



Sigen Energy Controller

3.0 – 12.0 kW Single Phase
5.0 – 30.0 kW Three Phase

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

Signen Energy Controller 3.0–12.0 kW Single Phase AU&NZ

SignenStor 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							SignenStor 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 / Signen 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						

Signen Energy Controller 5.0–30.0 kW Three Phase AU&NZ

SignenStor 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							SignenStor 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 / Signen 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						

- This refers to the load-side disruption time, to achieve this functionality Signen Energy Gateway needs to be used together with Signen Energy Controller and Signen Battery. Test conditions: In the open-circuit state of the power grid, the nominal power of the Signen Energy Controller is higher than the total power of the home loads.
- This is an optional feature only supported in certain models, please contact Signenergy for more information.
- For all standards refer to the certificates category on the Signenergy website.

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