

Technical data

4.6/5.0/6.0 kW

			Primo GEN24/GEN24 Plus							
			4.6		5.0		6.0			
Input data	Number of MPP trackers		2		2		2			
	DC input voltage range (V _{DC min} - V _{DC max})	V	65 - 600		65 - 600		65 - 600			
	Nominal input voltage (V _{DC,r})	V	400		400		400			
	Feed-in start voltage (V _{DC start})	V	80		80		80			
	Usable MPP voltage range	V	65 - 530		65 - 530		65 - 480			
	MPP voltage range (at rated power) (U _{mpp min} - U _{mpp max})	V	230 - 530		230 - 530		230 - 480			
			MPPT1	MPPT2	MPPT1	MPPT2	MPPT1	MPPT2		
	Max. usable input current (I _{DC max})	A	22	12	22	12	22	12		
	Max. module array short circuit current (I _{sc pv}) ¹	A	36	19	36	19	36	19		
	Number of DC connections		2	2	2	2	2	2		
		MPPT1	MPPT2	Total	MPPT1	MPPT2	Total	MPPT1	MPPT2	Total
Max. usable DC output	W	4,750	4,750	4,750	5,170	5,170	5,170	6,200	5,760	6,200
Max. PV generator output	W _{peak}	5,750	4,750	6,900	6,250	5,170	7,500	7,500	5,760	9,000

Output data	AC rated power (P _{AC,r})	W	4,600		5,000		6,000	
	Apparent power	VA	4,600		5,000		6,000	
	Max. output power	VA	4,600		5,000		6,000	
			220 V _{AC}	230 V _{AC}	220 V _{AC}	230 V _{AC}	220 V _{AC}	230 V _{AC}
	Nominal AC output current	A	20.9	20	22.7	21.7	27.3	26.1
	Grid connection (V _{AC,r})	V	1~ NPE 220/230 (+20%/-30%)					
	Frequency (frequency range f _{min} - f _{max})	Hz	50/60 (45 - 65)					
	Total harmonic distortion	%	< 2		< 2		< 2	
Power factor (cos φ _{ac,r})		0.8 - 1 ind. / cap.						

Output data PV Point	Nominal output power PV Point	VA	3,000		3,000		3,000	
	PV Point grid connection	V	1~ NPE 220/230					
	Switchover time	sec.	< 23		< 23		< 23	

 Full Backup power and battery function only available with GEN24 Plus

			Primo GEN24 Plus					
			4.6		5.0		6.0	
Output data Full Backup ²	Nominal Full Backup output power	VA	4,600		5,000		6,000	
	Full Backup grid connection	V	1~ NPE 220/230					
	Switchover time	sec.	< 35		< 35		< 35	

Battery connection	Number of DC inputs		1		1		1	
	Max. input current (I _{DC max})	A	22		22		22	
	DC input voltage range (U _{DC min} - U _{DC max}) ³	V	150 - 455		150 - 455		150 - 455	
	DC battery connection technology		1 × BATT+ and 1× BATT- push-in tension clamp terminals 2,5 - 10 mm ²					
	Max. DC input/output power ⁴	W	4,750		5,170		6,200	
	Max. charging power with AC coupling ⁴	W	4,600		5,000		6,000	
	Compatible batteries ⁵		BYD Battery-Box Premium HVS/HVM ⁶					

¹ I_{sc pv} = I_{sc max} ≥ I_{sc (STC)} × 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 Primo GEN24 3.0–10.0 Plus. Additional external components for grid switchover are required for the Full Backup. See the Operating Instructions for further details.

³ AC power derating of the inverter occurs with a DC battery input voltage of 419.7 V and higher

⁴ Depending on the connected battery

⁵ Depending on country-specific certification and availability

⁶ Excluding BYD Battery-Box Premium HVS 10.2, HVS 12.8, HVM 8.3, HVM 22.1

Fronius GEN24. Designed to empower.

			Primo GEN24/GEN24 Plus		
			4.6	5.0	6.0
General data	Dimensions (height × width × depth)	mm	530 × 474 × 165		
	Weight (inverter/with packaging)	kg	15,4/19	15,4/19	15,4/19
	Degree of protection		IP 66	IP 66	IP 66
	Safety class		1	1	1
	Night-time consumption	W	<10	<10	<10
	Overvoltage category (DC/AC) ⁷		2/3	2/3	2/3
	Inverter concept		Transformerless		
	Cooling		Active Cooling Technology		
	Installation		Indoor and outdoor installation		
	Ambient temperature range	°C	-40 to +60	-40 to +60	-40 to +60
	Permissible humidity	%	0 - 100	0 - 100	0 - 100
	Noise emissions	dB (A)	< 42	< 42	< 42
	Max. altitude	m	4,000	4,000	4,000
	DC PV connection technology		4 × DC+ and 4 × DC- push-in tension clamp terminals 2,5 - 10 mm ²		
	AC connection technology		3-pin AC push-in tension clamp terminals 2.5 - 10 mm ² 3-pin backup power push-in tension clamp terminals 1.5 - 10 mm ² 2 × PE screw terminals 2.5 - 16 mm ² and 3 × 2.5 - 10 mm ²		
	Certificates and compliance with standards ⁸		IEC 62109, IEC 62909, AS/NZS 4777.2, CEI 0-21, ABNT BNR 16149 und 16150, IEC 62116, IEC 61727, G98/G99, R25		
Backup power functions ⁹		PV Point and Full Backup			
Producing country		Austria			
Life Cycle Assessment		According to ÖNORM EN ISO 14040 and 14044 (verified by employees of Fraunhofer IZM)			
Efficiency	Maximum efficiency	%	97,6	97,6	97,6
	European efficiency (η _{EU})	%	96,8	97,0	97,1
	MPP adjustment efficiency	%	> 99,9	> 99,9	> 99,9
Protective devices	DC isolation measurement		Integrated		
	Overload performance		Operating point adjustment, power limitation		
	DC disconnecter		Integrated		
	Reverse polarity protection		Integrated		
Interfaces	Wi-Fi / 2 × Ethernet LAN		Fronius Solar.web, Modbus TCP SunSpec, Fronius Solar API (JSON)		
	6 digital inputs 6 digital inputs/outputs		Interface to ripple control receiver, energy management		
	Emergency shutdown (WSD)		Integrated		
	Datalogger and web server		Integrated		
	2 × RS485		Modbus RTU SunSpec (third-party provider) / Fronius Smart Meter, Battery (GEN24 Plus), Fronius Ohmpilot		

⁷In 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

⁸You can find the current certificates under www.fronius.com/primo-gen24-plus-cert

⁹Full Backup power and battery function only available with GEN24 Plus