



# FRONIUS SYMO HYBRID

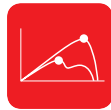
The flexible choice for individual storage solutions



SnapInverter technology



Integrated data communication



Dynamic Peak Manager



Smart Grid Ready



Zero feed-in



Multi Flow Technology

With power categories ranging from 3.0 to 5.0 kW, the Fronius Symo Hybrid allows surplus energy from a photovoltaic system to be stored in various batteries.

The Fronius Symo Hybrid is compatible with the Fronius Solar Battery as well as storage devices from other manufacturers, such as LG Chem or BYD, and thus the ideal hybrid inverter. Intelligent Multi Flow Technology enables AC and DC coupling of battery storage. In addition, loads are supplied at the same time as the battery is being charged – even in back-up power mode.

## TECHNICAL DATA FRONIUS SYMO HYBRID

INPUT DATA	SYMO HYBRID 3.0-3-S	SYMO HYBRID 4.0-3-S	SYMO HYBRID 5.0-3-S
Number of MPP trackers		1	
Max. PV input power	5.0 kW	6.5 kW	8.0 kW
Max. input current ( $I_{dc\ max}$ )		1 x 16 A	
Max. short circuit current, module array		24 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 (PV)		2	

BATTERY INPUT	SYMO HYBRID 3.0-3-S	SYMO HYBRID 4.0-3-S	SYMO HYBRID 5.0-3-S
Maximum output power to battery		Depends on connected Battery	
Maximum input power from battery		Depends on connected Battery	

OUTPUT DATA	SYMO HYBRID 3.0-3-S	SYMO HYBRID 4.0-3-S	SYMO HYBRID 5.0-3-S
AC nominal output ( $P_{ac,r}$ )	3,000 W	4,000 W	5,000 W
Max. output power	3,000 VA	4,000 VA	5,000 VA
Max. power from grid to battery	3,000 VA	4,000 VA	5,000 VA
Max. AC output current ( $I_{ac\ max}$ )		8.3 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.	

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GENERAL DATA	SYMO HYBRID 3.0-3-S	SYMO HYBRID 4.0-3-S	SYMO HYBRID 5.0-3-S
Dimensions (height x width x depth)	645 x 431 x 204 mm		
Weight	19.9 kg		
Degree of protection	IP 65		
Protection class	1		
Overvoltage category (DC / AC) <sup>1)</sup>	2 / 3		
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 (unrestricted voltage range)		
DC PV connection technology	2x DC+ and 2x DC- screw terminals 2.5 - 16 mm <sup>2</sup>		
DC battery connection technology	1x DC+ and 1x DC- screw terminals 2.5 - 16 mm <sup>2</sup>		
AC connection technology	5-pin AC screw terminals 2.5 - 16 mm <sup>2</sup>		
Certificates and compliance with standards	VDE AR N 4105, ÖVE / ÖNORM E 8001-4-712, DIN V VDE 0126-1-1		
Emergency power function	Yes <sup>2)</sup>		

EFFICIENCY	SYMO HYBRID 3.0-3-S	SYMO HYBRID 4.0-3-S	SYMO HYBRID 5.0-3-S
Max. efficiency (PV - grid)	97.7 %	97.9 %	
Max. efficiency (PV - battery - grid)	> 90.0 %	> 90.0 %	> 90.0 %
Europ. efficiency (PV - grid)	95.2 %	95.7 %	96.0 %
MPP adaptation efficiency	> 99.9 %		

COMPATIBLE BATTERIES	AVAILABLE MODELS	BACK-UP POWER
BYD	Battery-Box H 6.4, 7.7, 9.0, 10.2, 11.5 Battery-Box Premium HVM 8.3, 11.0, 13.8, 16.6, 19.3, 22.1 <sup>4)</sup>	Yes, 3-phase
LG CHEM <sup>3)</sup>	RESU 7H, 10H	No

<sup>1)</sup> Testing to IEC 62109-1

<sup>2)</sup> Not available with LG Chem RESU

<sup>3)</sup> Fronius Checkbox 500V is mandatory

<sup>4)</sup> Compatibility from Symo Hybrid with the BYD Battery-Box Premium HVM will be achieved through a software update, which is expected to be available in Q2 2020. This update can of course be installed on existing Symo Hybrid devices.

Further information regarding the availability of the inverters in your country can be found at [www.fronius.com](http://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 4,760 employees worldwide and 1,253 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](http://www.fronius.com)

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