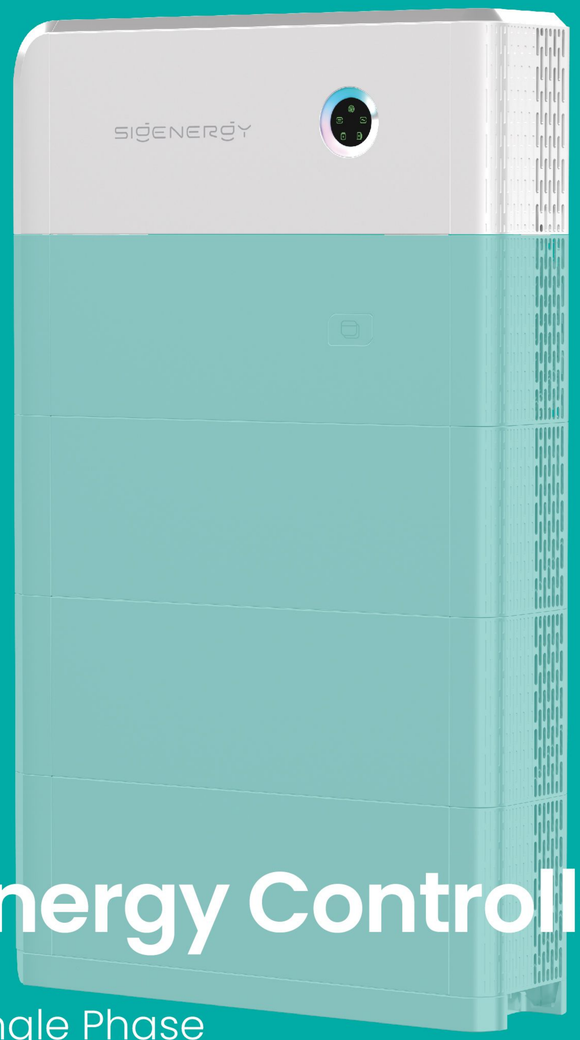

Sigen Energy Controller

3.0 – 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 3.0-6.0 kW Single Phase

SigenStor EC	3.0 SP	3.6 SP	4.0 SP	4.6 SP	5.0 SP	6.0 SP	Units
DC Input (from PV)							
Max. PV power	6000	7360	8000	9200	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	3000	3680	4000	4600	5000	6000	W
Max. output apparent power	3300	3680	4400	5000	5500	6600	VA
Nominal output current	13.6	16.0	18.2	20.9	22.7	27.3	A
Max. output current	15.0	16.0	20.0	22.7	25.0	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	97.0%	97.1%	97.2%	97.3%	97.4%	97.4%	
AC Output (backup)							
Peak output power (10 seconds)	4500	5520	6000	6900	7500	9000	W
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, Anti-islanding protection, AC overcurrent/overvoltage/short-circuit protection, Insulation monitoring, Residual current monitoring, DC/AC surge protection						
General Data							
Dimensions (W / H / D)	700 / 300 / 245						mm
Weight	18						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						

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 Sigenergy website.

Sigen Energy Controller 5.0-25.0 kW Three Phase

Preliminary

SigenStor EC	5.0 TP	6.0 TP	8.0 TP	10.0 TP	12.0 TP	15.0 TP	17.0 TP	20.0 TP	25.0 TP	Units
DC Input (from PV)										
Max. PV power	8000	9600	12800	16000	19200	24000	27200	32000	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	6000	8000	10000	12000	15000	17000	20000	25000	W
Max. output apparent power	5500	6600	8800	11000	13200	16500	18700	22000	27500	VA
Nominal output current	7.6	9.1	12.2	15.2	18.2	22.8	25.8	30.4	38.0	A
Max. output current	8.4	10.0	13.4	16.7	20.1	25.1	28.4	33.4	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	98.4%									
European efficiency	98.0%									
AC Output (backup)										
Peak output power (10 seconds)	7500	9000	12000	15000	18000	22500	25500	30000	30000	W
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 ground fault protection, Arc fault circuit interrupter, DC reverse polarity protection, Anti-islanding protection, AC overcurrent/overvoltage/short-circuit protection, Insulation monitoring, Residual current monitoring, DC/AC surge 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)									

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.