

# 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 SnaplNverter 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

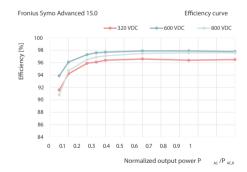
Maximum yield even when the PV modules are partially in the shade is possible thanks to the Dynamic Peak Manager feature of the Fronius Symo Advanced. The intelligent software-based shade management tool is installed as standard and requires no additional components.

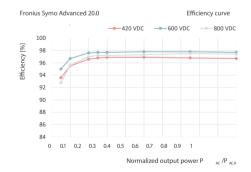
Fronius Symo Advanced

## Impressive power data

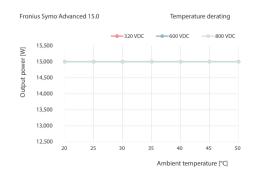
The Fronius Symo Advanced impresses with its flexible system design and the highest safety standards.

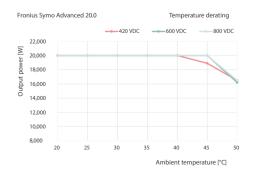
## Efficiency





## Power derating











# Technical data

# 10.0 / 12.5 / 15.0 kW

10.0	/ 12.3 / 13.0 KVV	Symo Advanced							
			10.0	-3-M	12.5	-3-M	15.0-3-M		
	Number of MPP trackers		2		:	2		2	
			MPPT1	MPPT2	MPPT1	MPPT2	MPPT1	MPPT2	
	Max. input current (I dc max )	А	27.0	16.5 <b>1</b>	27.0	16.5 <b>1</b>	33.0	27.0	
	Max. usable input current () 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 <sub>sc pv</sub> ) <sup>2</sup>	A	55.7	34	55.7	34	68	55.7	
Input data	DC input voltage range (U dc min - U dc max )	V	200-1000		200-1000		200–1000		
ıdul	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 )	Wpeak	15,0	000	18,8	300	22,5	500	
	_								
	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		
ata			380 VAC	400 VAC	380 Vac	400 VAC	380 VAC	400 VAC	
Output data	AC output current (I ac nom )	A	15.2	14.4	18.9	18	22.7	21.7	
utbı	Grid connection (voltage range)		3-NPE 400 V / 230 V or 3~NPE 380 V / 220 V (+20 % / -30 %)					%)	
0	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 φ <sub>ac,r</sub> )		0—1 ind. / cap.						
	Dimensions (height x width x depth)	mm			725 x 53	10 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		L	
			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						
ta	Cooling		Active Cooling technology						
General data	Installation				door and outdoor installation		05 55		
nera	Ambient temperature range	°€	-25 - +60		-25 - +60		-25 - +60		
Ge	Permissible humidity	%	0-100		0-100		0-3	T00	
					tricted / restricted voltage range				
	Max. altitude above sea level	m 2	2,000/3,400		2,000/3,400 2,000/3,400			3,400	
	DC connection technology	mm²							
	AC connection technology	mm 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			0-16,			
	Country of manufacture		Austria						

**<sup>1</sup>**14.0 A at voltages < 420 V

 $<sup>^3</sup>$  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.







 $<sup>^{2}</sup>$  Isc pv = Isc max. ≥ Isc (STC) x 1.25 according to e.g. IEC 60364-7-712, NEC 2020, AS/NZS 5033:2021.

Integrated

S0-Meter Interface / Input for overvoltage protection

Modbus RTU SunSpec or meter connection

			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 ( ηEU)	%	97.1	97.4	97.6		
	MPP adaptation efficiency	%	> 99.9	> 99.9	> 99.9		
			_				
	Arc Fault Circuit Interrupter - AFCI (Fronius Arc Guard)		Integrated				
⊑ .,	DC isolation measurement		Integrated				
Protection devices	Overload performance		Operating point shift, power limiter				
rote de\	DC disconnector		Integrated				
Д	Reverse polarity protection		Integrated				
	RCMU		Integrated				
	WLAN / Ethernet LAN		Fronius Solar.web, Modbus TCP SunSpec, Fronius Solar API (JSON)				
nterfaces	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)*		Fronius Solar Net				
ıteri	Message output 4		Energy management (potential-free relay output)				

RS485

Datalogger and web server

External input 4



<sup>&</sup>lt;sup>4</sup> Also available in a light version.

# Technical data

175 / 200 kW

	o / 20.0 KVV		Symo Advanced					
			17.5	-3-M	20.0-3-M			
	Number of MPP trackers			2	2	2		
			MPPT1	MPPT2	MPPT1	MPPT2		
	Max. input current (I dc max )	А	33.0	27.0	33.0	27.0		
	Max. usable input current (I dc max MPPT 1+2)	А	51.0		51.0			
			MPPT1	MPPT2	MPPT1	MPPT2		
Œ	Max. array short circuit current MPPT1/MPPT2 (I <sub>SC pv</sub> ) <sup>2</sup>	A	68	55.7	68	55.7		
Input data	DC input voltage range (U dc min - U dc max )	V	200-1000		200–1000			
dul	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 )	Wpeak	26,3	300	30,0	000		
	AC nominal output (P ac,r)	W	17,500		20,000			
	Max. output power / rated apparent power	VA	17,500		20,000			
ata			380 VAC	400 VAC	380 Vac	400 VAC		
Output data	AC output current (I ac nom )	A	26.5 25.3 30.3 28.9					
Jutp	Grid connection (voltage range)		3-NPE 400 V / 230 V or 3~NPE 380 V / 220 V (+20 % / -30 %)					
O	Frequency (frequency range)	Hz		(45 - 65)	50 / 60			
	Total harmonic distortion	%	< ^			.25		
	Power factor (cos φ <sub>aC,r</sub> )			0–1 inc	d. / cap.			
	Dimensions (height x width x depth)	mm	725 × 510 × 225					
	Weight (inverter/with packaging)	kg	41.96/		41.96	/44.96		
	Protection class		IP 66		IP 66			
	Safety class		1		1	L		
			DC	AC	DC	AC		
	Overvoltage category (DC/AC) <sup>3</sup>		2	3	2	3		
	Night consumption	W	<	1	<	1		
	Inverter concept		Transformerless					
В	Cooling		Active Cooling technology					
General data	Installation			Indoor and outdo	or installation			
ıeral	Ambient temperature range	°C	-25 - +60		-25 - +60			
Ger	Permissible humidity	%	0-2	L00	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						
	AC connection technology	mm ²	5-pin AC screw terminals 2.5 - 16mm2					
	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			Aus	tuio			

 $<sup>^{2}</sup>$  Isc pv = Isc max. ≥ Isc (STC) x 1.25 according to e.g. IEC 60364-7-712, NEC 2020, AS/NZS 5033:2021.

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			Symo Advanced		
			17.5-3-M	20.0-3-M	
Efficiency	Max. efficiency	%	97.9	97.9	
	Europ. efficiency ( ηEU)	%	97.6	97.6	
Effic	MPP adaptation efficiency	%	> 99.9	> 99.9	
	*				

	Arc Fault Circuit Interrupter - AFCI (Fronius Arc Guard)	Integrated
⊆ .,	DC isolation measurement	Integrated
ctio	Overload performance	Operating point shift, power limiter
Pr	DC disconnector	Integrated
	Reverse polarity protection	Integrated
	RCMU	Integrated

	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
S	USB (type A socket) 4	Datalogging, inverter updating using a USB thumb drive
Interfaces	2x RS422 (RJ45 socket)*	Fronius Solar Net
nter	Message output 4	Energy management (potential-free relay output)
_	Datalogger and web server	Integrated
	External input 4	S0-Meter Interface / Input for overvoltage protection
	RS485	Modbus RTU SunSpec or meter connection

<sup>&</sup>lt;sup>4</sup> Also available in a light version.

