



Designed to rely on.

Product advantages

- 01 More safety features included
- 02 Endless freedom
- 03 Optimal performance as standard

The Fronius Symo Advanced impresses not only with levels of performance and flexibility that have been proven a million times over, but also with its new equipment. The highlight in terms of safety is the integrated Fronius Arc Guard technology, which ensures the Fronius Symo Advanced exceeds the highest standards and is the future-proof and reliable choice for commercial photovoltaic systems of any size.

Fronius Symo Advanced. Designed to rely on.

Developed with safety in mind:

The Fronius Symo Advanced opens the next chapter in the Fronius SnapINverter portfolio. Performance proven a million times over meets new safety technology, making the Fronius Symo Advanced more than ever a future-proof choice for installers and their customers.

01 More safety features included

Detect, intervene, learn – the new Fronius Arc Guard technology follows this principle to protect against dangerous arcs. The algorithm developed by Fronius reliably detects arcing and shuts down the photovoltaic system before a fire can occur. The Fronius Arc Guard is being continuously trained by the manufacturer to make the Arc Fault Circuit Interrupter more precise and to optimize system protection.

02 Endless freedom

Easily plan complex roofs thanks to SuperFlex Design. The PV modules can be flexibly aligned and connected as the Fronius Symo Advanced is able to handle a wide range of input voltages as well as very high PV module currents.

03 Optimal performance as standard

Maximum yield even when the PV modules are partially in the shade is possible thanks to the Dynamic Peak Manager feature of the Fronius Symo Advanced. The intelligent software-based shade management tool is installed as standard and requires no additional components.

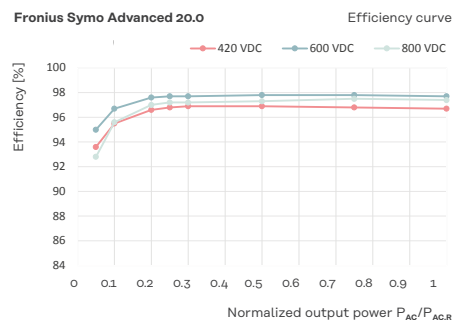
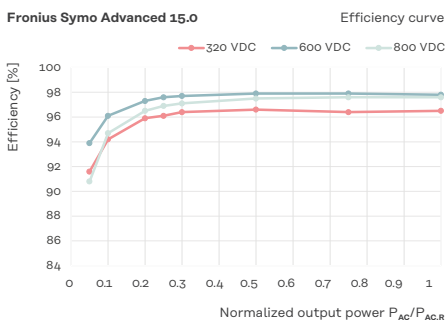
Fronius Symo Advanced



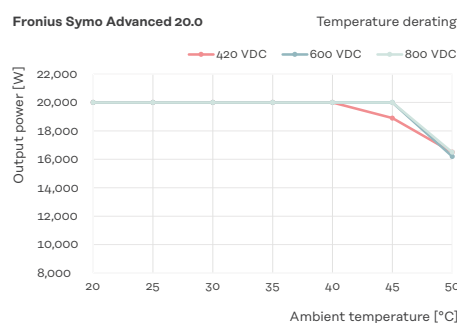
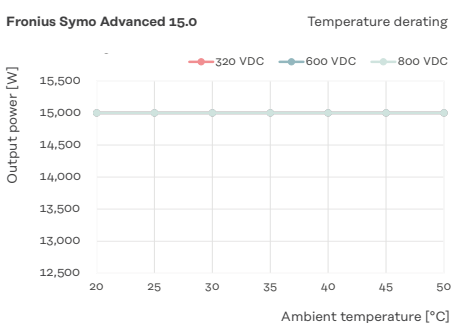
Impressive power data

The Fronius Symo Advanced impresses with its flexible system design and the highest safety standards.

Efficiency



Power derating



Technical data

10.0 / 12.5 / 15.0 kW

			Symo Advanced					
			10.0-3-M		12.5-3-M		15.0-3-M	
Input data	Number of MPP trackers		2		2		2	
			MPPT1	MPPT2	MPPT1	MPPT2	MPPT1	MPPT2
	Max. input current ($I_{dc\ max}$)	A	27.0	16.5 ¹	27.0	16.5 ¹	33.0	27.0
	Max. usable input current ($I_{dc\ max\ MPPT\ 1+2}$)	A	43.5		43.5		51.0	
			MPPT1	MPPT2	MPPT1	MPPT2	MPPT1	MPPT2
	Max. array short circuit current MPPT1/MPPT2 ($I_{sc\ pv}$) ²	A	55.7	34	55.7	34	68	55.7
	DC input voltage range ($U_{dc\ min} - U_{dc\ max}$)	V	200–1000		200–1000		200–1000	
	Feed-in start-up input voltage ($U_{dc\ start}$)	V	200		200		200	
	Usable MPP voltage range	V	200–800		200–800		200–800	
	MPP Voltage range (at rated power) ($U_{mpp\ min} - U_{mpp\ max}$)	V	270–800		320–800		320–800	
			MPPT1	MPPT2	MPPT1	MPPT2	MPPT1	MPPT2
	Number of DC connections		3	3	3	3	3	3
Max. PV generator output ($P_{dc\ max}$)	W _{peak}	15,000		18,800		22,500		
Output data	AC nominal output ($P_{ac,r}$)	W	10,000		12,500		15,000	
	Max. output power / rated apparent power	VA	10,000		12,500		15,000	
			380 V AC	400 V AC	380 V AC	400 V AC	380 V AC	400 V AC
	AC output current ($I_{ac\ nom}$)	A	15.2	14.4	18.9	18	22.7	21.7
	Grid connection (voltage range)		3-NPE 400 V / 230 V or 3-NPE 380 V / 220 V (+20 % / -30 %)					
	Frequency (frequency range)	Hz	50 / 60 (45 - 65)		50 / 60 (45 - 65)		50 / 60 (45 - 65)	
	Total harmonic distortion	%	< 1.75		< 2.0		< 1.5	
	Power factor ($\cos\ \varphi_{ac,r}$)		0–1 ind. / cap.					
General data	Dimensions (height x width x depth)	mm	725 x 510 x 225					
	Weight (inverter/with packaging)	kg	35.4/38.4		35.4/38.4		41.96/44.96	
	Protection class		IP 66		IP 66		IP 66	
	Safety class		1		1		1	
			DC	AC	DC	AC	DC	AC
	Overvoltage category (DC/AC) ³		2	3	2	3	2	3
	Night consumption	W	<1		<1		<1	
	Inverter concept		Transformerless					
	Cooling		Active Cooling technology					
	Installation		Indoor and outdoor installation					
	Ambient temperature range	°C	-25 - +60		-25 - +60		-25 - +60	
	Permissible humidity	%	0–100		0–100		0–100	
			unrestricted / restricted voltage range					
	Max. altitude above sea level	m	2,000/3,400		2,000/3,400		2,000/3,400	
	DC connection technology	mm ²	6x DC+ and 6x DC screw terminals 2.5 - 16 mm ²					
	AC connection technology	mm ²	5-pin AC screw terminals 2.5 - 16mm ²					
Certificates and compliance with standards		IEC 62109-1/-2, IEC 62116, IEC 61727, VDE 0126-1-1/A1, VDE AR-N 4105, G98/1, G99/1, AS/NZS 4777.2, UNE 206007-1, CEI 0-21, CEI 0-16, NRS 097-2-1, TOR Erzeuger Typ A, VDE AR-N 4110, EN 50549-1/-2, IEC 61683, IEC60068, IEC 63027:2023						
Country of manufacture		Austria						

¹ 14.0 A at voltages < 420 V

² $I_{sc\ pv} = I_{sc\ max} \geq I_{sc\ (STC)} \times 1.25$ according to e.g. IEC 60364-7-712, NEC 2020, AS/NZS 5033:2021.

³ In line with IEC 62109-1. DIN rail for optional surge protection device type 1 + 2 or type 2 present.

For further information on the availability of the inverters in your country, please visit www.fronius.com.

			Symo Advanced		
			10.0-3-M	12.5-3-M	15.0-3-M
Efficiency	Max. efficiency	%	97.8	97.8	97.9
	Europ. efficiency (η_{EU})	%	97.1	97.4	97.6
	MPP adaptation efficiency	%	> 99.9	> 99.9	> 99.9
Protection devices	Arc Fault Circuit Interrupter - AFCI (Fronius Arc Guard)		Integrated		
	DC isolation measurement		Integrated		
	Overload performance		Operating point shift, power limiter		
	DC disconnect		Integrated		
	Reverse polarity protection		Integrated		
	RCMU		Integrated		
Interfaces	WLAN / Ethernet LAN		Fronius Solarweb, Modbus TCP SunSpec, Fronius Solar API (JSON)		
	6 inputs and 4 digital inputs/outputs		Connection to ripple control receiver		
	USB (type A socket) ⁴		Datalogging, inverter updating using a USB thumb drive		
	2x RS422 (RJ45 socket) ⁴		Fronius Solar Net		
	Message output ⁴		Energy management (potential-free relay output)		
	Datalogger and web server		Integrated		
	External input ⁴		So-Meter Interface / Input for overvoltage protection		
	RS485		Modbus RTU SunSpec or meter connection		

⁴ Also available in a light version.

Technical data

17.5 / 20.0 kW

			Symo Advanced			
			17.5-3-M		20.0-3-M	
Input data	Number of MPP trackers		2		2	
			MPPT1	MPPT2	MPPT1	MPPT2
	Max. input current ($I_{dc\ max}$)	A	33.0	27.0	33.0	27.0
	Max. usable input current ($I_{dc\ max\ MPPT\ 1+2}$)	A	51.0		51.0	
			MPPT1	MPPT2	MPPT1	MPPT2
	Max. array short circuit current MPPT1/MPPT2 ($I_{sc\ pv}$) ²	A	68	55.7	68	55.7
	DC input voltage range ($U_{dc\ min} - U_{dc\ max}$)	V	200–1000		200–1000	
	Feed-in start-up input voltage ($U_{dc\ start}$)	V	200		200	
	Usable MPP voltage range	V	200–800		200–800	
	MPP Voltage range (at rated power) ($U_{mpp\ min} - U_{mpp\ max}$)	V	370–800		420–800	
			MPPT1	MPPT2	MPPT1	MPPT2
	Number of DC connections		3	3	3	3
Max. PV generator output ($P_{dc\ max}$)	W_{peak}	26,300		30,000		
Output data	AC nominal output ($P_{ac,r}$)	W	17,500		20,000	
	Max. output power / rated apparent power	VA	17,500		20,000	
			380 V ac	400 V ac	380 V ac	400 V ac
	AC output current ($I_{ac\ nom}$)	A	26.5	25.3	30.3	28.9
	Grid connection (voltage range)		3-NPE 400 V / 230 V or 3-NPE 380 V / 220 V (+20 % / -30 %)			
	Frequency (frequency range)	Hz	50 / 60 (45 - 65)		50 / 60 (45 - 65)	
	Total harmonic distortion	%	< 1.5		< 1.25	
	Power factor ($\cos\ \varphi_{ac,r}$)		0–1 ind. / cap.			
General data	Dimensions (height x width x depth)	mm	725 x 510 x 225			
	Weight (inverter/with packaging)	kg	41.96/44.96		41.96/44.96	
	Protection class		IP 66		IP 66	
	Safety class		1		1	
			DC	AC	DC	AC
	Overvoltage category (DC/AC) ³		2	3	2	3
	Night consumption	W	<1		<1	
	Inverter concept		Transformerless			
	Cooling		Active Cooling technology			
	Installation		Indoor and outdoor installation			
	Ambient temperature range	°C	-25 - +60		-25 - +60	
	Permissible humidity	%	0–100		0–100	
			unrestricted / restricted voltage range			
	Max. altitude above sea level	m	2,000/3,400		2,000/3,400	
	DC connection technology	mm ²	6x DC+ and 6x DC screw terminals 2.5 - 16 mm ²			
	AC connection technology	mm ²	5-pin AC screw terminals 2.5 - 16mm ²			
	Certificates and compliance with standards		IEC 62109-1/-2, IEC 62116, IEC 61727, VDE 0126-1-1/A1, VDE AR-N 4105, G98/1, G99/1, AS/NZS 4777.2, UNE 206007-1, CEI 0-21, CEI 0-16, NRS 097-2-1, TOR Erzeuger Typ A, VDE AR-N 4110, EN 50549-1/-2, IEC 61683, IEC60068, IEC 63027:2023			
Country of manufacture		Austria				

² $I_{sc\ pv} = I_{sc\ max} \geq I_{sc\ (STC)} \times 1.25$ according to e.g. IEC 60364-7-712, NEC 2020, AS/NZS 5033:2021.

³ In line with IEC 62109-1. DIN rail for optional surge protection device type 1 + 2 or type 2 present.

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Fronius Symo Advanced. Designed to rely on.

			Symo Advanced	
			17.5-3-M	20.0-3-M
Efficiency	Max. efficiency	%	97.9	97.9
	Europ. efficiency (η_{EU})	%	97.6	97.6
	MPP adaptation efficiency	%	> 99.9	> 99.9
Protection devices	Arc Fault Circuit Interrupter - AFCI (Fronius Arc Guard)		Integrated	
	DC isolation measurement		Integrated	
	Overload performance		Operating point shift, power limiter	
	DC disconnecter		Integrated	
	Reverse polarity protection		Integrated	
	RCMU		Integrated	
Interfaces	WLAN / Ethernet LAN		Fronius Solar.web, Modbus TCP SunSpec, Fronius Solar API (JSON)	
	6 inputs and 4 digital inputs/outputs		Connection to ripple control receiver	
	USB (type A socket) ⁴		Datalogging, inverter updating using a USB thumb drive	
	2x RS422 (RJ45 socket) ⁴		Fronius Solar Net	
	Message output ⁴		Energy management (potential-free relay output)	
	Datalogger and web server		Integrated	
	External input ⁴		SO-Meter Interface / Input for overvoltage protection	
	RS485		Modbus RTU SunSpec or meter connection	

⁴ Also available in a light version.

Further information: www.fronius.com/commercial-inverters

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FRONIUS SYMO

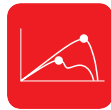
Maximum flexibility for the applications of tomorrow



SnapInverter technology



Integrated data communication



Dynamic Peak Manager



Smart Grid Ready



SuperFlex Design



Zero feed-in

With power categories ranging from 3.0 to 20.0 kW, 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.

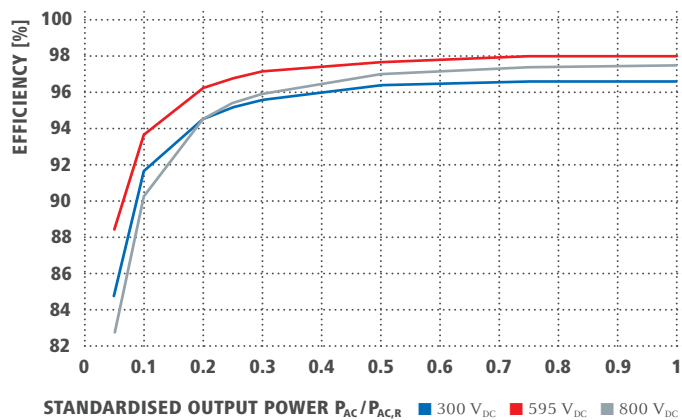
TECHNICAL DATA FRONIUS SYMO (3.0-3-S, 3.7-3-S, 4.5-3-S, 3.0-3-M, 3.7-3-M, 4.5-3-M)

INPUT DATA	SYMO 3.0-3-S	SYMO 3.7-3-S	SYMO 4.5-3-S	SYMO 3.0-3-M	SYMO 3.7-3-M	SYMO 4.5-3-M
Number MPP trackers		1			2	
Max. input current ($I_{dc \max 1} / I_{dc \max 2}^{2)}$)		16.0 A			16.0 A / 16.0 A	
Max. array short circuit current (MPP ₁ / MPP ₂ ¹⁾)		24.0 A			24.0 A / 24.0 A	
DC input voltage range ($U_{dc \min} - U_{dc \max}$)				150 - 1000 V		
Feed-in start voltage ($U_{dc \text{ start}}$)				200 V		
Usable MPP voltage range				150 - 800 V		
Number of DC connections		3			2+2	
Max. PV generator output ($P_{dc \max}$)	6.0 kW _{peak}	7.4 kW _{peak}	9.0 kW _{peak}	6.0 kW _{peak}	7.4 kW _{peak}	9.0 kW _{peak}
OUTPUT DATA	SYMO 3.0-3-S	SYMO 3.7-3-S	SYMO 4.5-3-S	SYMO 3.0-3-M	SYMO 3.7-3-M	SYMO 4.5-3-M
AC nominal output ($P_{ac,r}$)	3,000 W	3,700 W	4,500 W	3,000 W	3,700 W	4,500 W
Max. output power	3,000 VA	3,700 VA	4,500 VA	3,000 VA	3,700 VA	4,500 VA
AC output current ($I_{ac \text{ nom}}$)	4.3 A	5.3 A	6.5 A	4.3 A	5.3 A	6.5 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				< 3 %		
Power factor ($\cos \phi_{ac,r}$)		0.7 - 1 ind. / cap.			0.8 - 1 ind. / cap.	
GENERAL DATA	SYMO 3.0-3-S	SYMO 3.7-3-S	SYMO 4.5-3-S	SYMO 3.0-3-M	SYMO 3.7-3-M	SYMO 4.5-3-M
Dimensions (height x width x depth)			645 x 431 x 204 mm			
Weight		16.0 kg			19.9 kg	
Degree of protection				IP 65		
Protection class				1		
Overvoltage category (DC / AC) ²⁾				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			2,000 m / 3,400 m (unrestricted / restricted voltage range)			
DC connection technology	3x DC+ and 3x DC- screw terminals 2.5 - 16 mm ²			4x DC+ and 4x DC- screw terminals 2.5 - 16mm ² ³⁾		
AC connection technology	5-pole AC screw terminals 2.5 - 16 mm ²			5-pole AC screw terminals 2.5 - 16mm ² ³⁾		
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, G83/2, UNE 206007-1, SI 4777 ¹⁾ , CEI 0-21 ¹⁾ , NRS 097					

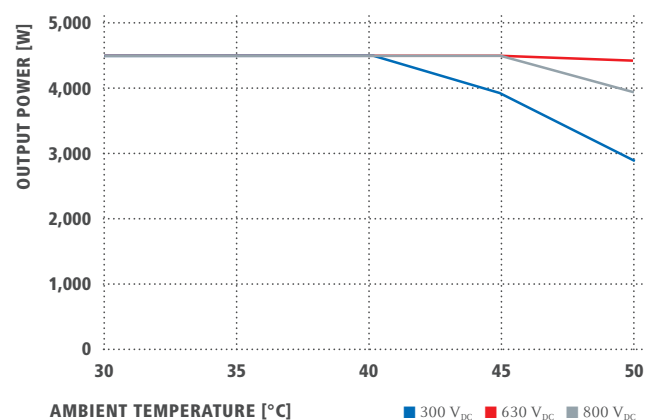
¹⁾ This applies to Fronius Symo 3.0-3-M, 3.7-3-M and 4.5-3-M. ²⁾ According to IEC 62109-1.

³⁾ 16 mm² without wire end ferrules. Further information regarding the availability of the inverters in your country can be found at www.fronius.com.

FRONIUS SYMO 4.5-3-S EFFICIENCY CURVE



FRONIUS SYMO 4.5-3-S TEMPERATURE DERATING



TECHNICAL DATA FRONIUS SYMO (3.0-3-S, 3.7-3-S, 4.5-3-S, 3.0-3-M, 3.7-3-M, 4.5-3-M)

EFFICIENCY	SYMO 3.0-3-S	SYMO 3.7-3-S	SYMO 4.5-3-S	SYMO 3.0-3-M	SYMO 3.7-3-M	SYMO 4.5-3-M
Max. efficiency	98.0 %					
European efficiency (η _{EU})	96.2 %	96.7 %	97.0 %	96.5 %	96.9 %	97.2 %
MPP adaptation efficiency	> 99.9 %					

PROTECTIVE DEVICES	SYMO 3.0-3-S	SYMO 3.7-3-S	SYMO 4.5-3-S	SYMO 3.0-3-M	SYMO 3.7-3-M	SYMO 4.5-3-M
DC insulation measurement				Yes		
Overload behaviour				Operating point shift, power limitation		
DC disconnect				Yes		
Reverse polarity protection				Yes		
RCMU				Yes		

INTERFACES	SYMO 3.0-3-S	SYMO 3.7-3-S	SYMO 4.5-3-S	SYMO 3.0-3-M	SYMO 3.7-3-M	SYMO 4.5-3-M
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) ¹⁾	Datalogging, inverter update via USB flash drive					
2x RS422 (RJ45 socket) ¹⁾	Fronius Solar Net					
Signalling output ¹⁾	Energy management (potential-free relay output)					
Datalogger and Webserver	Included					
External input ¹⁾	S0-Meter Interface / Input for overvoltage protection					
RS485	Modbus RTU SunSpec or meter connection					

¹⁾ Also available in the light version.

TECHNICAL DATA FRONIUS SYMO (5.0-3-M, 6.0-3-M, 7.0-3-M, 8.2-3-M)

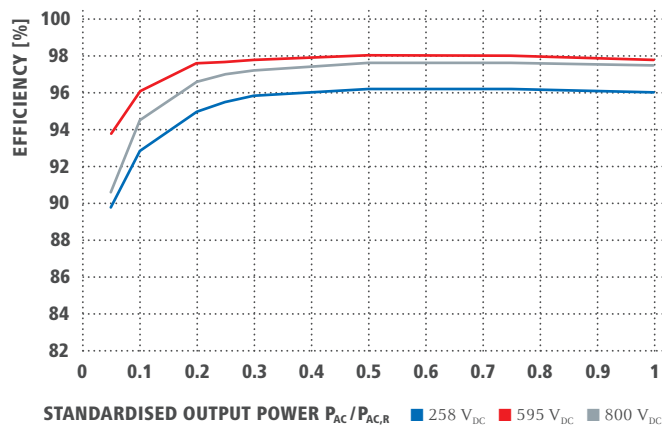
INPUT DATA	SYMO 5.0-3-M	SYMO 6.0-3-M	SYMO 7.0-3-M	SYMO 8.2-3-M
Number MPP trackers	2			
Max. input current ($I_{dc\ max\ 1} / I_{dc\ max\ 2}$)	16.0 A / 16.0 A			
Max. array short circuit current (MPP ₁ /MPP ₂)	24.0 A / 24.0 A			
DC input voltage range ($U_{dc\ min} - U_{dc\ max}$)	150 - 1000 V			
Feed-in start voltage ($U_{dc\ start}$)	200 V			
Usable MPP voltage range	150 - 800 V			
Number of DC connections	2+2			
Max. PV generator output ($P_{dc\ max}$)	10.0 kW _{peak}	12.0 kW _{peak}	14.0 kW _{peak}	16.4 kW _{peak}
OUTPUT DATA	SYMO 5.0-3-M	SYMO 6.0-3-M	SYMO 7.0-3-M	SYMO 8.2-3-M
AC nominal output ($P_{ac,r}$)	5,000 W	6,000 W	7,000 W	8,200 W
Max. output power	5,000 VA	6,000 VA	7,000 VA	8,200 VA
AC output current ($I_{ac,nom}$)	7.2 A	8.7 A	10.1 A	11.8 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	< 3 %			
Power factor ($\cos\ \phi_{ac,r}$)	0.8 - 1 ind. / cap.			
GENERAL DATA	SYMO 5.0-3-M	SYMO 6.0-3-M	SYMO 7.0-3-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			
Overtoltage 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	-25 - +60 °C			
Permitted humidity	0 - 100 %			
Max. altitude	2,000 m / 3,400 m (unrestricted / restricted voltage range)			
DC connection technology	4x DC+ and 4x DC- Screw terminals 2.5 - 16mm ² ²⁾			
AC connection technology	5-pole AC Screw terminals 2.5 - 16mm ² 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, G83/2, UNE 206007-1, SI 4777, CEI 0-21, NRS 097			

¹⁾ According to IEC 62109-1.

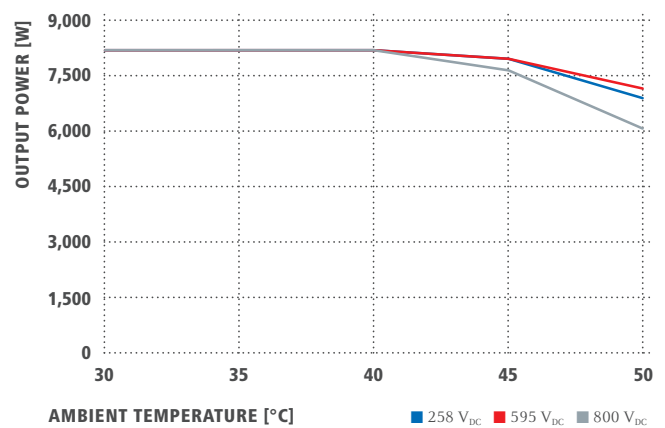
²⁾ 16 mm² without wire end ferrules.

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FRONIUS SYMO 8.2-3-M EFFICIENCY CURVE



FRONIUS SYMO 8.2-3-M TEMPERATURE DERATING



TECHNICAL DATA FRONIUS SYMO (5.0-3-M, 6.0-3-M, 7.0-3-M, 8.2-3-M)

EFFICIENCY	SYMO 5.0-3-M	SYMO 6.0-3-M	SYMO 7.0-3-M	SYMO 8.2-3-M
Max. efficiency			98.0 %	
European efficiency (η_{EU})	97.3 %	97.5 %	97.6 %	97.7 %
MPP adaptation efficiency			> 99.9 %	

PROTECTIVE DEVICES	SYMO 5.0-3-M	SYMO 6.0-3-M	SYMO 7.0-3-M	SYMO 8.2-3-M
DC insulation measurement			Yes	
Overload behaviour		Operating point shift, power limitation		
DC disconnect			Yes	
Reverse polarity protection			Yes	
RCMU			Yes	

INTERFACES	SYMO 5.0-3-M	SYMO 6.0-3-M	SYMO 7.0-3-M	SYMO 8.2-3-M
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) ¹⁾		Datalogging, inverter update via USB flash drive		
2x RS422 (RJ45 socket) ¹⁾		Fronius Solar Net		
Signalling output ¹⁾		Energy management (potential-free relay output)		
Datalogger and Webserver		Included		
External input ¹⁾		S0-Meter Interface / Input for overvoltage protection		
RS485		Modbus RTU SunSpec or meter connection		

¹⁾ Also available in the light version.

TECHNICAL DATA FRONIUS SYMO (10.0-3-M, 12.5-3-M, 15.0-3-M, 17.5-3-M, 20.0-3-M)

INPUT DATA	SYMO 10.0-3-M	SYMO 12.5-3-M	SYMO 15.0-3-M	SYMO 17.5-3-M	SYMO 20.0-3-M
Number MPP trackers	2				
Max. input current ($I_{dc \max 1} / I_{dc \max 2}$)	27.0 A / 16.5 A ¹⁾		33.0 A / 27.0 A		
Max. usable input current total ($I_{dc \max 1} + I_{dc \max 2}$)	43.5 A		51.0 A		
Max. array short circuit current (MPP ₁ /MPP ₂)	40.5 A / 24.8 A		49.5 A / 40.5 A		
DC input voltage range ($U_{dc \min} - U_{dc \max}$)	200 - 1000 V				
Feed-in start voltage ($U_{dc \text{ start}}$)	200 V				
Usable MPP voltage range	200 - 800 V				
Number of DC connections	3+3				
Max. PV generator output ($P_{dc \max}$)	15.0 kW _{peak}	18.8 kW _{peak}	22.5 kW _{peak}	26.3 kW _{peak}	30.0 kW _{peak}

OUTPUT DATA	SYMO 10.0-3-M	SYMO 12.5-3-M	SYMO 15.0-3-M	SYMO 17.5-3-M	SYMO 20.0-3-M
AC nominal output ($P_{ac,r}$)	10,000 W	12,500 W	15,000 W	17,500 W	20,000 W
Max. output power	10,000 VA	12,500 VA	15,000 VA	17,500 VA	20,000 VA
AC output current ($I_{ac \text{ nom}}$)	14.4 A	18.0 A	21.7 A	25.3 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 %	1.5 %	1.3 %
Power factor ($\cos \phi_{ac,r}$)	0 - 1 ind. / cap.				

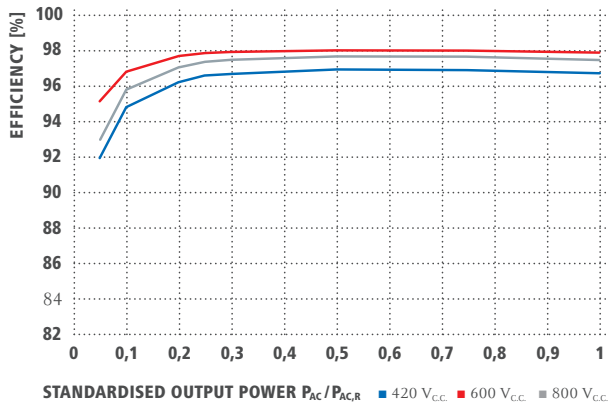
GENERAL DATA	SYMO 10.0-3-M	SYMO 12.5-3-M	SYMO 15.0-3-M	SYMO 17.5-3-M	SYMO 20.0-3-M
Dimensions (height x width x depth)	725 x 510 x 225 mm				
Weight	34.8 kg		43.4 kg		
Degree of protection	IP 66				
Protection class	1				
Overvoltage category (DC / AC) ²⁾	2 / 3				
Night time consumption	< 1 W				
Inverter 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	2,000 m / 3,400 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, G83/2, UNE 206007-1, SI 4777, CEI 0-16, CEI 0-21, NRS 097				

¹⁾ 14.0 A for voltages < 420 V

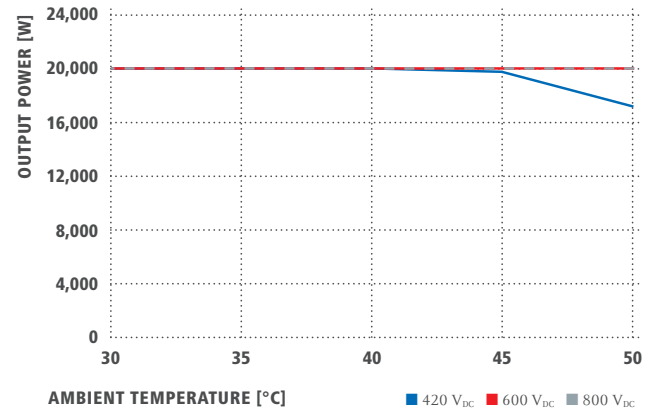
²⁾ According to IEC 62109-1. DIN rail for optional type 1 + 2 or type 2 surge protection device available.

Further information regarding the availability of the inverters in your country can be found at www.fronius.com.

FRONIUS SYMO 20.0-3-M EFFICIENCY CURVE



FRONIUS SYMO 20.0-3-M TEMPERATURE DERATING



TECHNICAL DATA FRONIUS SYMO (10.0-3-M, 12.5-3-M, 15.0-3-M, 17.5-3-M, 20.0-3-M)

EFFICIENCY	SYMO 10.0-3-M	SYMO 12.5-3-M	SYMO 15.0-3-M	SYMO 17.5-3-M	SYMO 20.0-3-M
Max. efficiency	98.0 %			98.1 %	
European efficiency (ηEU)	97.4 %	97.6 %	97.8 %	97.8 %	97.9 %
MPP adaptation efficiency	> 99.9 %				

PROTECTIVE DEVICES	SYMO 10.0-3-M	SYMO 12.5-3-M	SYMO 15.0-3-M	SYMO 17.5-3-M	SYMO 20.0-3-M
DC insulation measurement			Yes		
Overload behaviour			Operating point shift, power limitation		
DC disconnecter			Yes		
Reverse polarity protection			Yes		
RCMU			Yes		

INTERFACES	SYMO 10.0-3-M	SYMO 12.5-3-M	SYMO 15.0-3-M	SYMO 17.5-3-M	SYMO 20.0-3-M
WLAN / Ethernet LAN		Fronius Solar.web, Modbus TCP SunSpec, Fronius Solar API (JSON)			
6 inputs and 4 digital inputs/outputs		Interface to ripple control receiver			
USB (A socket) ¹⁾		Datalogging, inverter update via USB flash drive			
2x RS422 (RJ45-socket) ¹⁾		Fronius Solar Net			
Signalling output ¹⁾		Energy management (potential-free relay output)			
Datalogger and Webserver		Included			
External input ¹⁾		S0-Meter Interface / Input for overvoltage protection			
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.

/ Perfect Welding / Solar Energy / Perfect Charging

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 5,440 employees worldwide and 1,264 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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