

Technical data

12.0 kW

			Symo GEN24 SC / GEN24 Plus SC		
			12.0		
Input data	Number of MPP trackers		2		
	DC input voltage range ($U_{dc \min} - U_{dc \max}$)	V	80 - 1,000		
	Rated input voltage ($U_{dc,r}$)	V	610		
	Feed-in start-up input voltage ($U_{dc \text{ start}}$)	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 ($I_{sc \text{ pv}}$) ¹	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 _{peak}	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	VA	3,000		
	Grid connection PV Point	V	1~ NPE 220/230		
	Switching time	sec.	~15		



Full Backup power and battery function only available with GEN24 Plus SC.

			Symo GEN24 Plus SC		
			12.0		
Output data Full Backup ²	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 - 700		
	DC battery connection technology		1x BATT+ and 1x BATT- push-in spring terminals 2.5 - 10 mm ²		
	Max. DC input/output power ³	W	11,682		
	Max. charging power for AC coupling ³	W	11,682		
	Compatible batteries ⁴		Fronius Reserva & BYD Battery-Box Premium HVS/HVM		

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

² 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 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

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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) ⁵		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 ²
	AC connection technology		5-pin AC push-in spring terminals 1,5 - 10 mm ² 3-pin backup power push-in spring terminals 1,5 - 10 mm ² 5 × PPE screw terminals 2,5 - 16 mm ²
	Certificates and compliance with standards ⁶		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 ⁷		PV Point or Full Backup
Efficiency	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 (η _{EU})	%	97.9
	MPP adaptation efficiency	%	> 99.9
Protection devices			
	DC isolation measurement		Integrated
	DC disconnecter		Integrated
Protection devices	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

⁵ 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

⁶ You can find the current certificates under www.fronius.com/symo-gen24-plus-cert

⁷ Full Backup power is only available with GEN24 Plus SC.