



Sigen Energy Controller

5.0 – 6.0 kW Single Phase

5.0 – 25.0 kW Three Phase

- EMS inside for precise control
- DC ground-fault protection
- Multi-source black start
- On & off-grid compatibility
- DC/AC ratio up to 2 (single phase)
- IP66 system protection rating

Sigen Energy Controller 5.0–6.0 kW Single Phase Australia

SigenStor EC	5.0 SP	6.0 SP	Units
DC Input (from PV)			
Max. PV power	10000	12000	W
Max. DC input voltage	600		V
Nominal DC input voltage	350		V
Start-up voltage	100		V
MPPT voltage range	50 ~ 550		V
Number of MPP. trackers	2		
Number of PV strings per MPPT	1		
Max. input current per MPPT	16		A
Max. short-circuit current per MPPT	20		A
AC Output (on-grid)			
Nominal output power	4999	6000	W
Max. output apparent power	4999	6600	VA
Nominal output current	21.7	27.3	A
Max. output current	21.7	30.0	A
Nominal output voltage	220 / 230/ 240		V
Nominal grid frequency	50 / 60		Hz
Power factor	0.8 leading ~ 0.8 lagging		
Total current harmonic distortion	THDi < 2%		
Efficiency			
Max. efficiency	98.0%		
European efficiency	97.4%		
AC Output (backup)			
Nominal output power	5000	6000	W
Max. output apparent power	5500	6600	W
Peak output power (10 seconds)	7500	9000	W
Nominal output current	22.7	27.3	A
Max. output current	25.0	30.0	A
Peak output current (10 seconds)	34.1	40.9	A
Nominal output voltage	220 / 230 / 240		V
Nominal output frequency	50 / 60		Hz
Power factor	0.8 leading ~ 0.8 lagging		
Total voltage harmonic distortion	THDv < 2%		
Disruption time of backup switch ¹	0		ms
Battery Connection			
Battery module models	SigenStor BAT 5.0 / 8.0		
Number of modules per controller	1 ~ 6		pcs
Battery module voltage range	300 ~ 600		V
Protection			

Safety protection feature

DC ground fault protection, Arc fault circuit interrupter, DC reverse polarity protection, Insulation monitoring, Residual current monitoring, Type II DC/AC surge protection, Anti-islanding protection, AC overcurrent/overvoltage/short-circuit protection.

General Data

Dimensions (W / H / D)	700 / 300 / 245	mm
Weight	16	kg
Storage temperature range	-40 ~ 70	°C
Operating temperature range	-30 ~ 60	°C
Relative humidity range	0% ~ 95%	
Max. operating altitude	4000	m
Cooling	Natural convection	
System ingress protection rating	IP66	
Communication	WLAN / Fast Ethernet / RS485 / Sigen CommMod (4G/3G/2G)	

Standard Compliance

Standard ²	IEC/EN 62109-1, IEC/EN 62109-2, IEC/EN 62477, IEC/EN 61000-6-1, IEC/EN 61000-6-2
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- ¹ This refers to the load-side disruption time, to achieve this functionality Sigen Energy Gateway needs to be used together with Sigen Energy Controller and Sigen Battery. Test conditions: In the open-circuit state of the power grid, the nominal power of the Sigen Energy Controller is higher than the total power of the home loads.
- ² For all standards refer to the certificates category in the Sigenenergy website.

Sigen Energy Controller 5.0–25.0 kW Three Phase Australia

SigenStor EC	5.0 TP		10.0 TP		15.0 TP		25.0 TP		Units
DC Input (from PV)									
Max. PV power	8000		16000		24000		40000		W
Max. DC input voltage			1100						V
Nominal DC input voltage			600						V
Start-up voltage			180						V
MPPT voltage range			160 ~ 1000						V
Number of MPP. trackers	2		3		4				
Number of PV strings per MPPT			1						
Max. input current per MPPT			16						A
Max. short-circuit current per MPPT			20						A
AC Output (on-grid)									
Nominal output power	5000		9999		15000		25000		W
Max. output apparent power	5500		9999		15000		27500		VA
Nominal output current	7.6		14.4		21.7		38.0		A
Max. output current	8.4		14.4		21.7		41.8		A
Nominal output voltage			380 / 400						V
Nominal grid frequency			50 / 60						Hz
Power factor			0.8 leading ~ 0.8 lagging						
Total current harmonic distortion			THDi < 2%						
Efficiency									
Max. efficiency	98.1%		98.3%		98.3%		98.3%		A
European efficiency	96.1%		97.5%		97.9%		98.0%		A
AC Output (backup)									
Nominal output power	5000		10000		15000		25000		W
Max. output apparent power	5500		11000		16500		27500		W
Peak output power (10 seconds)	7500		15000		22500		30000		W
Nominal output current	7.6		15.2		22.8		38.0		A
Max. output current	8.4		16.7		25.1		41.8		A
Peak output current (10 seconds)	11.4		22.8		34.2		45.5		A
Nominal output voltage			380 / 400						V
Nominal output frequency			50 / 60						Hz
Power factor			0.8 leading ~ 0.8 lagging						
Total voltage harmonic distortion			THDv < 2%						
Disruption time of backup switch ¹			0						ms
Battery Connection									
Battery module models	SigenStor BAT 5.0 / 8.0								
Number of modules per controller	1 ~ 6								
Battery module voltage range	600 ~ 900								
Protection									

Safety protection feature

DC ground fault protection, Arc fault circuit interrupter, DC reverse polarity protection, Insulation monitoring, Residual current monitoring, Type II DC/AC surge protection, Anti-islanding protection, AC overcurrent/overvoltage/short-circuit protection

General Data

Dimensions (W / H / D)	700 / 300 / 260	mm
Weight	36	kg
Storage temperature range	-40 ~ 70	°C
Operating temperature range	-30 ~ 60	°C
Relative humidity range	0% ~ 95%	
Max. operating altitude	4000	m
Cooling	Smart air cooling	
System ingress protection rating	IP66	
Communication	WLAN / Fast Ethernet / RS485 / Sigen CommMod (4G/3G/2G)	

Standard Compliance

Standard ²	IEC/EN 62109-1, IEC/EN 62109-2, IEC/EN 61000-6-1, IEC/EN 61000-6-2
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