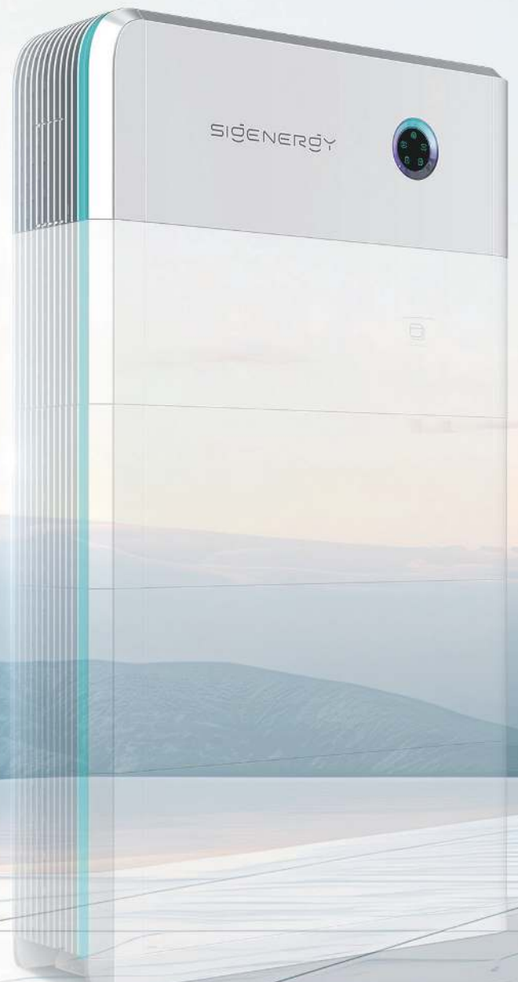
Sigen Energy Controller

5.0-12.0 kW | Single Phase
5.0-30.0 kW | Three Phase

- EMS-integrated intelligent management for precision control
- Max. 2.0 DC/AC ratio compatibility, higher energy utilization (Single Phase)
- Unbalanced 3-phase power output, ensuring efficient operation
- 150% peak output power in off-grid mode, instant high-power boost
- Up to 4 MPP trackers for maximum solar energy extraction



Disclaimer: The information in this file is provided on an "as is" basis. To the fullest extent permitted by law, Sigenergy Technology Co., Ltd. excludes all representations and warranties relating to this file and its contents or which is or may be provided by any affiliates or any other third party, including in relation to any inaccuracies or omissions in this file.

Version: 20251107

Sigen Energy Controller 5.0-12.0 kW Single Phase Australia

SigenStor EC	5.0 SP	6.0 SP	8.0 SP	10.0 SP	12.0 SP	Units
DC Input (from PV)						
Max. PV power	10000	12000	16000	20000	24000	W
Max. DC input voltage [1]			600			V
Nominal DC input voltage			350			V
Start-up voltage			100			V
MPPT voltage range			50 ~ 550			V
Number of MPP. trackers	2	2	3	4	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	4999	6000	8000	9999	12000	W
Max. output apparent power	4999	6600	8800	9999	12000	VA
Nominal output current	21.7	27.3	36.4	43.4	54.6	A
Max. output current	21.7	30.0	40.0	43.4	54.6	A
Nominal output voltage	220 / 230 / 240			220 / 230		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%	98.0%	97.6%	97.6%	97.6%	
European efficiency	97.4%	97.4%	97.0%	97.0%	97.0%	
AC Output (backup)						
Nominal output power	5000	6000	8000	10000	12000	W
Max. output apparent power	5500	6600	8800	11000	13200	VA
Peak output power (10 seconds)	7500	9000	12000	15000	18000	W
Nominal output current	22.7	27.3	36.4	45.5	54.6	A
Max. output current	25.0	30.0	40.0	50.0	60.0	A
Peak output current (10 seconds)	34.1	40.9	54.6	68.2	81.8	A
Nominal output voltage	220 / 230 / 240			220 / 230		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 [2]			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 reverse polarity protection, Insulation monitoring, Residual current monitoring, Arc fault circuit interrupter [3], AC overcurrent/overvoltage/short-circuit protection. Type II DC/AC surge protection, Anti-islanding protection			
General Data						
Dimensions (W / H / D)	700 / 300 / 245			700 / 300 / 260		mm
Weight	18			36		kg
Storage temperature range			-40 ~ 70			ºC
Operating temperature range			-30 ~ 60			ºC
Relative humidity range			0% ~ 100%			
Max. operating altitude			4000			m
Cooling	Natural convection			Smart air cooling		
System ingress protection rating			IP66			
Communication			WLAN / Fast Ethernet / RS485 / Sigen CommMod (4G/3G/2G)			
Standard Compliance						
Standard [4]			IEC 62109-1:2010, IEC 62109-2:2011, IEC/EN 62477, IEC/EN 61000-6-1, IEC/EN 61000-6-2, AS/NZS 4777.2:2020+A1:2024			

1. The inverter will initiate protection if the input voltage exceeds the MPPT operating voltage range.
2. 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.
3. This is an optional feature only supported in certain models, please contact Sigenergy for more information.
4. For all standards refer to the certificates category on the Sigenergy website.

Sigen Energy Controller 5.0-30.0 kW Three Phase Australia

SigenStor EC	5.0 TP	10.0 TP	15.0 TP	20.0 TP	25.0 TP	30.0 TP	Units
DC Input (from PV)							
Max. PV power	8000	16000	24000	32000	40000	48000	W
Max. DC input voltage [1]				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	3	4	4	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	20000	25000	29999	W
Max. output apparent power	5000	9999	15000	22000	27500	29999	VA
Nominal output current	7.2	14.4	21.7	30.4	38.0	43.4	A
Max. output current	7.2	14.4	21.7	33.4	41.8	43.4	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%	98.3%	98.4%	
European efficiency	96.1%	97.5%	97.9%	97.9%	98.0%	98.0%	
AC Output (backup)							
Nominal output power	5000	10000	15000	20000	25000	30000	W
Max. output apparent power	5500	11000	16500	22000	27500	33000	VA
Peak output power (10 seconds)	7500	15000	22500	30000	30000	36000	W
Nominal output current	7.6	15.2	22.8	30.4	38.0	45.6	A
Max. output current	8.4	16.7	25.1	33.4	41.8	50.1	A
Peak output current (10 seconds)	11.4	22.8	34.2	45.6	45.6	54.7	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 [2]				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				600 ~ 900			V
Protection							
Safety protection feature				DC reverse polarity protection, Insulation monitoring, Residual current monitoring, Arc fault circuit interrupter [3], AC overcurrent/overvoltage/short-circuit protection. Type II DC/AC surge protection, Anti-islanding protection			
General Data							
Dimensions (W / H / D)				700 / 300 / 260			mm
Weight	36	36	36	36	36	38	kg
Storage temperature range				-40 ~ 70			ºC
Operating temperature range				-30 ~ 60			ºC
Relative humidity range				0% ~ 100%			
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 [4]				IEC 62109-1:2010, IEC 62109-2:2011, IEC/EN 62477, IEC/EN 61000-6-1, IEC/EN 61000-6-2, AS/NZS 4777.2:2020+A1:2024			

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