



# Sigen Hybrid Inverter

50.0 / 60.0 / 80.0 / 100.0 / 110.0 kW



- Seamless switchover, ensuring 0ms load-side disruption operation
- 150% overload for 10s, handling impact loads for smooth device startup
- Minimal size & weight in the same power range, ensures simple installation
- Multi-unit connection via Energy Gateway, flexible expansion from kW to MW
- DC coupling micro-grid solution, simplifies configuration & boosts efficiency

# Sigen Hybrid Inverter 50.0 / 60.0 / 80.0 / 100.0 / 110.0 kW

Preliminary

Sigen PV	50MI-HYB	60MI-HYB	80MI-HYB	100MI-HYB	110MI-HYB	Units
<b>DC Input (PV)</b>						
Max. PV input power	100,000	120,000	160,000	200,000	220,000	Wp
Max. DC input voltage						V
Nominal DC input voltage	600 @380/400 Vac, 720 @480 Vac					V
Start-up voltage	180					V
MPPT voltage range	160 - 1,000					V
Number of MPP trackers	4	5	6	8	8	
Number of PV strings per MPPT	2					
Max. input current per MPPT	40					A
Max. short-circuit current per MPPT	60					A
<b>DC Input (Battery)</b>						
Battery module models	SigenStack BAT 12.0					
Battery controller models	SigenStack BC M2-0.5C-BST / SigenStack BC M2-1C-BST					
System configuration quantity range <sup>1</sup>	4 - 21					pcs
Max. charge power	55,000	66,000	88,000	110,000	121,000	W
Max. discharge power	55,000	66,000	88,000	110,000	121,000	W
Max. operating current	180					A
<b>AC Output (On-grid)</b>						
Nominal output active power	50,000	60,000	80,000	100,000	110,000	W
Max. output apparent power	55,000	66,000	88,000	110,000	121,000	VA
Max. output active power (cosΦ=1)	55,000	66,000	88,000	110,000	121,000	W
Nominal output current @380Vac	76.0	91.2	121.5	151.9	167.1	A
Nominal output current @400Vac	72.5	87.0	115.9	144.9	159.4	A
Nominal output current @480Vac	60.2	72.2	96.3	120.3	132.4	A
Max. output current @380/400Vac	83.6	100.3	133.7	167.1	183.8	A
Max. output current @480Vac	66.2	79.4	105.9	132.4	145.6	A
Nominal output voltage	380 / 400 / 480, 3W+N+PE					Vac
Nominal grid frequency	50 / 60					Hz
Power factor	0.8 leading - 0.8 lagging					
Total current harmonic distortion	THDI < 3%					
<b>AC Input (On-grid)</b>						
Max. input apparent power	100,000	120,000	160,000	160,000	160,000	VA
Max. input current @380/400Vac	151.9	182.3	243.1	243.1	243.1	A
Max. input current @480Vac	120.3	144.4	192.5	192.5	192.5	A
Max. continuous AC passthrough (grid to load)	83.6	100.3	133.7	167.1	183.8	A
<b>AC Output (Backup)</b>						
Nominal output active power	50,000	60,000	80,000	100,000	110,000	W
Max. output apparent power	55,000	66,000	88,000	110,000	121,000	VA
Peak output power (10 seconds)	75,000	90,000	120,000	150,000	150,000	W
Nominal output voltage	380 / 400 / 480, 3W+N+PE					V
Nominal output frequency	50 / 60					Hz
Power factor	0.8 leading - 0.8 lagging					
Total voltage harmonic distortion	THDv < 3%					
Disruption time of backup switch <sup>2</sup>	0					ms
<b>Efficiency</b>						
Max. efficiency @380/400 Vac	98.3%					
European efficiency @380/400 Vac	97.9%	97.9%	98.0%	98.0%	98.0%	
Max. efficiency @480 Vac	98.5%					
European efficiency @480 Vac	98.2%	98.2%	98.3%	98.3%	98.3%	
<b>Protection</b>						
Safety protection feature	DC reverse polarity protection, Insulation monitoring, Residual current monitoring, Arc fault circuit interrupter, AC overcurrent/overvoltage/short-circuit protection, Type II DC/AC surge protection, Anti-islanding protection					
<b>General Data</b>						
Dimensions (W / H / D)	1097 / 668 / 340					mm
Weight	99	102	102	105	105	kg
Storage temperature range	-40 ~ 70					°C
Operating temperature range	-30 ~ 60					°C
Relative humidity range	0% - 100%					
Max. operating altitude	5,000 (Derating at 4,000m)					m
Cooling	Smart air cooling					
Ingress protection rating	IP66					
Communication	WLAN / Fast Ethernet / RS485 / Sigen CommMod (4G/3G/2G)					
<b>Standard Compliance</b>						
Standard <sup>3</sup>	IEC / EN 62109-1, IEC / EN 62109-2, IEC / EN 61000-6-1, IEC / EN 61000-6-2					

- The requirements for the PV string open-circuit voltage in a PV+ESS DC coupling system are as follows: 1) When the system is configured with 219 battery modules, the string open-circuit voltage should meet the following minimum requirements: 1.1) If configured with 21 battery modules, the string open-circuit voltage should be > 935 V; 1.2) If configured with 20 battery modules, the string open-circuit voltage should be > 870 V; 1.3) If configured with 19 battery modules, the string open-circuit voltage should be > 805 V. 2) When the system is configured with 4 to 18 battery modules, the string open-circuit voltage has no special requirements.
- This refers to the load-side disruption time. Test conditions: In the open-circuit state of the power grid, the total power of the Sigen Hybrid Inverter is higher than the total power of the loads.
- For all standards refer to the certificates category on the Sigenenergy website.
- For Sigen energy gateway connections, the inverter should be connected to the gateway via its AC output port (Grid).
- The information in this document reflects the current state of technology and is subject to change without notice. For the latest updates, please refer to the Sigenenergy website.

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