



SHIFTING THE LIMITS

# FRONIUS PRIMO

/ The future of residential solar is here - Introducing the new Fronius Primo.



/ PC board replacement process



/ SnapINverter mounting system



/ Wi-Fi\* interface



/ SuperFlex Design



/ Smart Grid Ready



/ Arc Fault Circuit Interruption

/ With power categories ranging from 3.8 kW to 15.0 kW, the transformerless Fronius Primo is the ideal compact single-phase inverter for residential applications. The sleek design is equipped with the SnapINverter hinge mounting system which allows for lightweight, secure and convenient installation and service. The Fronius Primo has several integrated features that set it apart from competitors including dual powerpoint trackers, high system voltage, a wide input voltage range, Wi-Fi\* and SunSpec Modbus interface for seamless monitoring and datalogging, Arc Fault Circuit Interruption (AFCI), and Fronius' online and mobile platform Fronius Solar.web. The Fronius Primo is designed to adjust to future standards, offering a complete solution to code restrictions and technical innovations of tomorrow. It also works seamlessly with the Fronius Rapid Shutdown Box for a reliable NEC 2014 solution.

## 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.	20.1 x 28.5 x 8.9 in.
Weight	47.29 lb.	82.5 lbs.
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 - 131°F (-40 - 55°C)	-40 - 140°F (-40 - 60°C)
Permitted humidity	0 - 100 %	
DC connection terminals	4x DC+ and 4x DC- screw terminals for copper (solid / stranded / fine stranded) or aluminum (solid / stranded)	4x DC+1, 2x DC+2 and 6x 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. 1071-01 (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. 1071-01 (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	STANDARD WITH ALL PRIMO MODELS
Wi-Fi*/Ethernet/Serial	Wireless standard 802.11 b/g/n / Fronius Solar.web, SunSpec Modbus TCP, JSON / SunSpec Modbus RTU
6 inputs or 4 digital inputs/outputs	External relay controls
USB (A socket)	Datalogging and/or updating via USB
2x RS422 (RJ45 socket)	Fronius Solar Net, interface protocol
Datalogger and Webserver	Included

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

## TECHNICAL DATA FRONIUS PRIMO

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. 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 (1.25 I <sub>max</sub> ) (MPPT 1/MPPT 2)	22.5 A / 22.5 A				
Operating voltage range	80 V - 600 V				
Max. input voltage	600 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				

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 3800 W	5000 W	6000 W	7600 W	8200 W
	208 V 3800 W	5000 W	6000 W	7600 W	7900 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 %	96.9 %	96.9 %	96.9 %	97.0 %
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 φ <sub>ac,r</sub> )	0.85-1 ind./cap				

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 <sub>max</sub> ) (MPPT 1/MPPT 2)	41.3 A / 22.5 A			
Operating voltage range	80 V - 600 V			
Max. input voltage	600 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 60A, 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 9995 W	11400 W	12500 W	15000 W
	208 V 9995 W	11400 W	12500 W	13750 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 60A, from 61 to 100A minimum AWG 8 for copper or AWG 6 aluminum has to be used) , AWG 6 - AWG 2 copper(solid / stranded) MultiContactWiringable with AWG 12			
Grid connection	208 / 240 V			
Frequency	60 Hz			
Total harmonic distortion	< 2.5 %			
Power factor (cos φ <sub>ac,r</sub> )	0-1 ind./cap.			

/ Perfect Welding / Solar Energy / Perfect Charging

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/ Whether welding technology, photovoltaics or battery charging technology – our goal is clearly defined: to be the innovation leader. With around 3,300 employees worldwide, we shift the limits of what's possible - our record of over 900 granted patents is testimony to this. While others progress step by step, we innovate in leaps and bounds. Just as we've always done. The responsible use of our resources forms the basis of our corporate policy.

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