



# Sigen Energy Controller

**3.0 – 12.0 kW** Single Phase

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

# Sigen Energy Controller 3.0–12.0 kW Single Phase <sup>1</sup>

SigenStor EC	3.0 SP	3.6 SP	4.0 SP	4.6 SP	5.0 SP	6.0 SP	8.0 SP	10.0 SP	12.0 SP	Units	
<b>DC Input (from PV)</b>											
Max. PV power	6000	7360	8000	9200	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						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
<b>AC Output (on-grid)</b>											
Nominal output power	3000	3680	4000	4600	5000	6000	8000	10000	12000	W	
Max. output apparent power	3300	3680	4400	5000	5500	6600	8800	11000	12000	VA	
Nominal output current	13.6	16.0	18.2	20.9	22.7	27.3	36.4	45.5	54.6	A	
Max. output current	15.0	16.0	20.0	22.7	25.0	30.0	40.0	50.0	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%					
<b>Efficiency</b>											
Max. efficiency	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%	97.6%	97.6%	97.6%		
European efficiency	97.0%	97.1%	97.2%	97.3%	97.4%	97.4%	97.0%	97.0%	97.0%		
<b>AC Output (backup)</b>											
Peak output power (10 seconds)	4500	5520	6000	6900	7500	9000	12000	15000	15000	W	
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 <sup>2</sup>						0					ms
<b>Battery Connection</b>											
Battery module models						SigenStor BAT 5.0 / 8.0					
Number of modules per controller						1 ~ 6					pcs
Battery module voltage range						300 ~ 600					V
<b>Protection</b>											
Safety protection feature	DC reverse polarity protection, Insulation monitoring, Residual current monitoring, Arc fault circuit interrupter <sup>3</sup> , AC overcurrent/overvoltage/short-circuit protection, Type II DC/AC surge protection, Anti-islanding protection										
<b>General Data</b>											
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)										
<b>Standard Compliance</b>											
Standard <sup>4</sup>	IEC/EN 62109-1, IEC/EN 62109-2, IEC/EN 62477, IEC/EN 61000-6-1, IEC/EN 61000-6-2										

- Sigen Energy Controller 8.0–12.0 kW Single Phase is only available in specific regions. Please contact Sigenenergy or local distributors for details.
- 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.
- This is an optional feature only supported in certain models, please contact Sigenenergy for more information.
- For all standards refer to the certificates category on the Sigenenergy website.

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