



# FRONIUS PRIMO

/ Solutions for a brighter tomorrow.



/ PC board replacement process



/ SnapINverter mounting system



/ Wi-Fi®\* interface



/ Design Flexibility



/ 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. 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, and Fronius' online and mobile monitoring platform Fronius Solar.web. The Fronius Primo also works seamlessly with the Fronius Rapid Shutdown Box for a reliable NEC 2014 solution\*\* and offers a Revenue Grade Metering option completely integrated.

## 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.
Protection Class	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 %	
Elevation	4000m (13123 ft)	
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 Second Edition (incl. UL1741 Supplement SA 2016-09 for California Rule 21 and Hawaiian Electric Code Rule 14H), 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 2017 Article 690, C22. 2 No. 107.1-16, 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
DC reverse polarity protection	Yes
Anti Islanding	Internal; in accordance with UL 1741-2010, IEEE 1547-2033 and NEC
Over temperature protection	Output power derating/ Active cooling
AFCI	Yes
Rapid shutdown compliant	Yes (according to NEC 2014)
Ground Fault Protection with Isolation Monitor Interrupter	Yes
DC disconnect	Yes

  

INTERFACES	STANDARD WITH ALL PRIMO MODELS
USB (A socket)	Datalogging and inverter update possible via USB
2x RS422 (RJ45 socket)	Fronius Solar Net, interface protocol
Wi-fi*/Ethernet LAN	Wireless standard 802.11 b/g/n/Fronius Solar.web, SunSpec Modbus TCP, JSON
Datalogger and Webserver	Included
Serial RS485	SunSpec Modbus RTU, SunSpec Modbus TCP and Fronius Solar API (JSON, for actual values) or meter connection
6 inputs or 4 digital inputs/outputs	Load management; signaling, multipurpose I/O

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

\*\*Fronius Primo 10.0-15.0 kW: for automatic rapid shutdown functionality, inverter must have a serial number 27384701 or greater. Power stage SW2 seen in the inverter display "info" menu under "versions" must be 0.6.34.4 or greater.

## 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
Max. usable input current (MPPT 1+MPPT 2)	36 A				
Nominal input voltage	410 V	420 V	420 V	420V	420 V
Operating voltage range	80 V - 600 V				
DC startup voltage	80 V				
MPP Voltage Range	200-480 V	200-400 V	240-480 V	250-480 V	270-480 V
Max. input voltage	600 V				
Admissible conductor size DC	AWG 14 - AWG 6 copper (solid / stranded / fine stranded)(AWG 10 copper or AWG 8 aluminium for overcurrent protective devices up to 60A, from 61 to 100A minimum AWG 8 for copper or AWG 6 aluminium has to be used) , AWG 6 - AWG 2 copper(solid / stranded) MultiContactWiringable with AWG 12				
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	208 V/240 V	3800 VA/3800 VA	5000 VA/5000 VA	6000 VA/6000 VA	7600 VA/7600 VA	7900 VA/8200 VA
Output configuration	208/240 V					
Frequency range (adjustable)	45.0 - 55.0 Hz / 50 - 66 Hz					
Nominal operating frequency	60 Hz					
Admissible conductor size AC	AWG 14 - AWG 6					
Total harmonic distortion	< 5.0 %					
Power factor range	0.85-1 ind./cap					
Nominal output current	208 V	18.3 A	24.0 A	28.8 A	36.5 A	38.0 A
	240 V	15.8 A	20.8 A	25.0 A	31.7 A	34.2 A
OCPD/AC breaker size	208V	25 A	30 A	40 A	50 A	50 A
	240 V	20 A	30 A	35 A	40 A	45 A
Max. Efficiency	96.7 %					
CEC Efficiency	95.5 %					

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)	49.5 A / 27 A	49.5 A / 27 A	49.5 A / 27 A	49.5 A / 27A
Max. usable input current (MPPT 1+MPPT 2)	51 A			
Nominal input voltage	415 V	420 V	425 V	440 V
Operating voltage range	80 V - 600 V			
DC startup voltage	80 V			
MPP Voltage Range	220-480 V	240-480 V	260-480 V	320-480 V
Max. input voltage	600 V			
Admissible conductor size DC	AWG 14 - AWG 6 copper direct, AWG 6 aluminum direct (AWG 10 copper or AWG 8 aluminium for overcurrent protective devices up to 60A, from 61 to 100A minimum AWG 8 for copper or AWG 6 aluminium has to be used), AWG 4 - AWG 2 copper or aluminum with optional input combiner			
Number of MPPT	2			
Integrated DC string fuse holders	4- and 4+ for MPPT 1 / no fusing required on MPPT 2			

OUTPUT DATA	PRIMO 10.0-1	PRIMO 11.4-1	PRIMO 12.5-1	PRIMO 15.0-1	
Max. output power	208 V/240 V	9995 VA/9995 VA	11400 VA/11400 VA	12500 VA/12500 VA	13750 VA/15000 VA
Output configuration	1-NPE 208/240 V				
Frequency range (adjustable)	45-65 Hz				
Nominal operating frequency	60 Hz				
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 100A minimum AWG 6 aluminum has to be used), AWG 6-AWG 2 copper (solid/stranded) Multi Contact Wiringable with AWG 12				
Total harmonic distortion	< 2.5 %				
Power factor range	0-1 ind./cap.				
Max. continuous output current	208 V	48.1 A	54.8 A	60.1 A	66.1 A
	240 V	41.6 A	47.5 A	52.1 A	62.5 A
OCPD/AC breaker size	208 V	70 A	70 A	80 A	90 A
	240 V	60 A	60 A	70 A	80 A
Max. Efficiency	96.7 %				
CEC Efficiency	240 V	96.0 %		96.5 %	

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