



Sigen Energy Controller

5.0 – 6.0kW Single Phase

5.0 – 25.0kW 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

Signen Energy Controller 5.0–6.0 kW Single Phase Australia

SignenStor EC	5.0 SP	6.0 SP	Units
DC Input (from PV)			
Max. PV power	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	4999	6000	W
Max. output apparent power	4999	6600	VA
Nominal output current	21.7	27.3	A
Max. output current	21.7	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	97.4%		
AC Output (backup)			
Nominal output power	5000	6000	W
Max. output apparent power	5500	6600	W
Peak output power (10 seconds)	7500	9000	W
Nominal output current	22.7	27.3	A
Max. output current	25.0	30.0	A
Peak output current (10 seconds)	34.1	40.9	A
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	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 ground fault protection, Arc fault circuit interrupter, DC reverse polarity protection, Insulation monitoring, Residual current monitoring, Type II DC/AC surge protection, Anti-islanding protection, AC overcurrent/overvoltage/short-circuit protection.		

General Data

Dimensions (W / H / D)	700 / 300 / 245	mm
Weight	16	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 / Signen 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 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.
- ² For all standards refer to the certificates category in the Signenergy website.

Signen Energy Controller 5.0–25.0 kW Three Phase Australia

SignenStor EC	5.0 TP	10.0 TP	15.0 TP	25.0 TP	Units
DC Input (from PV)					
Max. PV power	8000	16000	24000	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	9999	15000	25000	W
Max. output apparent power	5500	9999	15000	27500	VA
Nominal output current	7.6	14.4	21.7	38.0	A
Max. output current	8.4	14.4	21.7	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	98.1%	98.3%	98.3%	98.3%	A
European efficiency	96.1%	97.5%	97.9%	98.0%	A
AC Output (backup)					
Nominal output power	5000	10000	15000	25000	W
Max. output apparent power	5500	11000	16500	27500	W
Peak output power (10 seconds)	7500	15000	22500	30000	W
Nominal output current	7.6	15.2	22.8	38.0	A
Max. output current	8.4	16.7	25.1	41.8	A
Peak output current (10 seconds)	11.4	22.8	34.2	45.5	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				
Battery module voltage range	600 – 900				
Protection					
Safety protection feature	DC ground fault protection, Arc fault circuit interrupter, DC reverse polarity protection, Insulation monitoring, Residual current monitoring, Type II DC/AC surge protection, Anti-islanding protection, AC overcurrent/overvoltage/short-circuit 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 / Signen CommMod (4G/3G/2G)	
Standard Compliance		
Standard ²	IEC/EN 62109-1, IEC/EN 62109-2, IEC/EN 61000-6-1, IEC/EN 61000-6-2	

- ¹ 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.
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