

SNAPINVERTER

GRID-TIE

3000W ~ 27000W



HmT
electrical



Fronius PRIMO



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 8.2kW 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, 3.6-1, 4.6-1)

INPUT DATA	PRIMO 3.0-1	PRIMO 3.6-1	PRIMO 4.6-1
Number of MPP trackers	2		
Max. input current($I_{dc\ max}$ / $i_{dc\ max\ 2}$)	12.0 A / 12.0 A		
Max. array short circuit current (MPP1/MPP2)	18.0 A / 18.0A		
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	5.5kW peak	6.9kW peak

OUTPUT DATA	PRIMO 3.0-1	PRIMO 3.6-1	PRIMO 4.6-1
AC nominal output ($P_{ac,r}$)	3000 W	3680 W	4600 W
Max. output power	3000 VA	3680 VA	4600 VA
AC output current ($I_{ac\ nom}$)	13.0 A	16.0 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, 3.6-1, 4.6-1)

GENERAL DATA	PRIMO 3.0-1	PRIMO 3.6-1	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)	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	4000 m		
DC connection technology	4x DC+ and 4x DC - screw terminals 2.5 - 16 mm ²		
AC connection technology	3-pole AC screw terminals 2.5 - 16 mm ²		
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		

Technical Data Fronius Primo (5.0-1, 6.0-1, 8.2-1)

INPUT DATA	PRIMO 5.0-1	PRIMO 6.0-1	PRIMO 8.2-1
Number of MPP trackers	2		
Max. input current(I _{dc max} / IDC _{max 2})	12.0 A / 12.0 A	18.0 A / 18.0 A	
Max. array short circuit current (MPP1/MPP2)	18.0 A / 18.0A	27.0 A / 27.0 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})	7.5 kW peak	9.0 kW peak	12.3 kW peak

Technical Data Fronius Primo (5.0-1, 6.0-1, 8.2-1)

OUTPUT DATA	PRIMO 5.0-1	PRIMO 6.0-1	PRIMO 8.2-1
AC nominal output (P _{ac,r})	5000 W	6000 W	8200 W
Max. output power	5000 VA	6000 VA	8200 VA
AC output current (I _{ac,nom})	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 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)	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	4000 m		
DC connection technology	4x DC+ and 4x DC - screw terminals 2.5 - 16 mm ²		
AC connection technology	3-pole AC screw terminals 2.5 - 16 mm ²		
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		



Fronius SYMO



Snapinverter Technology



Integrated data communication



Dynamic Peak Manager



Smart Grid Ready



Superflex Design



Zero feed-in



With power categories ranging from 3.0 to 20.0kW, the transformerless Fronius Symo is the three-phase inverter for systems of every size. Owing to the Superflex design, the Fronius Symo is the perfect answer to irregularly shaped or multi-oriented roofs. The standard interface to the internet via WLAN or Ethernet and the ease of integration of third-party components make the Fronius Symo one of the most communicative inverters on the market. Furthermore the meter interface permits dynamic feed-in management and a clear visualisation of the consumption overview.

Technical Data Fronius Symo (3.0-3-S)

INPUT DATA	SYMO 3.0-3-S
Number of MPP trackers	1
Max. input current($I_{dc\ max}$ / $i_{dc\ max\ 2}$)	16.0 A
Max. array short circuit current (MPP1/MPP2)	31.0A
DC input voltage range ($U_{dc\ min}$ - $U_{dc\ max}$)	150 - 1000 V
Feed-in start voltage ($U_{dc\ start}$)	200 V
Usable MPP voltage range	150 - 800 V
Number of DC connections	3
Max. PV generator output ($P_{dc\ max}$)	6.0kW peak

OUTPUT DATA	SYMO 3.0-3-S
AC nominal output ($P_{ac,r}$)	3000 W
Max. output power	3000 VA
AC output current ($I_{ac\ nom}$)	4.3A
Grid connection (voltage range)	3 ~ NPE 400 V / 230 V or 3 ~ NPE 380 V / 220 V (+20%/-30%)
Frequency (frequency range)	50 Hz / 60 Hz (45 - 65 Hz)
Total harmonic distortion	< 3 %
Power factor ($\cos\ \phi_{ac,r}$)	0.7 - 1 ind. / cap.

Technical Data Fronius Symo (3.0-3-S)

GENERAL DATA	SYMO 3.0-3-S
Dimensions (height x width x depth)	645 x 431 x 204 mm
Weight	16.0 kg
Degree of protection	IP 65
Protection class	1
Overvoltage category (DC / AC)	2 / 3
Night time consumption	< 1 W
Inverter design	Transformerless
Cooling	Regulated air cooling
Installation	Indoor and outdoor installation
Ambient temperature range	-25 - +60 °C
Permitted humidity	0 - 100 %
Max. altitude	2000 m / 3400 m (unrestricted/restricted voltage range)
DC connection technology	3x DC+ and 3x DC - screw terminals 2.5 - 16 mm ²
AC connection technology	5-pole AC screw terminals 2.5 - 16 mm ²
Certificates and compliance with standards	ÖVE / ÖNORM E 8001-4-712, DIN V VDE 0126-1-1/A1, VDE AR N 4105, IEC 62109-1/-2, IEC 62116, IEC 61727, AS 3100, AS 4777-2, AS 4777-3, CER 06-190, G98, G99, UNE 206007-1, SI 4777 1), CEI 0-21 1) , NRS 097
Country of manufacture	Austria

Technical Data Fronius Symo (6.0-3-M, 8.2-3-M)

INPUT DATA	SYMO 6.0-3-M	SYMO 8.2-3-M
Number of MPP trackers	2	
Max. input current(I _{dc} max / i _{dc} max 2)	16.0 A	
Max. array short circuit current (MPP1/MPP2)	24.0A	
DC input voltage range (U _{dc} min - U _{dc} max)	150 - 1000 V	
Feed-in start voltage (U _{dc} start)	200 V	
Usable MPP voltage range	150 - 800 V	
Number of DC connections	2+2	
Max. PV generator output (P _{dc} max)	12.0kW peak	16.4kW peak

OUTPUT DATA	SYMO 6.0-3-M	SYMO 8.2-3-M
AC nominal output (P _{ac,r})	6000 W	8200 W
Max. output power	6000 VA	8200 VA
AC output current (I _{ac} nom)	8.7A	11.8A
Grid connection (voltage range)	3 ~ NPE 400 V / 230 V or 3 ~ NPE 380 V / 220 V (+20%/-30%)	
Frequency (frequency range)	50 Hz / 60 Hz (45 - 65 Hz)	
Total harmonic distortion	< 3 %	
Power factor (cos ϕ _{ac,r})	0.8 - 1 ind. / cap.	

Technical Data Fronius Symo (6.0-3-M, 8.2-3-M)

GENERAL DATA	SYMO 6.0-3-M	SYMO 8.2-3-M
Dimensions (height x width x depth)	645 x 431 x 204 mm	
Weight	19.9 kg	21.9 kg
Degree of protection	IP 65	
Protection class	1	
Overvoltage category (DC / AC)	2 / 3	
Night time consumption	< 1 W	
Inverter design	Transformerless	
Cooling	Regulated air cooling	
Installation	Indoor and outdoor installation	
Ambient temperature range	-25 - +60 °C	
Permitted humidity	0 - 100 %	
Max. altitude	2000 m / 3400 m (unrestricted/restricted voltage range)	
DC connection technology	4x DC+ and 4x DC - screw terminals 2.5 - 16 mm ²	
AC connection technology	5-pole AC screw terminals 2.5 - 16 mm ²	
Certificates and compliance with standards	ÖVE / ÖNORM E 8001-4-712, DIN V VDE 0126-1-1/A1, VDE AR N 4105, IEC 62109-1/-2, IEC 62116, IEC 61727, AS 3100, AS 4777-2, AS 4777-3, CER 06-190, G98, G99, UNE 206007-1, SI 4777 1), CEI 0-21 1) , NRS 097	
Country of manufacture	Austria	

Technical Data Fronius Symo (10.0-3-M, 12.5-3-M, 15.0-3-M, 20.0-3-M)

INPUT DATA	SYMO 10.0-3-M	SYMO 12.5-3-M	SYMO 15.0-3-M	SYMO 20.0-3-M
Number of MPP trackers	2			
Max. input current(I _{dc} max / i _{dc} max 2)	27.0 A / 16.5 A			
Max. usable input current total	43.5 A			
Max. array short circuit	40.5 A / 24.8 A			
DC input voltage range	200 - 1000 V			
Feed-in start voltage	200 V			
Usable MPP voltage range	200 - 800 V			
Nr of DC connections & Max PV Output	3+3 / 15.0kW peak	3+3 / 18.8kW peak	3+3 / 22.5kW peak	3+3 / 30.kW peak

OUTPUT DATA	SYMO 10.0-3-M	SYMO 12.5-3-M	SYMO 15.0-3-M	SYMO 20.0-3-M
AC nominal output (P _{ac,r})	10 000 W	12 500 W	15 000 W	20 000 W
Max. output power	10 000 VA	12 500 VA	15 000 VA	20 000 VA
AC output current (I _{ac} nom)	14.4 A	18.0 A	21.7 A	28.9 A
Grid connection (voltage range)	3 ~ NPE 400 V / 230 V or 3 ~ NPE 380 V / 220 V (+20%/-30%)			
Frequency (frequency range)	50 Hz / 60 Hz (45 - 65 Hz)			
Total harmonic distortion	1.8%	2.0%	1.5%	1.3%
Power factor (cos $\phi_{ac,r}$)	0 - 1 ind. / cap.			

Technical Data Fronius Symo (10.0-3-M, 12.5-3-M, 15.0-3-M, 20.0-3-M)

GENERAL DATA	SYMO 10.0-3-M	SYMO 12.5-3-M	SYMO 15.0-3-M	SYMO 20.0-3-M
Dimensions (height x width x depth)	725 x 510 x 225 mm			
Weight	34.8 kg			
Degree of protection	IP 66			
Protection class	1			
Overvoltage category (DC / AC)	2 / 3			
Night time consumption	< 1 W			
Inverter design	Transformerless			
Cooling	Regulated air cooling			
Installation (DIN rail)	Indoor and outdoor installation (106 x 90 x 66 mm)			
Ambient temperature range	-40 - +60 °C			
Permitted humidity	0 - 100 %			
Max. altitude	2000 m / 3400 m (unrestricted/restricted voltage range)			
DC connection technology	6x DC+ and 6x DC - screw terminals 2.5 - 16 mm ²			
AC connection technology	5-pole AC screw terminals 2.5 - 16 mm ²			
Certificates and compliance with standards	ÖVE / ÖNORM E 8001-4-712, DIN V VDE 0126-1-1/A1, VDE AR N 4105, IEC 62109-1/-2, IEC 62116, IEC 61727, AS 3100, AS 4777-2, AS 4777-3, CER 06-190, G98, G99, UNE 206007-1, SI 4777 1), CEI 0-21 1) , NRS 097			
Country of manufacture	Austria			

Fronius ECO



Snapinverter
Technology



Integrated data
communication



Dynamic Peak
Manager



Smart Grid
Ready



Zero feed-in



The three-phase Fronius Eco in power categories 25.0 and 27.0kW perfectly meets all the requirements of large scale installations. Thanks to its light weight and Snapinverter mounting system, this transformerless device can be installed quickly and easily either indoors or outdoors. This inverter range is setting new standards with its Ip66 protection class. Furthermore, thanks to its integrated double fuse holders and optional overvoltage protection, string collection boxes are no longer necessary.

Technical Data Fronius ECO

INPUT DATA	Fronius ECO 27.0-3-S
Number of MPP trackers	1
Max. input current($I_{dc\ max}$ / $i_{dc\ max\ 2}$)	47.7 A
Max. array short circuit current (MPP1/MPP2)	71.6 A
DC input voltage range ($U_{dc\ min}$ - $U_{dc\ max}$)	580 - 1000 V
Feed-in start voltage ($U_{dc\ start}$)	650 V
Usable MPP voltage range	580 - 850 V
Number of DC connections	6
Max. PV generator output ($P_{dc\ max}$)	37.8 kW peak

OUTPUT DATA	Fronius ECO 27.0-3-S
AC nominal output ($P_{ac,r}$)	27 000 W
Max. output power	27 000 VA
AC output current ($I_{ac\ nom}$)	40.9 A / 39.1 A
Grid connection (voltage range)	3 ~ NPE 380 V / 220 V or 3 ~ NPE 400 V / 230 V (+20% / - 30%)
Frequency (frequency range)	50 Hz / 60 Hz (45 - 65 Hz)
Total harmonic distortion	< 2.0 %
Power factor ($\cos \varphi_{ac,r}$)	0 - 1 ind. / cap.

Fronius SMART METER

Thanks to its monitoring capabilities, the Fronius Smart Meter plays a key role in making a PV system storage ready.

The Smart meter provides a clear overview of power consumption, feed-in and surplus energy, enabling improved energy management and giving accurate information on future battery requirements.



The Fronius Smart Meter is a bidirectional meter, which optimises self-consumption, records the load curve and controls the various energy flows. Thanks to highly accurate measurements and rapid communication via the Modbus RTU interface, dynamic feed-in control when feed-in limits are imposed is faster and more accurate than with S0 meter.

Together with the Fronius Solar.web, the Smart Meter presents a clear overview of the power consumption. In combination with the Fronius storage solution, the device ensures a perfect coordination of various energy flows, which optimises the entire energy management. The Fronius Smart Meter is ideally suited for use with the Gen24 Plus and Tauro, as well as all Fronius inverters with the Fronius Datamanager 2.0.

TECHNICAL DATA	63A-3	50KA-3	63A-1
Nominal Voltage	400 - 415 V		230 - 240 V
Grid frequency range	50 to 60 Hz		
Maximum current	3 x 63 A	3 x 50 000 A	1 x 63 A
Input terminal capacity	1 - 16 mm ²	0.05 - 4 mm ²	1 - 16mm ²
Communication and neutral line terminal capacity	0.05 - 4 mm ²		
Power Consumption	1.5 W	2.5 W	1.5 W
Starting Current	40 mA		
Accuracy class	1		
Active energy accuracy	Class B (En50470)		
Reactive energy accuracy	Class 2 (EN/IEC 62053-23)		
Short-time overcurrent	30 x I _{max} / 0.5S		
Mounting	DIN rail (Indoors)		
Housing	4 modules DIN 43880		2 modules DIN 43880
Degree of Protection	IP 51 (front frame), IP 20 (terminals)		
Specified operating range	-25°C - + 55°C	-5°C - + 55°C	-25°C - +55°C
Dimensions (Height x Width x Depth)	89.0 x 71.2 x 65.6mm		89.0 x 35.0 x 65.6mm
Interface to Inverter	Modbus RTU (Rs485)		

Fronius SMART METER IP

Visualise, control and optimise energy flows: you can only do that if you have the right data.

And this is exactly what the Fronius Smart Meter - our bidirectional and intelligent electricity meter provides.



Based on the information obtained, and in combination with the inverter and Fronius Solar.web, you can deliver efficient energy management, which saves your customers money – whether for private or commercial photovoltaic systems. We offer the right Smart Meter for photovoltaic systems for every application. Unlock the potential of the data. You can rely on the Fronius Smart Meter. Designed to monitor.

TECHNICAL DATA	IP
Nominal Voltage	100 - 240 (3 x 208 - 480)
Operating voltage range	-10 to +10
Nominal frequency	50 - 60
Maximum current	5000
Power line cross section	1.5 - 4
Neutral line cross section	1.5 - 4
Ct's & communication line cross section	0.25 - 2.5
Power Consumption	2
Starting Current	20 (max 30)
Accuracy Class	1
Active energy accuracy	Class 1 (EN 62053-21 / Class B (EN 50470-3)
Reactive energy accuracy	Class 2 (EN 62053-23)
Short-time overcurrent	3 x I _{max} / 20s
Mounting	Indoors (DIN rail)
Housing	3 modules DIN 43880
Degree of protection	Ip20 (front frame), Ip30 (terminals)
Ambient temperature range	-25 to +55
Dimensions (H x W x D)	90 x 53 x 58
Weight	132
Interface to Inverter	Modbus RTU (Rs485), Modbus TCP (WiFi, LAN)
Current transformer	Primary: 1 - 5000 A / secondary: use only Ct's with voltage output 333 mV



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	PRIMO	SYMO	ECO
AC Output power	3.0 – 8.2kVA	3.0 – 8.2kVA, 10.0 – 20.0kVA	25.0, 27.0kVA
Technology	Transformerless	Transformerless	Transformerless
Number of phases	1	3	3
Max input voltage	1000V	1000V	1000V
DC start up voltage	80V	150V*, 200V*	580V
Number of MPP trackers usable	2	1*, 2	1
MPP voltage range	80 – 800V	150 – 800V*, 200V – 800V*	580 – 850V
Optimised tracking algorithm	Yes	Yes	No
Max efficiency	97.8%	98.1%	98.7%
Degree of protection	IP 65	IP 65*, IP 66*	IP 66
Weight	21.5kg	16.0kg*, 19.9kg*, 21.9kg*, 34.8kg*, 43.4kg*	35.7kg
Power factor	0.85 - 1 ind./cap.	0.70 - 1 ind./cap.* 0.85 - 1 ind./cap.*	0.0 - 1 ind./cap.
Dimensions (h x w x d mm)	645 x 431 x 204	645 x 431 x 204*, 725 x 510 x 225*	725 x 510 x 225

* Depends on specific inverter model. Please refer to specific datasheet for more information.

SOLAR.WEB

/ PV systems can be monitored, analysed and compared quickly and easily using the Fronius Solar.web online portal. Up-to-date system data can be accessed at any time and is clearly presented via a user-friendly range of analysis functions. Solar.web is also a convenient platform for adjusting system configurations.

THE ADVANTAGES AT A GLANCE

- / **Professional monitoring and data presentation** with the cloud-based platform, Fronius Solar.web.
- / **Easy installation with the commissioning wizard**, installers can wirelessly connect to the Fronius Datamanager using their laptop/ smart device to easily configure monitoring and register the PV system on Fronius Solar.web.
- / **Straightforward support** as the Fronius Datamanager directly connects the inverter to Fronius Solar.web.



/ Fronius Datamanager Box 2.0



HmT
electrical



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