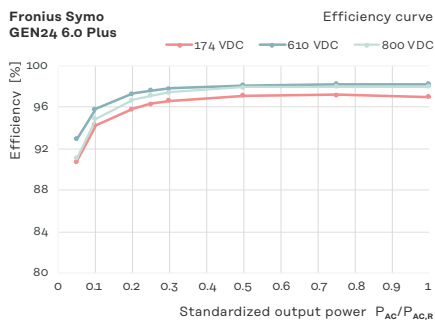
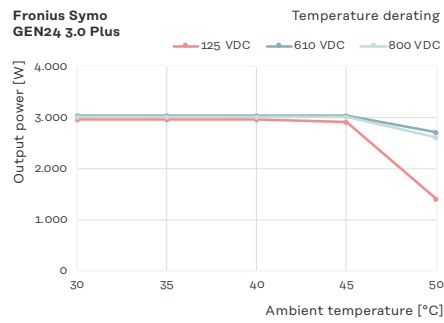
The Fronius GEN24 and GEN24 Plus impress with premium efficiency and maximum power at high temperatures.



## Efficiency



## Power derating




# Technical data

## 3.0/4.0/5.0 kW

			Symo GEN24/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				
	Rated 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) <sup>1</sup>	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	W <sub>peak</sub>	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
	Rated 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	Rated 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.	~15		~15		~15	

 Full Backup power and battery function only available with GEN24 Plus

			Symo GEN24 Plus		
			3.0	4.0	5.0
Output data Full Backup <sup>2</sup>	Rated 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 - 531		160 - 531		160 - 531	
	DC battery connection technology		1 × BATT+ and 1 × BATT- push-in spring terminals 2.5 - 10 mm <sup>2</sup>					
	Max. DC input/output power <sup>3</sup>	W	3,150		4,180		5,200	
	Max. charging power for AC coupling <sup>3</sup>	W	3,000		4,000		5,000	
Compatible batteries <sup>4</sup>		BYD Battery-Box Premium HVS/HVM & LG FLEX <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> 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.

<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

			Symo GEN24/GEN24 Plus		
			3.0	4.0	5.0
<b>General data</b>	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) <sup>6</sup>		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 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 0126, VDE AR-N4105, AS/NZS 4777.2, EN 50549, CEI 0-21, G98/G99, R25		
Backup power functions		PV Point (Comfort)			
Country of manufacture		Austria			
Life cycle analysis		In accordance with ÖNORM EN ISO 14040 and 14044 (checked by employees from Fraunhofer IZM)			
<b>Efficiency</b>	Max. efficiency	%	98.1	98.2	98.2
	Euro. efficiency (η <sub>EU</sub> )	%	96.7	97.2	97.5
	MPP adaptation efficiency	%	> 99.9	> 99.9	> 99.9
<b>Protection devices</b>	DC isolation measurement		Integrated		
	DC disconnect		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 (GEN24 Plus), 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)

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


# Technical data

## 6.0/8.0/10.0 kW

			Symo GEN24/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				
	Rated 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) <sup>1</sup>	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	7,200	6,000	8,260	7,200	6,000	10,300
Max. PV generator output	W <sub>peak</sub>	7,200	6,500	9,000	7,200	7,000	12,000	7,200	7,200	14,400	

Output data	AC rated power (Pac,r)	W	6,000		8,000		9,999	
	Apparent power	VA	6,000		8,000		9,999	
	Max. output power	VA	6,000		8,000		9,999	
			380 Vac	400 Vac	380 Vac	400 Vac	380 Vac	400 Vac
	Rated 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	Rated 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.	~15		~15		~15	

 Full Backup power and battery function only available with GEN24 Plus

			Symo GEN24 Plus					
			6.0		8.0		10.0	
Output data Full Backup <sup>2</sup>	Rated output power Full Backup	VA	6,000		8,000		9,999	
	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.	~10		~10		~10	

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 - 531		160 - 531		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	6,220		8,260		10,300	
	Max. charging power for AC coupling <sup>3</sup>	W	6,000		8,000		9,999	
	Compatible batteries <sup>4</sup>		BYD Battery-Box Premium HVS/HVM & LG FLEX <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> 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.

<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

			Symo GEN24/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) <sup>6</sup>		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 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 0126, VDE AR-N4105, AS/NZS 4777.2, EN 50549, CEI 0-21, G98/G99, R25		
Backup power functions <sup>8</sup>		PV Point (Comfort) or Full Backup			
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 (η <sub>EU</sub> )	%	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		

<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.

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# Fronius Symo GEN24 and GEN24 Plus



# Designed to empower.

For further information, please visit

[www.fronius.com/gen24-residential](http://www.fronius.com/gen24-residential)

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