

# FRONIUS SYMO

/ The future of commercial solar is here - Introducing the new Fronius Symo.



/ PC Board  
Replacement Process



/ SnapINverter  
Mounting system



/ Integrated Data  
Communication



/ SuperFlex  
Design



/ Smart Grid  
Ready



/ Dynamic Peak  
Manager



/ Boasting power categories ranging from 10 kW to 24 kW, the transformerless Fronius Symo is the ideal compact three-phase inverter for commercial applications. The high system voltage, wide input voltage range and unrestricted use indoors and outdoors ensure maximum flexibility in system design. The modern design is equipped with the SnapINverter mounting system, allowing for lightweight, secure and convenient installation and repair. The entire SnapINverter line is NEC 2014 Ready!

/ Several industry-leading features come standard with the Fronius Symo including a Wi-Fi®\* and SunSpec Modbus interface for seamless monitoring and datalogging, Arc Fault Circuit Interruption (AFCI), and Fronius's superb online and mobile platform Fronius Solar.web. This makes the Fronius Symo one of the most communicative, efficient and streamlined inverters on the market.

## TECHNICAL DATA FRONIUS SYMO

GENERAL DATA	STANDARD WITH ALL SYMO MODELS
Dimensions (width x height x depth)	20.1 x 28.5 x 8.9 inches
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°F - +140 °F (-40 - +60 °C)
Permitted humidity	0 - 100 % (non-condensing)
DC connection terminals	6x DC+ and 6x DC- screw terminals for copper (solid / stranded / fine stranded) or aluminum (solid / stranded)
AC connection terminals	Screw terminals 14-6 AWG
Certificates and compliance with standards	UL 1741-2010, UL1998 (for functions: AFCL, GFDI and isolation monitoring), IEEE 1547-2003, IEEE 1547.1, UL 1699B-2013, ANSI/IEEE C62.41, FCC Part 15 A & B, NEC Article 690, C22. 2 No. 107.1-01 (Sept. 2001) UL 1699B Issue 2-2013, CSA TIL M-07 Issue 1-2013

WEIGHT	10.0-3 208/240	12.0-3 208/240	10.0-3 480	12.5-3 480	15.0-3 480	17.5-3 480	20.0-3 480	22.7-3 480	24.0-3 480
Weight	91.9 lbs.	91.9 lbs.	76.7 lbs.	76.7 lbs.	95.7 lbs.	95.7 lbs.	95.7 lbs.	95.7 lbs.	95.7 lbs.

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

## TECHNICAL DATA FRONIUS SYMO

PROTECTIVE DEVICES	STANDARD WITH ALL SYMO MODELS
AFCI	Yes
2014 NEC Ready	Yes
DC disconnect	Yes

INTERFACES	STANDARD WITH ALL SYMO MODELS
Wi-Fi*/Ethernet/Serial	Wireless standard 802.11 b/g/n / Fronius Solar.web, SunSpec Modbus TCP, JSON / SunSpec Modbus RTU
6 inputs and 4 digital I/Os	Load management; signaling, multipurpose I/O
USB (A socket)	Datalogging and inverter update possible via USB
2x RS422 (RJ45 socket)	Fronius Solar Net, interface protocol
Datalogger and Webserver	Included

INPUT DATA	10.0-3 208/240	12.0-3 208/240	10.0-3 480	12.5-3 480	15.0-3 480	17.5-3 480	20.0-3 480	22.7-3 480	24.0-3 480
Recommended PV power (kWp)	8.0 - 13.0	9.6 - 15.6	8.0 - 13.0	10.0 - 16.25	12.0 - 19.5	14.0 - 22.75	16.0 - 26.0	18.2 - 29.5	19.2 - 31.2
Max. usable input current (MPPT 1/MPPT 2)	25.0 A / 16.5 A				33.0 A / 25.0 A				
MPP-voltage range	300 - 500 V	300 - 500 V	300 - 800 V	350 - 800 V	350 - 800 V	400 - 800 V	450 - 800 V	500 - 800 V	500 - 800 V
Operating voltage range	200 - 600 V	200-600 V	200 - 1000 V						
Max. input voltage	600 V	600 V	1000 V						
Nominal input voltage	208	350 V	350 V	NA	NA	NA	NA	NA	NA
	240	370 V	370 V	NA	NA	NA	NA	NA	NA
	480	NA	NA	675 V	685 V	685 V	695 V	710 V	720 V
Admissible conductor size DC	AWG 14...AWG 6 copper direct, AWG 6 aluminum direct, AWG 4...AWG 2 copper or aluminum with input combiner								
Number of MPPT	2								

OUTPUT DATA		10.0-3 208/240	12.0-3 208/240	10.0-3 480	12.5-3 480	15.0-3 480	17.5-3 480	20.0-3 480	22.7-3 480	24.0-3 480
Max. output power	208	9995 VA	11995 VA	NA	NA	NA	NA	NA	NA	NA
	220/240	9995 VA	11995 VA	NA	NA	NA	NA	NA	NA	NA
	480	NA	NA	9995 VA	12495 VA	14995 VA	17495VA	19995 VA	22727 VA	23995 VA
Max. output current	208	31.5 A	35.0 A	NA	NA	NA	NA	NA	NA	NA
	220/240	29.7 A / 27.3 A	35.0 A / 32.8 A	NA	NA	NA	NA	NA	NA	NA
	480	NA	NA	13.7 A	17.1 A	20.5 A	23.9 A	27.4 A	31.1 A	32.8 A
Max. Efficiency		97.0 %	97.0 %	98.1 %	98.1 %	98.0 %				
CEC Efficiency	208	96.5 %	96.5 %	NA	NA	NA	NA	NA	NA	NA
	220/240	96.5 %	96.5 %	NA	NA	NA	NA	NA	NA	NA
	480	NA	NA	96.5 %	96.5 %	97.0 %	97.5 %	97.0 %	97.5 %	97.5 %
Admissible conductor size AC	AWG 14 - AWG 6									
Grid connection (U <sub>ac,r</sub> )	208/240	208/240	480 Delta + N**							
Frequency (f <sub>r</sub> )	60 Hz									
Total harmonic distortion	< 3.5 %									
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 3,000 employees worldwide, we shift the limits of what's possible - our record of over 1,000 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.

Further information about all Fronius products and our global sales partners and representatives can be found at [www.fronius.com](http://www.fronius.com)



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