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

Enjoy Green Energy

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Preliminary

Sigen PV	50M1-HYB	60M1-HYB	80M1-HYB	100M1-HYB	110M1-HYB	Units
DC Input (PV)						
Max. PV input power	100,000	120,000	160,000	200,000	220,000	Wp
Max. DC input voltage			1,100			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
DC Input (Battery)						
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 [1]			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
AC Output (On-grid)						
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%			
AC Output (Backup)						
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 [2]			0			ms
Efficiency						
Max. efficiency			98.3%			
European efficiency	97.9%	97.9%	98.0%	98.0%	98.0%	
Protection						
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			
General Data						
Dimensions (W / H / D)			1110 / 668 / 348			mm
Weight			110			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)			
Standard Compliance						
Standard [3]			IEC / EN 62109-1, IEC / EN 62109-2, IEC / EN 61000-6-1, IEC / EN 61000-6-2			

1. 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 ≥19 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.
2. 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.
3. For all standards refer to the certificates category on the Sigenergy website.
4. For Sigen energy gateway connections, the inverter should be connected to the gateway via its AC output port (Grid).
5. 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 Sigenergy

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