



/ Perfect Welding / Solar Energy / Perfect Charging



FRONIUS SYMO

/ Maximum flexibility for the applications of tomorrow.



/ SnapInverter technology



/ Integrated data communication



/ SuperFlex Design



/ Dynamic Peak Manager



/ Smart Grid Ready



/ Zero feed-in



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 - 1,000 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 ($\cos\ \phi_{ac,r}$)	0.85 - 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			
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	-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			

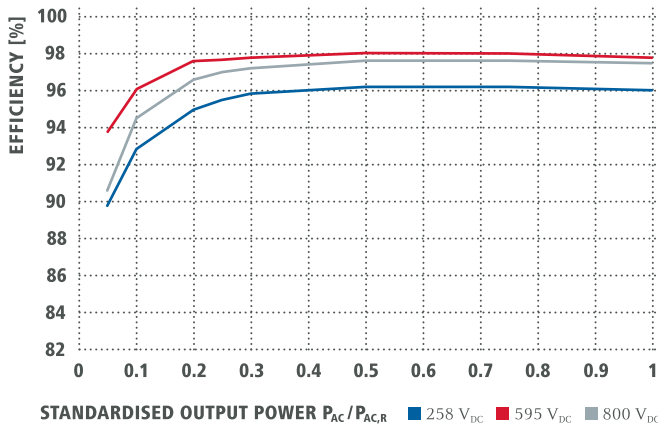
¹⁾ According to IEC 62109-1.

²⁾ 16 mm² without wire end ferrules.

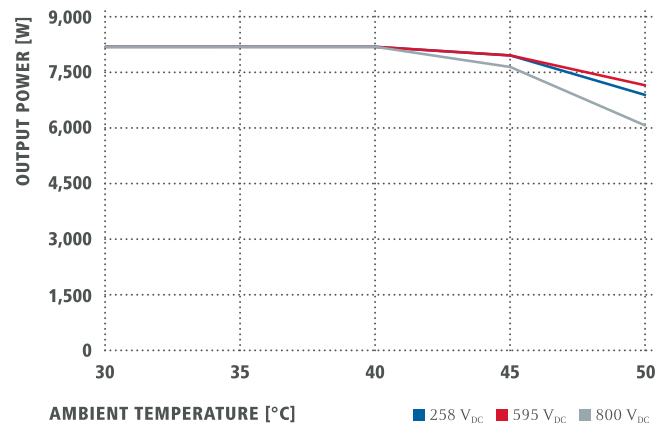
Further information regarding the availability of the inverters in your country can be found at www.fronius.com.



FRONIUS SYMO 8.2-3-M EFFICIENCY CURVE



FRONIUS SYMO 8.2-3-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)

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 - 1,000 V				
Feed-in start voltage ($U_{dc\ start}$)	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 ($I_{ac\ nom}$)	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	Indoor and outdoor installation				
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.