

## TECHNICAL DATA FRONIUS PRIMO GEN24 PLUS (4.6, 5.0, 6.0)

INPUT DATA	PRIMO GEN24 4.6 PLUS	PRIMO GEN24 5.0 PLUS	PRIMO GEN24 6.0 PLUS
Number of MPP trackers	2		
Max. input current ( $I_{dc \max}$ MPPT1 / MPPT2)	22 A / 12 A		
Max. array short circuit current (MPPT1 / MPPT2)	33 A / 18 A		
DC input voltage range ( $U_{dc \min}$ - $U_{dc \max}$ )	65 V - 600 V		
Nominal input voltage ( $U_{dc,r}$ )	400 V		
Feed-in start voltage ( $U_{dc \text{ start}}$ )	80 V		
Usable MPP voltage range	65 V - 530 V		65 V - 480 V
Number of DC connections (MPPT1 / MPPT2)	2 / 2		
Max. PV generator output	6.9 kW <sub>peak</sub>	7.5 kW <sub>peak</sub>	9.0 kW <sub>peak</sub>

OUTPUT DATA	PRIMO GEN24 4.6 PLUS	PRIMO GEN24 5.0 PLUS	PRIMO GEN24 6.0 PLUS
AC nominal output ( $P_{ac,r}$ )	4,600 W	5,000 W	6,000 W
Max. output power	4,600 VA	5,000 VA	6,000 VA
Max. output current ( $I_{ac \max}$ )	27.50 A	27.50 A	27.50 A
Grid connection (voltage range)	1~NPE 220 V / 230 V (+ 20 % / - 30 %)		
Frequency (frequency range)	50 Hz / 60 Hz (45 Hz - 65 Hz)		
Total harmonic distortion	< 2 %		
Power factor ( $\cos \phi_{ac,r}$ )	0,8 - 1 ind. / cap.		
Backup power	1~NPE 220 V / 230 V		

OUTPUT DATA PV POINT / FULL BACKUP <sup>1)</sup>	PRIMO GEN24 4.6 PLUS	PRIMO GEN24 5.0 PLUS	PRIMO GEN24 6.0 PLUS
Nom. output power PV Point / full backup	3,000 VA / 4,600 VA	3,000 VA / 5,000 VA	3,000 VA / 6,000 VA
Grid connection (voltage range) PV Point	1 ~ NPE 220 V / 230 V		
Grid connection (voltage range) full backup	1 ~ NPE 220 V / 230 V		
Switchover time	< 90 seconds		

BATTERY CONNECTION	PRIMO GEN24 4.6 PLUS	PRIMO GEN24 5.0 PLUS	PRIMO GEN24 6.0 PLUS
Number of DC connections	1		
Max. input current ( $I_{dc \max}$ )	22 A		
DC input voltage range ( $U_{dc \min}$ - $U_{dc \max}$ )	150 V - 455 V		
Max. input / output power <sup>2)</sup>	4,750 W	5,170 W	6,200 W
Max. AC charging power	4,600 W	5,000 W	6,000 W

<sup>1)</sup> For the Full Backup, additional external components for grid separation are required. You can find more information on this in the operating instructions.

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GENERAL DATA	PRIMO GEN24 4.6 PLUS	PRIMO GEN24 5.0 PLUS	PRIMO GEN24 6.0 PLUS
Dimensions (height x width x depth)	530 x 474 x 165 mm		
Weight (inverter / with packaging)	15.4 / 19 kg		
Degree of protection	IP 66		
Protection class	1		
Nighttime power loss	< 10 W		
Overvoltage category (DC/AC) <sup>3)</sup>	2 / 3		
Inverter design	Transformerless		
Cooling	Regulated air cooling		
Installation	Indoor and outdoor installation		
Ambient temperature range	-40 - +60 °C		
Permitted humidity	0 - 100 %		
Noise Emission	< 42 dB (A)		
Max. altitude	4,000 m		
DC PV connection technology	4x DC+ and 4x DC- push-in spring terminals 2.5 - 10 mm <sup>2</sup>		
DC battery connection technology	1x BATT+ and 1x BATT- push-in spring terminals 2.5 - 10 mm <sup>2</sup>		
AC connection technology	3 pole AC push-in spring terminals 2.5 - 10 mm <sup>2</sup> 3 pole backup power push-in spring terminals 1.5mm <sup>2</sup> - 10mm <sup>2</sup> 2x PE screw terminals 2.5 - 16 mm <sup>2</sup> and 3x 2.5 - 10mm <sup>2</sup>		
Certificates and compliance with standards	IEC 62109, IEC 62909, AS/NZS 4777.2, CEI 0-21, ABNT NBR 16149 and 16150, IEC 62116, IEC 61727 <sup>4)</sup>		
Back-up power functions	PV Point or full backup		
Compatible batteries	BYD Battery-Box Premium HVS/HVM <sup>5)</sup>		

EFFICIENCY	PRIMO GEN24 4.6 PLUS	PRIMO GEN24 5.0 PLUS	PRIMO GEN24 6.0 PLUS
Max. efficiency	97.6 %		
Europ. efficiency (η <sub>EU</sub> )	97.2 %	97.2 %	97.1 %
MPP-tracking efficiency	> 99.9 %		

PROTECTIVE DEVICES	PRIMO GEN24 4.6 PLUS	PRIMO GEN24 5.0 PLUS	PRIMO GEN24 6.0 PLUS
DC insulation measurement	Yes		
Overload behaviour	Operating point shift. Power limitation		
DC disconnecter	Yes		
Reverse polarity protection	Yes		

INTERFACES	PRIMO GEN24 4.6 PLUS	PRIMO GEN24 5.0 PLUS	PRIMO GEN24 6.0 PLUS
WLAN / 2x Ethernet LAN	Fronius Solar.web, Modbus TCP SunSpec, Fronius Solar API (JSON)		
6x digital in/out + 6x digital in	Interface to ripple control receiver, energy management		
USB 2.0 (A-socket)	1 A supply		
Emergency stop (WSD)	Yes		
Datalogger and Webserver	Included		
2x RS485	Modbus RTU SunSpec (third-party supplier) / Fronius Smart Meter, battery, Fronius Ohmpilot		

<sup>2)</sup> Depending on the connected battery

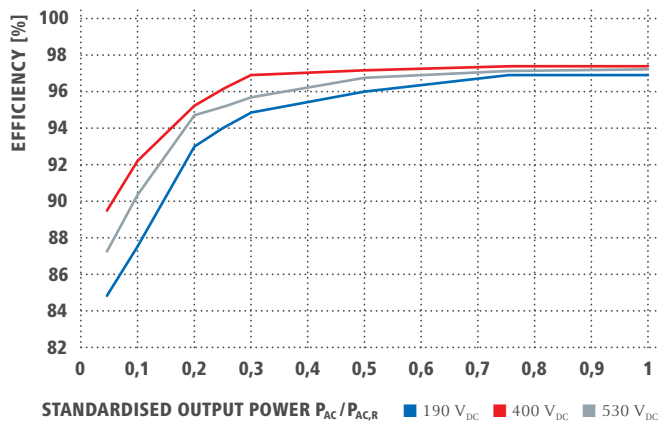
<sup>3)</sup> According to IEC 62109-1. Optional retrofit surge protection device DC SPD type 1+2 for 2 MPP trackers available under the following article number: 4,240,313,CK

<sup>4)</sup> For the current certificates, please see [www.fronius.com/primo-gen24-plus-cert](http://www.fronius.com/primo-gen24-plus-cert)

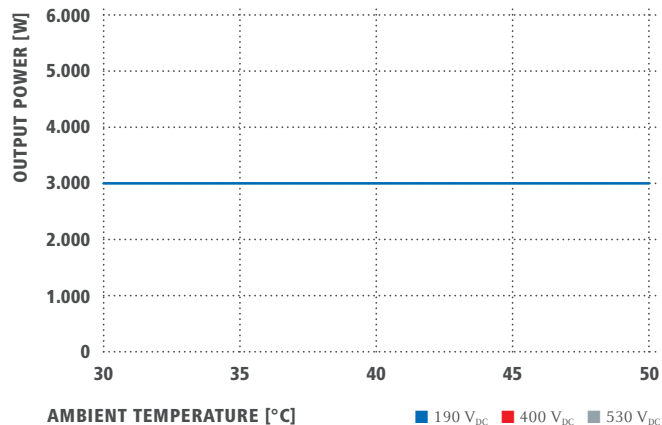
<sup>5)</sup> Except HVS 10.2, HVS 12.8, HVM 8.3 and HVM 22.1

For further information on the availability of this inverter in your country please see [www.fronius.com](http://www.fronius.com).

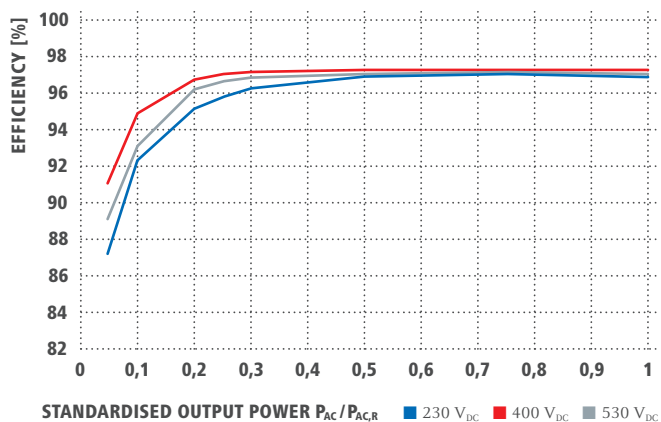
## FRONIUS PRIMO GEN24 PLUS 3.0 EFFICIENCY CURVE



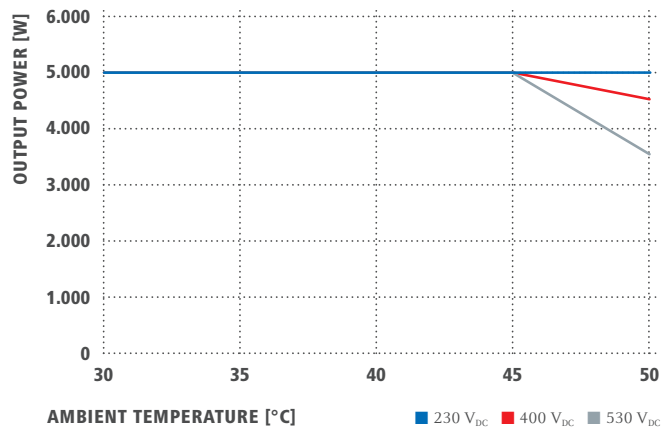
## FRONIUS PRIMO GEN24 PLUS 3.0 TEMPERATURE DERATING



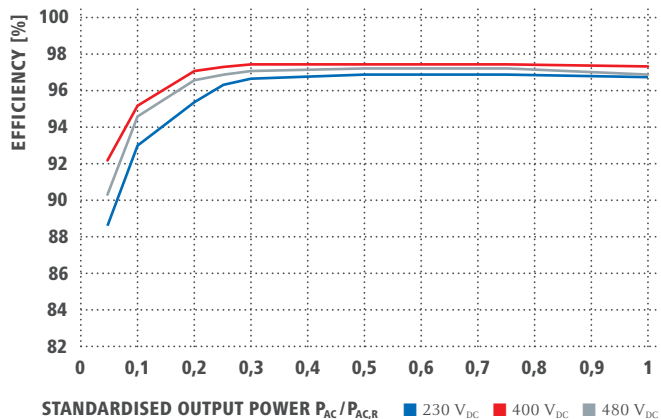
## FRONIUS PRIMO GEN24 PLUS 5.0 EFFICIENCY CURVE



## FRONIUS PRIMO GEN24 PLUS 5.0 TEMPERATURE DERATING



## FRONIUS PRIMO GEN24 PLUS 6.0 EFFICIENCY CURVE



## FRONIUS PRIMO GEN24 PLUS 6.0 TEMPERATURE DERATING

