

/ Perfect Welding / Solar Energy / Perfect Charging



SHIFTING THE LIMITS

FRONIUS PRIMO



/ PC board replacement process



/ SnapINverter mounting system



/ Wireless monitoring



/ Open data communication



/ Smart Grid Ready



/ Arc Fault Circuit Interruption



The transformerless Fronius Primo is the ideal compact single-phase inverter for residential and small-scale commercial applications with power categories from 3.8 to 8.2 kW. In accordance with ESA rules for residential applications, the Fronius Primo can operate efficiently at a maximum input voltage of 600 V. And for increased efficiency and additional cost savings for commercial applications, the Fronius Primo can operate at the maximum input voltage of 1,000 V. Industry-leading features now come standard with the Fronius Primo, including: dual maximum power point tracking, arc fault protection, integrated wireless monitoring and SunSpec Modbus interfaces for seamless monitoring and datalogging via Fronius' online and mobile platform, Fronius Solar.web.

TECHNICAL DATA FRONIUS PRIMO

GENERAL DATA	FRONIUS PRIMO 3.8 - 8.2	FRONIUS PRIMO 10.0-15.0
Dimensions (width x height x depth)	16.9 x 24.7 x 8.1 in. / 42.9 x 62.7 x 20.6 cm	20.1 x 28.5 x 8.9 in. / 51.1 x 72.4 x 20.6 cm
Weight	47.29 lb. / 19.18 kg	82.5 lbs. / 37.42 kg
Degree of protection	NEMA 4X	
Night time consumption	< 1 W	
Inverter topology	Transformerless	
Cooling	Variable speed fan	
Installation	Indoor and outdoor installation	
Ambient operating temperature range	-40 to 131 F / -40 to 55 C	-40 to 140 F / -40 to 60 C
Permitted humidity	0 - 100 %	
DC connection terminals	4 x DC+ and 4 x DC- screw terminals for copper (solid / stranded / fine stranded) or aluminum (solid / stranded)	4 x DC+1, 2 x DC+2 and 6 x DC- screw terminals for copper (solid / stranded / fine stranded) or aluminum (solid / stranded)
AC connection terminals	Screw terminals 12 - 6 AWG	
Revenue Grade Metering	Optional (ANSI C12.1 accuracy)	
Certificates and compliance with standards	UL 1741-2010, UL1998 (for functions: AFCI and isolation monitoring), IEEE 1547-2003, IEEE 1547.1-2003, ANSI/IEEE C62.41, FCC Part 15 A & B, NEC Article 690, C22. 2 No. 107.1-01 (September 2001), UL1699B Issue 2 -2013, CSA TIL M-07 Issue 1 -2013	UL 1741-2015, UL1998 (for functions: AFCI, RCMU and isolation monitoring), IEEE 1547-2003, IEEE 1547.1-2003, ANSI/IEEE C62.41, FCC Part 15 A & B, NEC Article 690-2014, C22. 2 No. 107.1-01 (September 2001), UL1699B Issue 2 -2013, CSA TIL M-07 Issue 1 -2013

PROTECTIVE DEVICES	STANDARD WITH ALL PRIMO MODELS
AFCI & 2014 NEC Ready	Yes
Ground Fault Protection with Isolation Monitor Interrupter	Yes
DC disconnect	Yes
DC reverse polarity protection	Yes

INTERFACES	AVAILABILITY	AVAILABLE WITH ALL FRONIUS PRIMO MODELS
USB (A socket)	Standard	Datalogging and inverter update via USB
2x RS422 (RJ45 socket)	Standard	Fronius Solar Net, interface protocol
Wi-Fi*/Ethernet/Serial/Datalogger and webserver	Optional	Wireless standard 802.11 b/g/n / Fronius Solar.web, SunSpec Modbus TCP, JSON / SunSpec Modbus RTU
6 inputs or 4 digital inputs/outputs	Optional	External relay controls

*The term Wi-Fi® is a registered trademark of the Wi-Fi Alliance.

TECHNICAL DATA FRONIUS PRIMO 3.8-1 TO 8.2-1

INPUT DATA	PRIMO 3.8-1	PRIMO 5.0-1	PRIMO 6.0-1	PRIMO 7.6-1	PRIMO 8.2-1
Recommended PV power (kWp)	3.0 - 6.0 kW	4.0 - 7.8 kW	4.8 - 9.3 kW	6.1 - 11.7 kW	6.6 - 12.7 kW
Max. permitted PV power	5.7 kW	7.5 kW	9 kW	11.4 kW	12.3 kW
Max. usable input current (MPPT 1/MPPT 2)	18 A / 18 A	18 A / 18 A	18 A / 18 A	18 A / 18 A	18 A / 18 A
Total max. DC current	36 A				
Max. array short circuit current	2 x 22.5 A				
Operating voltage range	80 V* - 1,000 V				
Max. input voltage	1,000 V				
Nominal input voltage	410 V	420 V	420 V	420 V	420 V
Admissible conductor size DC	AWG 14 - AWG 6				
MPP Voltage Range	200 - 480 V	240 - 480 V	240 - 480 V	250 - 480 V	270 - 480 V
Number of MPPT	2				

* Start up voltage was improved from 150 to 80 V as of serial number 26170960.

OUTPUT DATA	PRIMO 3.8-1	PRIMO 5.0-1	PRIMO 6.0-1	PRIMO 7.6-1	PRIMO 8.2-1
Max. output power	240 V 3,800 W	5,000 W	6,000 W	7,600 W	8,200 W
	208 V 3,800 W	5,000 W	6,000 W	7,600 W	7,900 W
Max. continuous output current	240 V 15.8 A	20.8 A	25.0 A	31.7 A	34.2 A
	208 V 18.3 A	24.0 A	28.8 A	36.5 A	38.0 A
Recommended OCPD/AC breaker size	240 V 20 A	30 A	35 A	40 A	45 A
	208 V 25 A	30 A	40 A	50 A	50 A
Max. Efficiency	96.7 %				
CEC Efficiency	240 V 95.0 %	95.5 %	96.0 %	96.0 %	96.5 %
Admissible conductor size AC	AWG 14 - AWG 6				
Grid connection	208 / 240 V				
Frequency	60 Hz				
Total harmonic distortion	< 5.0 %				
Power factor (cos $\varphi_{ac,r}$)	0.85 - 1 ind./cap				

TECHNICAL DATA FRONIUS PRIMO 10.0-1 TO 15.0-1

INPUT DATA	PRIMO 10.0-1	PRIMO 11.4-1	PRIMO 12.5-1	PRIMO 15.0-1
Recommended PV power (kWp)	8.0 - 12.0 kW	9.1 - 13.7 kW	10.0 - 15.0 kW	12.0 - 18.0 kW
Max. usable input current (MPPT 1/MPPT 2)	33.0 A / 18.0 A			
Total max. DC current	51 A			
Max. array short circuit current (1.25 I _{max}) (MPPT 1/MPPT 2)	41.3 A / 22.5 A			
Operating voltage range	80 V - 1,000 V			
Max. input voltage	1,000 V			
Nominal input voltage	415 V	420 V	425 V	440 V
Admissible conductor size DC	AWG 14 - AWG 6 copper direct, AWG 6 aluminum direct (AWG 10 copper or AWG 8 aluminum for overcurrent protective devices up to 60 A, from 61 to 100A minimum AWG 8 for copper or AWG 6 aluminum has to be used), AWG 4 - AWG 2 copper or aluminum with optional input combiner			
MPP Voltage Range	220 - 480 V	240 - 480 V	260 - 480 V	320 - 480 V
Integrated DC string fuse holders	4- and 4+ for MPPT 1 / no fusing required on MPPT 2			
Number of MPPT	2			
OUTPUT DATA	PRIMO 10.0-1	PRIMO 11.4-1	PRIMO 12.5-1	PRIMO 15.0-1
Max. output power	240 V 9,995 W	11,400 W	12,500 W	15,000 W
	208 V 9,995 W	11,400 W	12,500 W	13,750 W
Max. continuous output current	240 V 41.6 A	47.5 A	52.1 A	62.5 A
	208 V 48.1 A	54.8 A	60.1 A	66.1 A
Recommended OCPD/AC breaker size	240 V 60 A	60 A	70 A	80 A
	208 V 70 A	70 A	80 A	90 A
Max. efficiency	96.7 %			
CEC efficiency	96.0 %			96.5 %
Admissible conductor size AC	AWG 10 - AWG 2 copper (solid / stranded / fine stranded) (AWG 10 copper or AWG 8 aluminum for overcurrent protective devices up to 60 A, from 61 to 100 A minimum AWG 8 for copper or AWG 6 aluminum must be used), AWG 6 - AWG 2 copper (solid / stranded) MultiContact Wiringable with AWG 12			
Grid connection	208 / 240 V			
Frequency	60 Hz			
Total harmonic distortion	< 2.5 %			
Power factor (cos $\varphi_{ac,r}$)	0-1 ind./cap.			