

Designed to empower.



Fronius
Primo GEN24

Product advantages

- 01 Integrated shade management
- 02 Backup power right from the start
- 03 Built-in longevity
- 04 Flexibility for greater potential

The heart of the photovoltaic system



01 Integrated shade management

Highest yields even in shade: That's what the Fronius GEN24 achieves with the Dynamic Peak Manager. The intelligent algorithm optimizes PV yields at the string level, eliminating the need for expensive module level optimization components.

02 Backup power right from the start

Harness backup power directly from the sun with the Fronius GEN24 equipped with PV Point. In the event of a power failure, energy is supplied via a designated socket with no need for a battery as long as the sun is shining.

03 Built-in longevity

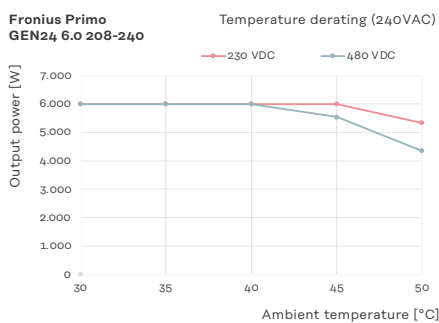
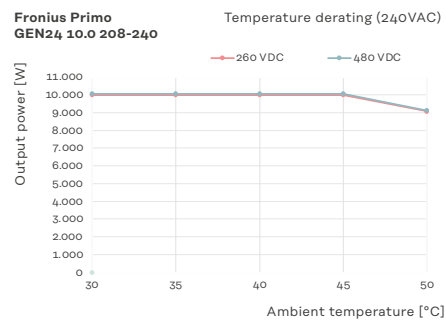
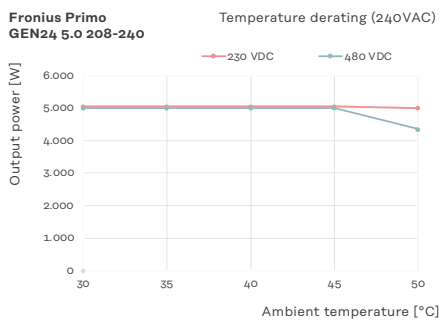
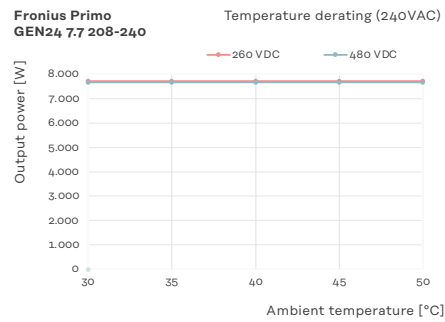
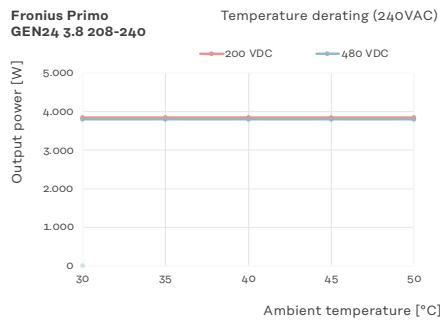
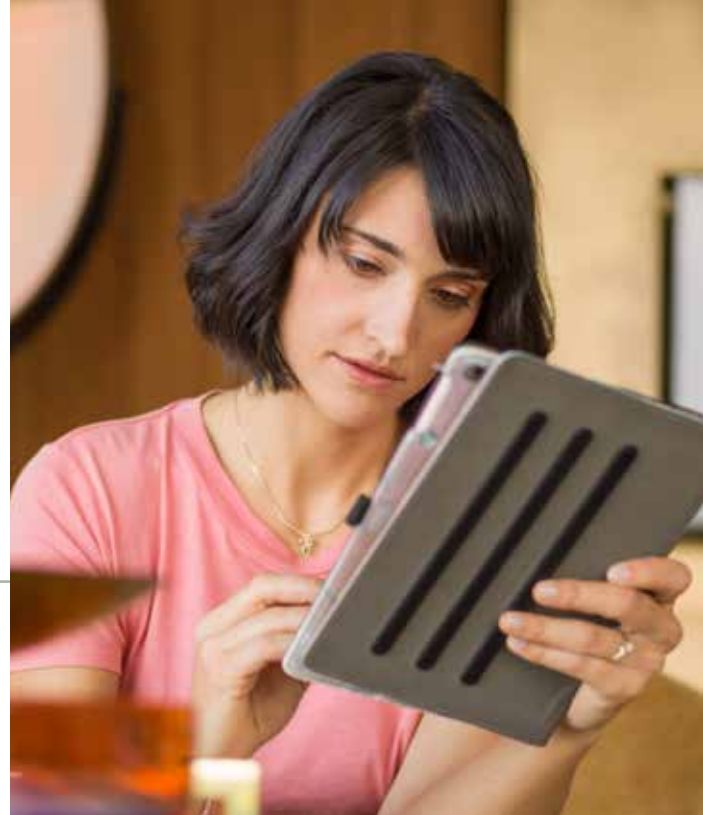
The Active Cooling Technology effectively safeguards the electrical components, protecting them from heat development, therefore extending the service life of our inverters and securing the longevity of customers' investment.

04 Flexibility for greater potential

Thanks to the SuperFlex Design, the Fronius GEN24 is ideally equipped for complex roof situations. With the ability to align PV modules in different orientations and strings from 3 modules on, installers have the flexibility to design solar systems tailored to their customers' individual needs.

Impressive power data

The Fronius GEN24 impresses with maximum power at high temperatures.



Technical data

3.8/5.0/6.0 kW

			Primo GEN24 208-240								
			3.8			5.0			6.0		
Input data	Number of MPP trackers		2			2			2		
	DC input voltage range ($U_{dc, min} - U_{dc, max}$)	V	65 - 600								
			208 V _{ac}	220 V _{ac}	240 V _{ac}	208 V _{ac}	220 V _{ac}	240 V _{ac}	208 V _{ac}	220 V _{ac}	240 V _{ac}
	Nominal input voltage ($U_{dc,r}$)	V	360	380	400	360	380	400	360	380	400
	Feed-in start voltage ($U_{dc, start}$)	V	80			80			80		
	Usable MPP voltage range	V	65-530			65-530			65-350		
	MPP voltage range (at rated power)	V	200-480			200-480			200-480		
			MPPT1	MPPT2	Total	MPPT1	MPPT2	Total	MPPT1	MPPT2	Total
	Max. usable input current ($I_{dc, max}$)	A	22		12	22		12	22		12
	Max. short circuit current per MPPT ($I_{sc, pv}$) 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 power	W	3,940	3,940	3,940	5,150	5,150	5,150	6,190	6,190	6,190
	Max. PV generator output	W _{peak}	5,700	5,700	5,700	7,500	6,800	7,500	8,000	6,800	9,000
Output data			208 V _{ac}	220 V _{ac}	240 V _{ac}	208 V _{ac}	220 V _{ac}	240 V _{ac}	208 V _{ac}	220 V _{ac}	240 V _{ac}
	AC rated power ($P_{ac,r}$)	W	3,800	3,800	3,800	5,000	5,000	5,000	5,740	6,000	6,000
	Apparent power	VA	3,800	3,800	3,800	5,000	5,000	5,000	5,740	6,000	6,000
	Max. Output power	VA	3,800	3,800	3,800	5,000	5,000	5,000	5,740	6,000	6,000
	Nom. AC output current	A	18.13	17.3	15.8	24	22.7	20.8	27.6	27.3	25
	Mains connection ($U_{ac,r}$)	V	1~NPE 208 V / 220 V / 240 V (+ 10 % / - 12 %)								
	Frequency (frequency range $f_{min} - f_{max}$)	Hz	50 Hz / 60 Hz (45 Hz - 66 Hz)								
	Distortion factor	%	< 3.5								
Power factor ($\cos \varphi_{ac,r}$)		0.8 - 1 ind. / cap.									
Output data PV Point			120 V _{ac}	220 V _{ac}	240 V _{ac}	120 V _{ac}	220 V _{ac}	240 V _{ac}	120 V _{ac}	220 V _{ac}	240 V _{ac}
	Nom. Output power PV Point	VA	1,560	2,860	3,120	1,560	2,860	3,120	1,560	2,860	3,120
	Nominal AC voltage PV Point	V	1~NPE 120 V / 220 V / 240 V								
	Switching time	sec.	< 23								

¹ I_{sc} (STC) of the strings multiplied by 1.25 must be less or equal than ISC PV according to NEC 2023. This value needs to be divided by the amount of strings connected to the MPPT.

			Primo GEN24 208-240								
			3.8			5.0			6.0		
General data	Dimensions (height × width × depth)	inch/mm	20.4 × 18.7 × 6.5 / 518 × 474 × 164								
	Weight (inverter)	lbs./kg	33.24 lbs. / 15.08 kg								
	Protection class		Type 4X								
	Protection class		1								
	Night consumption	W	<10								
	Overvoltage category (DC/AC) ²		2/4								
	Cooling		Active Cooling Technology								
	Installation		Indoor and outdoor installation								
	Ambient temperature range	°F/°C	-40 to +140 / -40 to +60								
	Permissible humidity	%	0–100								
	Noise emissions	dB (A)	< 42								
	Max. altitude	ft/m	13,123 / 4,000								
	Connection technology DC PV		2x DC+1, 2x DC+2 and 4x DC- spring-type terminals for solid: copper AWG 14-8								
	Connection technology AC		Spring-type terminals for solid: copper stranded / fine stranded: copper: AWG 14-8 Backup power spring-type terminals: AWG 16-8								
Certificates and standard compliance		UL 1741 Third Edition (incl. UL1741 Supplement SA and SB), UL CRD - Non-Isolated EPS Interactive PV Inverters Rated Less Than 30kVA UL1998 (for functions: AFCI, RCMU, PVRSE and isolation monitoring), IEEE 1547:2018 incl. IEEE 1547a:2020, IEEE 1547.1:2020, IEEE 1547:2003 incl. IEEE 1547.1:2005 ANSI/IEEE C62.41, FCC Part 15 A & B, CSA C22. 2 No. 107.1-16 (reaffirmed 2021), CSA C22.2 No.290-19, CSA C22.2 No.330-23, CSA C22.3 No.9:20 UL1699B:2021									
Country of manufacture		Austria									
Efficiency			208 V _{ac}	220 V _{ac}	240 V _{ac}	208 V _{ac}	220 V _{ac}	240 V _{ac}	208 V _{ac}	220 V _{ac}	240 V _{ac}
	Max. Efficiency	%	97.4	97.4	97.6	97.4	97.4	97.6	97.4	97.4	97.6
	CEC (ηCEC)	%	96.5	96.5	96.5	97	97	97	97	97	97
	MPP adjustment efficiency	%	> 99.9								
Protective equipment	DC insulation measurement		Integrated								
	DC disconnect		Integrated								
	Reverse polarity protection		Integrated								
	Arc Fault Circuit Interruption (Arc Guard)		Integrated								
Interfaces	WLAN / 2 × Ethernet LAN		Fronius Solar.web, Modbus TCP, Fronius Solar API (JSON)								
	6 digital inputs		Connection to ripple control receiver, energy management								
	6 digital inputs/outputs		Integrated								
	Emergency shutdown (WSD)		Integrated								
	Data logger and web server		Modbus RTU (third-party) / Fronius Smart Meter								

² According to UL 1741.

Technical data

7.7/10.0 kW

			Primo GEN24 208-240					
			7.7			10.0		
Input data	Number of MPP trackers		2					
	DC input voltage range ($U_{dc\ min} - U_{dc\ max}$)	V	65–600					
			208 V_{ac}	220 V_{ac}	240 V_{ac}	208 V_{ac}	220 V_{ac}	240 V_{ac}
	Nominal input voltage ($U_{dc,r}$)	V	365	365	385	365	365	385
	Feed-in start voltage ($U_{dc\ start}$)	V	80					
	Usable MPP voltage range	V	65–480			65–480		
	MPP voltage range (at rated power)	V	260–480			260–480		
			MPPT1	MPPT2	MPPT1	MPPT2	MPPT1	MPPT2
	Max. usable input current ($I_{dc\ max}$)	A	22	22	22	22	22	22
	Max. short circuit current per MPPT ($I_{sc\ pv}$) ¹	A	41.25	36	41.25	36	41.25	36
	Number of DC connections		2	2	2	2	2	2
			MPPT1	MPPT2	Total	MPPT1	MPPT2	Total
	Max. usable DC power	W	8,000	8,000	8,000	10,250	10,250	10,250
Max. PV generator output	W _{peak}	11,520	11,520	11,520	13,500	13,000	15,000	
Output data			208 V_{ac}	220 V_{ac}	240 V_{ac}	208 V_{ac}	220 V_{ac}	240 V_{ac}
	AC rated power ($P_{ac,r}$)	W	7,680	7,680	7,680	9,450	10,000	10,000
	Apparent power	VA	7,680	7,680	7,680	9,450	10,000	10,000
	Max. Output power	VA	7,680	7,680	7,680	9,450	10,000	10,000
	Nom. AC output current	A	36.9	34.9	32.0	45.45	45.45	41.7
	Mains connection ($U_{ac,r}$)	V	1~NPE 208 V / 220 V / 240 V (+ 10 % / - 12 %)					
	Frequency (frequency range $f_{min} - f_{max}$)	Hz	50 Hz / 60 Hz (45 Hz–66 Hz)					
	Distortion factor	%	< 3.5					
	Power factor ($\cos \varphi_{ac,r}$)		0.8–1 ind. / cap.					
Output data PV Point			120 V_{ac}	220 V_{ac}	240 V_{ac}	120 V_{ac}	220 V_{ac}	240 V_{ac}
	Nom. Output power PV Point	VA	1,560	2,860	3,120	1,560	2,860	3,120
	Nominal AC voltage PV Point	V	1~NPE 120 V / 220 V / 240 V					
	Switching time	sec.	< 35					

¹ I_{sc} (STC) of the strings multiplied by 1.25 must be less or equal than ISC PV according to NEC 2023.
This value needs to be divided by the amount of strings connected to the MPPT.

			Primo GEN24 208-240					
			7.7			10.0		
General data	Dimensions (height × width × depth)	inch/mm	23.0 x 20.8 x 7.1 / 583 x 529 x 180					
	Weight (inverter)	lbs./kg	45.97 lbs. / 20.85 kg					
	Protection class		Type 4X					
	Protection class		1					
	Night consumption	W	<10					
	Overvoltage category (DC/AC) ²		2/4					
	Cooling		Active Cooling Technology					
	Installation		Indoor and outdoor installation					
	Ambient temperature range	°F/°C	-40 to +140 / -40 to +60					
	Permissible humidity	%	0–100					
	Noise emissions	dB (A)	< 52					
	Max. altitude	ft/m	13,123 / 4,000					
	Connection technology DC PV		2x DC+1, 2x DC+2 and 4x DC- spring-type terminals for solid: copper stranded / fine stranded: copper AWG 14-8					
	Connection technology AC		Spring-type terminals for solid: copper stranded / fine stranded: copper: AWG 12-6 Backup power spring-type terminals: AWG 16-8					
Certificates and standard compliance		UL 1741 Third Edition (incl. UL1741 Supplement SA and SB), UL CRD - Non-Isolated EPS Interactive PV Inverters Rated Less Than 30kVA UL1998 (for functions: AFCI, RCMU, PVRSE and isolation monitoring), IEEE 1547:2018 incl. IEEE 1547a:2020, IEEE 1547.1:2020, IEEE 1547:2003 incl. IEEE 1547.1:2005 ANSI/IEEE C62.41, FCC Part 15 A & B, CSA C22.2 No. 107.1-16 (reaffirmed 2021), CSA C22.2 No.290-19, CSA C22.2 No.330-23, CSA C22.3 No.9:20 UL1699B:2021						
Country of manufacture		Austria						
Efficiency			208 V_{ac}	220 V_{ac}	240 V_{ac}	208 V_{ac}	220 V_{ac}	240 V_{ac}
	Max. Efficiency	%	97.2	97.2	97.5	97.2	97.2	97.5
	CEC (ηCEC)	%	96.5	96.5	97	96.5	96.5	97
	MPP adjustment efficiency	%	> 99.9					
Protective equipment	DC insulation measurement		Integrated					
	DC disconnecter		Integrated					
	Reverse polarity protection		Integrated					
	Arc Fault Circuit Interruption (Arc Guard)		Integrated					
Interfaces	WLAN / 2 × Ethernet LAN		Fronius Solar.web, Modbus TCP, Fronius Solar API (JSON)					
	6 digital inputs		Connection to ripple control receiver, energy management					
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	Data logger and web server		Modbus RTU (third-party) / Fronius Smart Meter					

² According to UL 1741.

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For more information about the product, visit:

www.fronius.ca/gen24

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