

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



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			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	W
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 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 reverse polarity protection, Insulation monitoring, Residual current monitoring, Arc fault circuit interrupter ² , 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			°C
Operating temperature range			-30 ~ 60			°C
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 ³	IEC/EN 62109-1, IEC/EN 62109-2, IEC/EN 62477, IEC/EN 61000-6-1, IEC/EN 61000-6-2, AS 4777					

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.

This is an optional feature only supported in certain models, please contact Sigenergy for more information.
3.

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			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	W	
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 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	600 ~ 900							V
Protection								
Safety protection feature	DC reverse polarity protection, Insulation monitoring, Residual current monitoring, Arc fault circuit interrupter ² , 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							°C
Operating temperature range	-30 ~ 60							°C
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 ³	IEC/EN 62109-1, IEC/EN 62109-2, IEC/EN 61000-6-1, IEC/EN 61000-6-2, AS 4777							

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