



# GEN24

# SC



Fronius Symo GEN24 SC  
& GEN24 Plus SC 3.0 - 12.0 kW

# Product advantages



## 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.

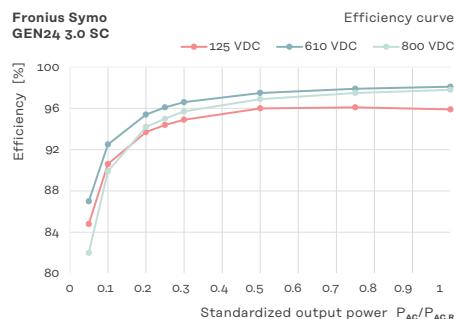
\* Available in the Fronius webshop in selected countries.

# Impressive power data

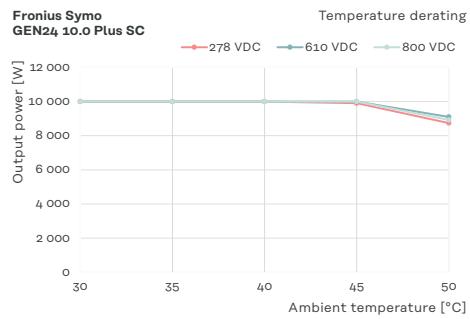
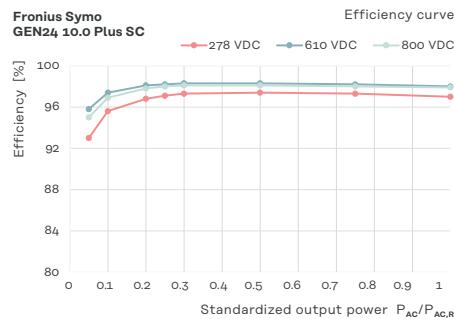
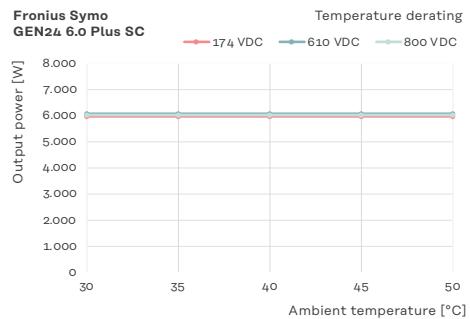
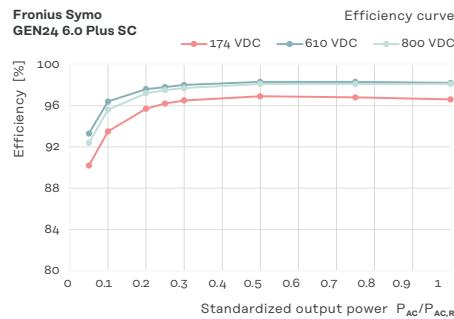
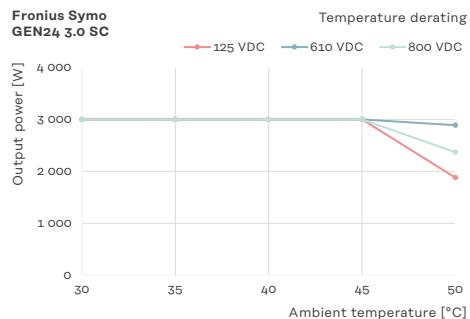
The Fronius GEN24 and GEN24 Plus impress with premium efficiency and maximum power at high temperatures.



## Efficiency



## Power derating



## Technical data

3.0 / 4.0 / 5.0 kW

Input data	Symo GEN24 SC / GEN24 Plus SC					
	3.0		4.0		5.0	
	Number of MPP trackers	2	2	2		
	DC input voltage range (U <sub>dc</sub> min - U <sub>dc</sub> max)	V	80 - 1,000	80 - 1,000	80 - 1,000	
	Rated input voltage (U <sub>dc,r</sub> )	V	610	610	610	
	Feed-in start-up input voltage (U <sub>dc start</sub> )	V	80	80	80	
	Usable MPP voltage range	V	80 - 800	80 - 800	80 - 800	
	MPP voltage range (at rated power) (U <sub>mpp min</sub> - U <sub>mpp max</sub> )	V	115 - 800	150 - 800	190 - 800	
		MPPT1	MPPT2	MPPT1	MPPT2	MPPT1
	Max. usable input current (I <sub>dc max</sub> )	A	14	14	14	14

Output data	AC rated power (P <sub>ac,r</sub> )	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
	Rated AC output current	A	4.5	4.3	6.1	5.8
	Grid connection (U <sub>ac,r</sub> )	V	3~ NPE 400/230 or 3~ NPE 380/220 (+20%/-30%)			
	Frequency (frequency range f <sub>min</sub> - f <sub>max</sub> )	Hz	50/60 (45 - 65)			
	Total harmonic distortion	%	< 3.5		< 3.5	< 3.5
	Power factor (cos φ <sub>ac,r</sub> )		0.7 - 1 ind. / cap.			

Output data PV Point	Rated output power PV Point	VA	3,000	3,000	3,000	
	Grid connection PV Point	V	1~ NPE 220/230			
	Switching time	sec.	~15		~15	~15

Output data Full Backup <sup>2</sup>	Symo GEN24 Plus SC					
	3.0		4.0		5.0	
	Rated output power Full Backup	VA				
	Nominal Full Backup phase power	VA				
	Grid connection Full Backup	V	The Full Backup power supply function is available for Symo GEN24 6.0-12.0 Plus SC.			

Battery connection	Number of DC inputs		1	1	1	
	Max. input current (I <sub>dc max</sub> )	A	14	14	14	
	DC input voltage range (U <sub>dc min</sub> - U <sub>dc max</sub> )	V	160 - 700	160 - 700	160 - 700	
	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	3,300	4,300	5,300	
	Max. charging power for AC coupling <sup>3</sup>	W	3,000	4,000	5,000	
	Compatible batteries <sup>4</sup>		Fronius Reserva & BYD Battery-Box Premium HVS/HVM			

<sup>1</sup> I<sub>sc pv</sub> = I<sub>sc max</sub> >= I<sub>sc</sub> (STC) x 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> Compatibility with the Fronius GEN24 Plus varies depending on the battery storage type and capacity class, country-specific certification and availability. More information: [www.fronius.com/battery-overview](http://www.fronius.com/battery-overview)

		Symo GEN24 SC / GEN24 Plus SC		
		3.0	4.0	5.0
General data	Dimensions (height x width x depth)	mm	530 x 474 x 165	
	Weight (inverter/with packaging)	kg	15,6 / 19,4	15,6 / 19,4
	Protection class		IP 66	IP 66
	Safety class		1	1
	Night consumption	W	<10	<10
	Overvoltage category (DC/AC) <sup>5</sup>		2/3	2/3
	Cooling		Active Cooling technology	
	Installation		Indoor and outdoor installation	
	Ambient temperature range	°C	-25 to +60	-25 to +60
	Permissible humidity	%	0 - 100	0 - 100
	Noise emissions	dB (A)	< 36	< 36
	Max. altitude above sea level	m	3,000/4,000 (unrestricted/restricted voltage range)	
	DC connection technology PV		3 x DC+ and 3 x 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 x PPE screw terminals 2.5 - 16 mm <sup>2</sup>	
	Certificates and compliance with standards <sup>6</sup>		IEC 62109, IEC 62116, IEC 61727, IEC 62909, VDE AR-N4105, AS/NZS 4777.2, EN 50549, CEI 0-21, G 98, R25	
	Backup power functions <sup>7</sup>		PV Point 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	%	98.1	98.1
	Euro. efficiency (ηEU)	%	96.6	97.1
	MPP adaptation efficiency	%	> 99.9	> 99.9
Protection devices	DC isolation measurement		Integrated	
	DC disconnector		Integrated	
	Reverse polarity protection		Integrated	
Interfaces	WLAN/2 x 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 x RS485		Modbus RTU SunSpec (third-party provider)/Fronius Smart Meter, battery, Fronius Ohmpilot	

<sup>5</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>6</sup> You can find the current certificates under [www.fronius.com/symo-gen24-plus-cert](http://www.fronius.com/symo-gen24-plus-cert)

<sup>7</sup> Full Backup power is only available with GEN24 Plus SC.

## Technical data

6.0 / 8.0 / 10.0 kW

Input data	Symo GEN24 SC / GEN24 Plus SC					
	6.0		8.0		10.0	
	Number of MPP trackers	2	2	2		
	DC input voltage range (U <sub>dc</sub> min - U <sub>dc</sub> max)	V	80 - 1,000	80 - 1,000	80 - 1,000	
	Rated input voltage (U <sub>dc,r</sub> )	V	610	610	610	
	Feed-in start-up input voltage (U <sub>dc start</sub> )	V	80	80	80	
	Usable MPP voltage range	V	80 - 800	80 - 800	80 - 800	
	MPP voltage range (at rated power) (U <sub>mpp min</sub> - U <sub>mpp max</sub> )	V	148 - 800	197 - 800	246 - 800	
		MPPT1	MPPT2	MPPT1	MPPT2	MPPT1
	Max. usable input current (I <sub>dc max</sub> )	A	28	14	28	14
	Max. array short circuit current (I <sub>sc pv</sub> ) <sup>1</sup>	A	40	20	40	20
	Number of DC connections		2	1	2	1
		MPPT1	MPPT2	Total	MPPT1	MPPT2
	Max. usable DC power	W	6,180	6,180	6,180	8,240
	Max. PV generator output	Wpeak	7,500	7,500	9,000	10,000
		MPPT1	MPPT2	Total	MPPT1	MPPT2

Output data	AC rated power (P <sub>ac,r</sub> )	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
	Rated AC output current	A	9.1	8.7	12.1	11.6
	Grid connection (U <sub>ac,r</sub> )	V	3~ NPE 400/230 or 3~ NPE 380/220 (+20%/-30%)			
	Frequency (frequency range f <sub>min</sub> - f <sub>max</sub> )	Hz	50/60 (45 - 65)			
	Total harmonic distortion	%	< 3.5		< 3.5	
	Power factor (cos φ <sub>ac,r</sub> )		0.7 - 1 ind. / cap.			

Output data PV Point	Rated output power PV Point	VA	3,000	3,000	3,000
	Grid connection PV Point	V	1~ NPE 220/230		
	Switching time	sec.	~15	~15	~15

Output data Full Backup <sup>2</sup>	Symo GEN24 Plus SC					
	6.0		8.0		10.0	
	Rated output power Full Backup	VA	6,000	8,000	9,999	
	Nominal Full Backup phase power	VA	4,133	4,133	4,133	
	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 (I <sub>dc max</sub> )	A	22	22	22
	DC input voltage range (U <sub>dc min</sub> - U <sub>dc max</sub> )	V	160 - 700	160 - 700	160 - 700
	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	6,180	8,240	10,300
	Max. charging power for AC coupling <sup>3</sup>	W	6,000	8,000	9,999
	Compatible batteries <sup>4</sup>		Fronius Reserva & BYD Battery-Box Premium HVS/HVM		

<sup>1</sup> I<sub>sc pv</sub> = I<sub>sc max</sub> >= I<sub>sc</sub> (STC) x 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> Compatibility with the Fronius GEN24 Plus varies depending on the battery storage type and capacity class, country-specific certification and availability. More information: [www.fronius.com/battery-overview](http://www.fronius.com/battery-overview)

		Symo GEN24 SC / GEN24 Plus SC		
		6.0	8.0	10.0
General data	Dimensions (height × width × depth)	mm	595 × 529 × 180	
	Weight (inverter/with packaging)	kg	22,8 / 28,0	22,8 / 28,0
	Protection class		IP 66	IP 66
	Safety class		1	1
	Night consumption	W	<10	<10
	Overvoltage category (DC/AC) <sup>5</sup>		2/3	2/3
	Cooling		Active Cooling technology	
	Installation		Indoor and outdoor installation	
	Ambient temperature range	°C	-25 to +60	-25 to +60
	Permissible humidity	%	0 - 100	0 - 100
	Noise emissions	dB (A)	< 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>6</sup>		IEC 62109, IEC 62116, IEC 61727, IEC 62909, VDE AR-N4105, AS/NZS 4777.2, EN 50549, CEI 0-21, G 98, R25	
	Backup power functions <sup>7</sup>		PV Point 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	%	98.3	98.3
	Euro. efficiency (ηEU)	%	97.9	98
	MPP adaptation efficiency	%	> 99.9	> 99.9
Protection devices	DC isolation measurement		Integrated	
	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	

<sup>5</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>6</sup> You can find the current certificates under [www.fronius.com/symo-gen24-plus-cert](http://www.fronius.com/symo-gen24-plus-cert)

<sup>7</sup> Full Backup power is only available with GEN24 Plus SC.

## Technical data

12.0 kW

Symo GEN24 SC / GEN24 Plus SC						
12.0						
Input data	Number of MPP trackers	2				
	DC input voltage range (U <sub>dc</sub> min - U <sub>dc</sub> max)	V	80 - 1,000			
	Rated input voltage (U <sub>dc,r</sub> )	V	610			
	Feed-in start-up input voltage (U <sub>dc start</sub> )	V	80			
	Usable MPP voltage range	V	80 - 800			
	MPP voltage range (at rated power) (U <sub>mpp min</sub> - U <sub>mpp max</sub> )	V	295 - 800			
			MPPT1	MPPT2		
	Max. usable input current (I <sub>dc max</sub> )	A	28	14		
	Max. array short circuit current (I <sub>sc pv</sub> ) <sup>1</sup>	A	40	20		
	Number of DC connections		2	1		
Output data		MPPT1	MPPT2	Total		
	Max. usable DC power	W	12,360	8,600		
	Max. PV generator output	Wpeak	14,000	9,000		
				18,000		
Output data	AC rated power (P <sub>ac,r</sub> )	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 <sub>ac,r</sub> )	V	3~ NPE 400/230 or 3~ NPE 380/220 (+20%/-30%)			
	Frequency (frequency range f <sub>min</sub> - f <sub>max</sub> )	Hz	50/60 (45 - 65)			
	Total harmonic distortion	%	< 3.5			
Output data PV Point	Power factor (cos φ <sub>ac,r</sub> )		0.7 - 1 ind. / cap.			
	Rated output power PV Point	VA	3,000			
	Grid connection PV Point	V	1~ NPE 220/230			
Output data Full Backup <sup>2</sup>	Switching time	sec.	~15			
 <b>Full Backup power and battery function only available with GEN24 Plus SC.</b>		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 <sub>dc max</sub> )	A	22			
	DC input voltage range (U <sub>dc min</sub> - U <sub>dc max</sub> )	V	160 - 700			
	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>		Fronius Reserva & BYD Battery-Box Premium HVS/HVM			

<sup>1</sup>  $I_{sc\ pv} = I_{sc\ max} \geq I_{sc} \text{ (STC)} \times 1,25$  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> Compatibility with the Fronius GEN24 Plus varies depending on the battery storage type and capacity class, country-specific certification and availability. More information: [www.fronius.com/battery-overview](http://www.fronius.com/battery-overview)

Symo GEN24 SC / GEN24 Plus SC			
12.0			
General data	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>5</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>6</sup>		IEC 62109, IEC 62116, IEC 61727, IEC 62909, VDE AR-N4105, AS/NZS 4777.2, EN 50549, CEI 0-21, G 98, R25
	Backup power functions <sup>7</sup>		PV Point 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
	Euro. efficiency (ηEU)	%	97.9
	MPP adaptation efficiency	%	> 99.9
Protection devices	DC isolation measurement		Integrated
	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

<sup>5</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>6</sup> You can find the current certificates under [www.fronius.com/symo-gen24-plus-cert](http://www.fronius.com/symo-gen24-plus-cert)

<sup>7</sup> Full Backup power is only available with GEN24 Plus SC.



## Reserva

# One-stop-shop

Fronius now offers all the components for 24 hours of sun - a complete PV system from a single source. Electricity, heating, cooling, e-mobility – everything is possible with GEN24 Plus, even at night. The battery-enabled inverter is perfectly matched to the Fronius storage solution, Reserva, and makes you even more independent.



### The Fronius storage solution

Make yourself independent and utilise solar energy around the clock. The Fronius Reserva is a high-voltage battery with DC coupling that guarantees particularly effective and efficient energy transfer. With capacities from 6.3 to 15.8 kWh, it adapts flexibly to your needs.



### Backup power for every eventuality

With the Fronius Backup Controller, you can switch to full backup power operation automatically. The cost-effective switching component can be installed in the control cabinet to save space and eliminate the need for additional hardware such as switch boxes.



### Charge electric cars intelligently and flexibly

With the Fronius Wattpilot, you can charge your electric car wherever you are – at home or on the move. The smart wallbox adapts to your needs and offers two versions: Home for fixed installation and Go as a portable solution. Both allow sustainable charging with solar energy or green electricity from the grid. Whether you have a PV system or not, the Fronius Wattpilot helps you charge cost-effectively and in an environmentally friendly way.

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

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