



Sigen Energy Controller

3.0 – 12.0 kW Single Phase

5.0 – 30.0 kW Three Phase

- EMS inside for precise control
- Up to 4 MPP. trackers (three phase)
- Multi-source black start
- On & off-grid compatibility
- DC/AC ratio up to 2 (single phase)
- IP66 system protection rating

Sigen Energy Controller 3.0-12.0 kW Single Phase AU&NZ

SigenStor EC	3.0 SP	5.0 SP	6.0 SP	8.0 SP	10.0 SP	12.0 SP	Units
DC Input (from PV)							
Max. PV power	6000	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	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	3000	4999	6000	8000	9999	12000	W
Max. output apparent power	3300	4999	6600	8800	9999	12000	VA
Nominal output current	13.6	21.7	27.3	36.4	43.4	54.6	A
Max. output current	15.0	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%	98.0%	97.6%	97.6%	97.6%	
European efficiency	97.0%	97.4%	97.4%	97.0%	97.0%	97.0%	
AC Output (backup)							
Nominal output power	3000	5000	6000	8000	10000	12000	W
Max. output apparent power	3300	5500	6600	8800	11000	13200	W
Peak output power (10 seconds)	4500	7500	9000	12000	15000	18000	W
Nominal output current	13.6	22.7	27.3	36.4	45.5	54.6	A
Max. output current	15.0	25.0	30.0	40.0	50.0	60.0	A
Peak output current (10 seconds)	20.5	34.1	40.9	54.5	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% - 95%				
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					

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 Sigenenergy for more information.

3. For all standards refer to the certificates category on the Sigenenergy website.

Sigen Energy Controller 5.0-30.0 kW Three Phase AU&NZ

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	29900	W
Max. output apparent power	5500	9999	15000	22000	27500	29900	VA
Nominal output current	7.6	14.4	21.7	30.4	38.0	43.3	A
Max. output current	8.4	14.4	21.7	33.4	41.8	43.3	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% - 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 ³	IEC/EN 62109-1, IEC/EN 62109-2, IEC/EN 61000-6-1, IEC/EN 61000-6-2						

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