



Technical Data Fronius Symo Advanced 10.0 – 20.0

		Unit	Symo Advanced 10.0-3-M		Symo Advanced 12.5-3-M		Symo Advanced 15.0-3-M		Symo Advanced 17.5-3-M		Symo Advanced 20.0-3-M	
Input Data	Number MPP trackers		2		2		2		2		2	
	Max. input current ($I_{dc\ max}$)	A	MPPT1 27.0	MPPT2 16.5 ¹⁾	MPPT1 27.0	MPPT2 16.5 ¹⁾	MPPT1 33.0	MPPT2 27.0	MPPT1 33.0	MPPT2 27.0	MPPT1 33.0	MPPT2 27.0
	Max. usable input current total ($I_{dc\ max\ MPPT\ 1+2}$)	A	43.5		43.5		51.0		51.0		51.0	
	Max. array short circuit current ($I_{sc\ pv}$) ²⁾	A	MPPT1 55.7	MPPT2 34	MPPT1 55.7	MPPT2 34	MPPT1 68	MPPT2 55.7	MPPT1 68	MPPT2 55.7	MPPT1 68	MPPT2 55.7
	DC input voltage range ($U_{dc\ min} - U_{dc\ max}$)	V	200 - 1000		200 - 1000		200 - 1000		200 - 1000		200 - 1000	
	Feed-in start-up input voltage ($U_{dc\ start}$)	V	200		200		200		200		200	
	Usable MPP voltage range ($U_{mpp\ min} - U_{mpp\ max}$)	V	270 - 800		320 - 800		320 - 800		370 - 800		420 - 800	
	Number of DC connections		MPPT1 3	MPPT2 3	MPPT1 3	MPPT2 3	MPPT1 3	MPPT2 3	MPPT1 3	MPPT2 3	MPPT1 3	MPPT2 3
	Max. PV generator output ($P_{dc\ max}$)	Wpeak	15,000		18,800		22,500		26,300		30,000	

1) 14.0 A for 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.



Output Data	AC nominal output ($P_{ac,r}$)	W	10,000	12,500	15,000	17,500	20,000
	Max. output power / rated apparent power	VA	10,000	12,500	15,000	17,500	20,000
	AC output current ($I_{ac,nom}$)	A	380 V _{AC} 15.2 400 V _{AC} 14.4	380 V _{AC} 18.9 400 V _{AC} 18	380 V _{AC} 22.7 400 V _{AC} 21.7	380 V _{AC} 26.5 400 V _{AC} 25.3	380 V _{AC} 30.3 400 V _{AC} 28.2
	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)	50 / 60 (45 - 65)	50 / 60 (45 - 65)
	Total harmonic distortion	%	< 1.75%	< 2.0	< 1.5	< 1.5	< 1.25
	Power factor ($\cos \phi_{ac,r}$)		0 - 1 ind. / cap.	0 - 1 ind. / cap.	0 - 1 ind. / cap.	0 - 1 ind. / cap.	0 - 1 ind. / cap.

General Data	Dimensions (height x width x depth)	mm	725 x 510 x 225	725 x 510 x 225	725 x 510 x 225	725 x 510 x 225	725 x 510 x 225
	Weight (Inverter / with packaging)	kg	34.8 / 37.4	34.8 / 37.4	43.4 / 46.0	43.4 / 46.0	43.4 / 46.0
	Degree of protection		IP66	IP66	IP66	IP66	IP66
	Protection class		1	1	1	1	1
	Overvoltage category (DC / AC) ³⁾		DC 2 AC 3	DC 2 AC 3	DC 2 AC 3	DC 2 AC 3	DC 2 AC 3
	Night time consumption	W	<1	<1	<1	<1	<1
	Inverter design		Transformerless	Transformerless	Transformerless	Transformerless	Transformerless
	Cooling		Regulated air cooling	Regulated air cooling	Regulated air cooling	Regulated air cooling	Regulated air cooling
	Installation		Indoor and outdoor installation				
	Ambient temperature range	°C	-25 - +60	-25 - +60	-25 - +60	-25 - +60	-25 - +60
Permitted humidity	%	0 - 100	0 - 100	0 - 100	0 - 100	0 - 100	



			unrestricted / restricted voltage range				
Max. altitude	m	2,000 / 3,400	2,000 / 3,400	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					
AC connection technology	mm ²	5-pole AC screw terminals 2.5 - 16					
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					
Country of manufacture		Austria					

3) 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.



Efficiency	Max. efficiency	%	97.8	97.8	97.9	97.9	97.9
	European efficiency (η_{EU})	%	97.1	97.4	97.6	97.6	97.6
	MPP adaptation efficiency	%	>99.9	>99.9	>99.9	>99.9	>99.9

Protective Devices	AFCI - Arc Fault Detection (Arc Guard)		Yes	Yes	Yes	Yes	Yes
	DC insulation measurement		Yes	Yes	Yes	Yes	Yes
	Overload behaviour		Operating point shift, power limitation				
	DC disconnecter		Yes	Yes	Yes	Yes	Yes
	Reverse polarity protection		Yes	Yes	Yes	Yes	Yes
	RCMU		Yes	Yes	Yes	Yes	Yes

Interfaces	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) ⁴⁾		Datalogging, inverter update via USB flash drive				
	2x RS422 (RJ45-socket) ⁴⁾		Fronius Solar Net				
	Signalling output ⁴⁾		Energy management (potential-free relay output)				
	Datalogger and Webserver		Included				
	External input ⁴⁾		S0-Meter Interface / Input for overvoltage protection				
	RS485		Modbus RTU SunSpec or meter connection				

4) Also available in the light version.