SHIFTING THE LIMITS

FRONIUS PRIMO

/ The communicative inverter for optimised energy management.

AVAILABLE FROM Q1 2015

/ PC board replacement process

/ SnapINverter Technology

/ Integrated data communication
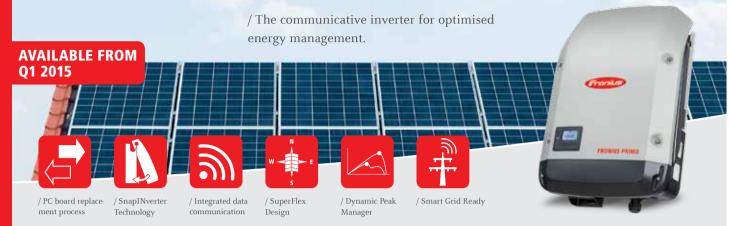
/ SuperFlex Design

/ Dynamic Peak Manager

/ Smart Grid Ready

/ The Fronius Primo in power categories from 3.0 to 8.2 kW perfectly completes the new 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) [1]

INPUT DATA	PRIMO 3.0-1	PRIMO 3.5-1	PRIMO 3.6-1	PRIMO 4.0-1	PRIMO 4.6-1
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		
Min. input voltage ($U_{dc\ min}$)			150 V		
Feed-in start voltage ($U_{dc,\ start}$)			200 V		
Nominal input voltage ($U_{dc,\ r}$)			650 V		
Max. Eingangsspannung ($U_{dc\ max}$)			1,000 V		
MPP voltage range ($U_{mpp\ min}$ - $U_{mpp\ max}$)		200 - 800 V		210 - 800 V	240 - 800 V
Number MPP trackers			2		
Number of DC connections			2 + 2		

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 (Pac, r)	3,000 W	3,500 W	3,680 W	4,000 W	4,600 W
Max. output power	3,000 VA	3,500 VA	3,680 VA	4,000 VA	4,600 VA
Max. output current ($I_{ac\ max}$)	15.2 A	17.7 A	18.6 A	20.2 A	23.2 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.			

[1] Preliminary data.

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 ℃				
Permitted humidity	0 - 100 %				
Max. altitude	4,000 m				
DC connection technology	2x DC+1, 2x DC+2 and 4x DC- screw terminals 2.5 - 16 mm²				
Mains connection technology	3-pole AC screw terminals 2.5 - 16 mm²				
Certificates and compliance with standards	n.a.				

EFFICIENCY	PRIMO 3.0-1	PRIMO 3.5-1	PRIMO 3.6-1	PRIMO 4.0-1	PRIMO 4.6-1
Max. efficiency	~ 97.7 %				
European efficiency (η_{EU})	n.a.				
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				

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.

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

INPUT DATA	PRIMO 5.0-1	PRIMO 5.0-1 AUS	PRIMO 6.0-1	PRIMO 8.2-1
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	
Min. input voltage ($U_{dc\,min}$)	150 V			
Feed-in start voltage ($U_{dc,\,start}$)	200 V			
Nominal input voltage ($U_{dc,\,r}$)	650 V			
Max. input voltage ($U_{dc\,max}$)	1,000 V			
MPP voltage range ($U_{mpp\,min}$ - $U_{mpp\,max}$)	240 - 800 V			270 - 800 V
Number MPP trackers	2			
Number of DC connections	2 + 2			

OUTPUT DATA	PRIMO 5.0-1	PRIMO 5.0-1 AUS	PRIMO 6.0-1	PRIMO 8.2-1
AC nominal output (Pac, r)	5,000 W	4,600 W	6,000 W	8,200 W
Max. output power	5,000 VA	5,000 VA	6,000 VA	8,200 VA
Max. output current ($I_{ac\,max}$)	25.0 A	25.3 A	30.3 A	37.5 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.			

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GENERAL DATA	PRIMO 5.0-1	PRIMO 5.0-1 AUS	PRIMO 6.0-1	PRIMO 8.2-1
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Mains connection technology	3-pole AC screw terminals 2.5 - 16 mm²			
Certificates and compliance with standards	n.a.			

EFFICIENCY	PRIMO 5.0-1	PRIMO 5.0-1 AUS	PRIMO 6.0-1	PRIMO 8.2-1
Max. efficiency	~ 97.8 %		~ 97.9 %	
European efficiency (η_{EU})	n.a.			
MPP adaptation efficiency	> 99.9 %			

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WE HAVE THREE DIVISIONS AND ONE PASSION: SHIFTING THE LIMITS OF POSSIBILITY.

/ What Günter Fronius started in 1945 in Pettenbach, Austria, has now become a modern day success story. Today, the company has around 3,000 employees worldwide and has been granted more than 1,000 patents. Our goal has remained constant throughout: to be the innovation leader. We shift the limits of what's possible. While others progress step by step, we innovate in leaps and bounds. The responsible use of our resources forms the basis of our corporate policy.

PERFECT WELDING

/ We develop products and complete systems - both manual and automated - as well as the corresponding services for our customers in the global welding technology market. We have made it our goal to decode the "DNA of the arc".

SOLAR ENERGY

/ The challenge is to make the leap to a regenerative energy supply. Our vision is to use renewable energy to achieve energy independence. With our services, inverters and energy-storage systems for optimising energy yields, we are one of the leading suppliers in the photovoltaics sector.

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/ As know-how leaders in the world of battery charging, we deliver exceptional solutions to create the maximum benefit for our customers. For the intralogistics sector, we are committed to energy flow optimisation for electric forklift trucks and are constantly striving for the next innovation. Our powerful charging systems for vehicle workshops guarantee safe and reliable processes.

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