/ Perfect Welding / Solar Energy / Perfect Charging

FRONIUS PRIMO

The communicative inverter for optimised energy management.

SnapINverter Technology

Integrated data communication

SuperFlex Design

Dynamic Peak Manager

Smart Grid Ready

Zero feed-in

The Fronius Primo in power categories from 3.0 to 8.2 kW perfectly completes the SnapINverter generation. This single-phase, transformerless device is the ideal inverter for private households.

Its innovative SuperFlex Design provides maximum flexibility in system design, while the SnapINverter mounting system makes installation and maintenance easier than ever before. The communication package included as standard, with WLAN, energy management, several interfaces and much more besides, makes the Fronius Primo a communicative inverter for owner-occupiers.

TECHNICAL DATA FRONIUS PRIMO (3.0-1, 3.5-1, 3.6-1, 4.0-1, 4.6-1)

INPUT DATA	PRIMO 3.0-1	PRIMO 3.5-1	PRIMO 3.6-1	PRIMO 4.0-1	PRIMO 4.6-1
Number of MPP trackers	2				
Max. input current ($I_{dc\ max\ 1}$ / $I_{dc\ max\ 2}$)	12.0 A / 12.0 A				
Max. array short circuit current (MPP_1/MPP_2)	18.0 A / 18.0 A				
DC input voltage range ($U_{dc\ min}$ - $U_{dc\ max}$)	80 - 1000 V				
Feed-in start voltage ($U_{dc\ start}$)	80 V				
Usable MPP voltage range	80 - 800 V				
Number of DC connections	2 + 2				
Max. PV generator output ($P_{dc\ max}$)	4.5 kW_{peak}	5.3 kW_{peak}	5.5 kW_{peak}	6.0 kW_{peak}	6.9 kW_{peak}

OUTPUT DATA	PRIMO 3.0-1	PRIMO 3.5-1	PRIMO 3.6-1	PRIMO 4.0-1	PRIMO 4.6-1
AC nominal output ($P_{ac,r}$)	3,000 W	3,500 W	3,680 W	4,000 W	4,600 W
Max. output power / max. rated apparent power	3,000 VA	3,500 VA	3,680 VA	4,000 VA	4,600 VA
AC output current ($I_{ac\ nom}$)	13.0 A	15.2 A	16.0 A	17.4 A	20.0 A
Grid connection (voltage range)	1 ~ NPE 220 V / 230 V (180 V - 270 V)				
Frequency (frequency range)	50 Hz / 60 Hz (45 - 65 Hz)				
Total harmonic distortion	< 5 %				
Power factor ($\cos \varphi_{ac,r}$)	0.85 - 1 ind. / cap.				

TECHNICAL DATA FRONIUS PRIMO (3.0-1, 3.5-1, 3.6-1, 4.0-1, 4.6-1)

GENERAL DATA	PRIMO 3.0-1	PRIMO 3.5-1	PRIMO 3.6-1	PRIMO 4.0-1	PRIMO 4.6-1
Dimensions (height x width x depth)	645 x 431 x 204 mm				
Weight	21.5 kg				
Degree of protection	IP 65				
Protection class	1				
Overvoltage category (DC / AC) [1]	2 / 3				
Night time consumption	< 1 W				
Inverter design	Transformerless				
Cooling	Regulated air cooling				
Installation	Indoor and outdoor installation				
Ambient temperature range	-40 - +55 °C				
Permitted humidity	0 - 100 %				
Max. altitude	4,000 m				
DC connection technology	4x DC+ and 4x DC- screw terminals 2.5 - 16 mm²				
AC connection technology	3-pole AC screw terminals 2.5 - 16 mm²				
Certificates and compliance with standards	DIN V VDE 0126-1-1/A1, IEC 62109-1/-2, IEC 62116, IEC 61727, AS 4777-2, AS 4777-3, G83/2, G59/3, CEI 0-21, VDE AR N 4105				
Country of manufacture	Austria				

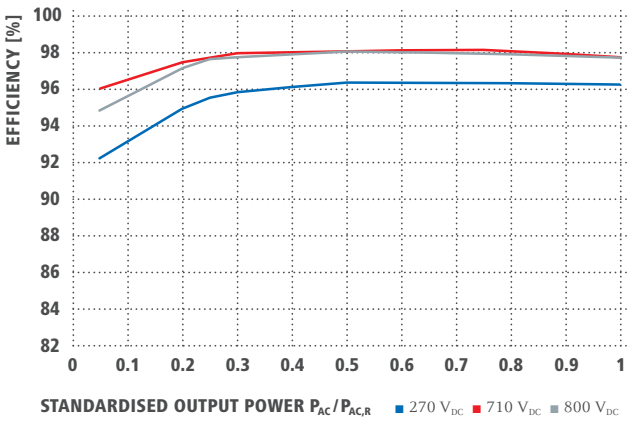
EFFICIENCY	PRIMO 3.0-1	PRIMO 3.5-1	PRIMO 3.6-1	PRIMO 4.0-1	PRIMO 4.6-1
Max. efficiency	98.0 %	98.0 %	98.0 %	98.1 %	98.1 %
European efficiency (ηEU)	96.1 %	96.8 %	96.8 %	97.0 %	97.0 %
MPP adaptation efficiency	> 99.9 %				

PROTECTIVE DEVICES	PRIMO 3.0-1	PRIMO 3.5-1	PRIMO 3.6-1	PRIMO 4.0-1	PRIMO 4.6-1
DC insulation measurement	Yes				
Overload behaviour	Operating point shift. Power limitation				
DC disconnector	Yes				
Reverse polarity protection	Yes				
RCMU	Yes				

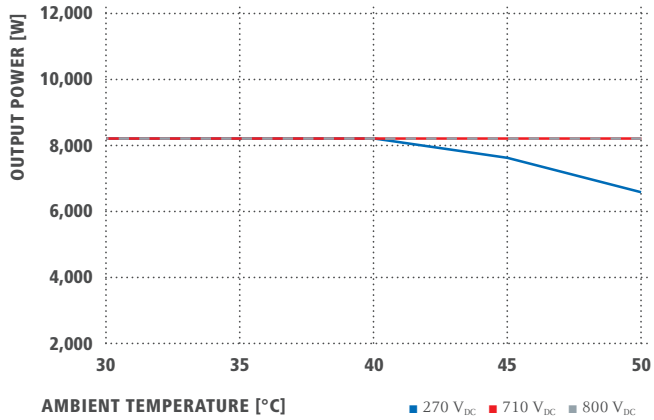
INTERFACES	PRIMO 3.0-1	PRIMO 3.5-1	PRIMO 3.6-1	PRIMO 4.0-1	PRIMO 4.6-1
WLAN / Ethernet LAN	Fronius Solar.web, Modbus TCP SunSpec, Fronius Solar API (JSON)				
6 inputs and 4 digital in/out	Interface to ripple control receiver				
USB (A socket) [2]	Datalogging, inverter update via USB flash drive				
2x RS422 (RJ45 socket) [2]	Fronius Solar Net				
Signalling output [2]	Energy management (potential-free relay output)				
Datalogger and Webserver	Included				
External input [2]	S0-Meter Interface / Input for overvoltage protection				
RS485	Modbus RTU SunSpec or meter connection				

[1] According to IEC 62109-1.
[2] Also available in the light version.
Further information regarding the availability of the inverters in your country can be found at **www.fronius.com.**

FRONIUS PRIMO 8.2-1 EFFICIENCY CURVE



FRONIUS PRIMO 8.2-1 TEMPERATURE DERATING



TECHNICAL DATA FRONIUS PRIMO (5.0-1, 5.0-1 AUS, 5.0-1 SC, 6.0-1, 8.2-1)

INPUT DATA	PRIMO 5.0-1	PRIMO 5.0-1 AUS	PRIMO 5.0-1 SC	PRIMO 6.0-1	PRIMO 8.2-1
Number of MPP trackers	2				
Max. input current ($I_{dc\ max\ 1}$ / $I_{dc\ max\ 2}$)	12.0 A / 12.0 A	18.0 A / 18.0 A			
Max. array short circuit current (MPP_1/MPP_2)	18.0 A / 18.0 A	27.0 A / 27.0 A			
DC input voltage range ($U_{dc\ min}$ - $U_{dc\ max}$)	80 - 1,000 V				
Feed-in start voltage ($U_{dc\ start}$)	80 V				
Usable MPP voltage range	80 - 800 V				
Number of DC connections	2 + 2				
Max. PV generator output ($P_{dc\ max}$)	7.5 kW_{peak}	7.5 kW_{peak}	7.5 kW_{peak}	9.0 kW_{peak}	12.3 kW_{peak}

OUTPUT DATA	PRIMO 5.0-1	PRIMO 5.0-1 AUS	PRIMO 5.0-1 SC	PRIMO 6.0-1	PRIMO 8.2-1
AC nominal output ($P_{ac,r}$)	5,000 W	4,600 W	5,000 W	6,000 W	8,200 W
Max. output power / max. rated apparent power	5,000 VA	5,000 VA / 4,600 VA	5,000 VA	6,000 VA	8,200 VA
AC output current ($I_{ac\ nom}$)	21.7 A	21.7 A	21.7 A	26.1 A	35.7 A
Grid connection (voltage range)	1 ~ NPE 220 V / 230 V (180 V - 270 V)				
Frequency (frequency range)	50 Hz / 60 Hz (45 - 65 Hz)				
Total harmonic distortion	< 5 %				
Power factor ($\cos \phi_{ac,r}$)	0.85 - 1 ind. / cap.				

GENERAL DATA	PRIMO 5.0-1	PRIMO 5.0-1 AUS	PRIMO 5.0-1 SC	PRIMO 6.0-1	PRIMO 8.2-1
Dimensions (height x width x depth)	645 x 431 x 204 mm				
Weight	21.5 kg				
Degree of protection	IP 65				
Protection class	1				
Overvoltage category (DC / AC) [1]	2 / 3				
Night time consumption	< 1 W				
Inverter design	Transformerless				
Cooling	Regulated air cooling				
Installation	Indoor and outdoor installation				
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Country of manufacture	Austria				

[1] According to IEC 62109-1.
[2] Fronius Primo 5.0-1, Fronius Primo 6.0-1 and Fronius Primo 8.2-1 are not fully compliant with VDE AR N 4105.
Further information regarding the availability of the inverters in your country can be found at **www.fronius.com.**

EFFICIENCY	PRIMO 5.0-1	PRIMO 5.0-1 AUS	PRIMO 5.0-1 SC	PRIMO 6.0-1	PRIMO 8.2-1
Max. efficiency	98.1 %	98.1 %	98.1 %	98.1 %	98.1 %
European efficiency (ηEU)	97.1 %	97.1 %	97.1 %	97.3 %	97.5 %
MPP adaptation efficiency	> 99.9 %				

PROTECTIVE DEVICES	PRIMO 5.0-1	PRIMO 5.0-1 AUS	PRIMO 5.0-1 SC	PRIMO 6.0-1	PRIMO 8.2-1
DC insulation measurement	Yes				
Overload behaviour	Operating point shift. power limitation				
DC disconnector	Yes				
Reverse polarity protection	Yes				
RCMU	Yes				

INTERFACES	PRIMO 5.0-1	PRIMO 5.0-1 AUS	PRIMO 5.0-1 SC	PRIMO 6.0-1	PRIMO 8.2-1
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RS485	Modbus RTU SunSpec or meter connection				

[1] Also available in the light version.
Further information and technical data can be found at **www.fronius.com.**

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THREE BUSINESS UNITS, ONE GOAL: TO SET THE STANDARD THROUGH TECHNOLOGICAL ADVANCEMENT.

What began in 1945 as a one-man operation now sets technological standards in the fields of welding technology, photovoltaics and battery charging. Today, the company has around 5,660 employees worldwide and 1,321 patents for product development show the innovative spirit within the company. Sustainable development means for us to implement environmentally relevant and social aspects equally with economic factors. Our goal has remained constant throughout: to be the innovation leader.

Further information about all Fronius products and our global sales partners and representatives can be found at **www.fronius.com**

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