SigenCube

ES401-2H/ES401-4H
ES401-2H-GL/ES401-4H-GL

- Highly integrated layout cuts footprint and deployment costs
- Factory pre-commissioning & one-tap setup accelerate deployment
- Cell-to-system protection, precise thermal runaway control
- Pack-level active balancing, no need for on-site SOC calibration
- Low-noise operation below 60 dB expands site flexibility
- 150% overload for 10 seconds ensures reliable start-up



Sigen Energy Storage System

Preliminary

SigenCube	ES401-2H	ES401-4H	ES401-2H-GL	ES401-4H-GL	Units
DC Side					
Battery type		$LiFePO_4$			
Total energy capacity		401			kWh
Nominal voltage range		896 ~ 1,152			V
Nominal charge / discharge rate	0.5P	0.25P	0.5P	0.25P	
AC Side (On-grid)					
Nominal output power	200,000	99,990	200,000	99,990	W
Max. output apparent power	220,000	109,989	220,000	109,989	VA
Max. output active power (cosΦ=1)	220,000	109,989	220,000	109,989	W
Nominal voltage		380 / 400, 3P4W			Vac
Nominal grid frequency		50 / 60			Hz
Power factor		1 leading ~ 1 lagging			
Total current harmonic distortion		THDi ≤ 1.5%			
AC Side (Backup)[1]					
Nominal output power	200,000	99,990	200,000	99,990	W
Max. output apparent power	220,000	109,989	220,000	109,989	VA
Peak output power (10 seconds)	300,000	149,985	300,000	149,985	VA
Nominal voltage		380 / 400, 3P4W			Vac
Nominal grid frequency		50 / 60			Hz
Power factor		1 leading ~ 1 lagging			
Total voltage harmonic distortion		THDv ≤ 2%			
Disruption time of backup switch[2]		0			ms
Protection					
Safety protection feature		Insulation monitoring, Residual current monitoring, AC overcurrent/overvoltage/short-circuit protection, Type II AC surge protection, Anti-islanding protection			
System General Data					
Dimensions (W / H / D)		1,100 / 2,450 / 1,650			mm
Weight		4,000			kg
Storage temperature range		-35 ~ 60			°C
Operating temperature range		–30 ~ 55 (Derating at 45°C)			°C
Relative humidity range		0% ~ 100% (non-condensing)			
Max. operating altitude		4,000 (Derating at 3,000m)			m
Cooling		Smart Liquid cooling			
Balance mode		Active balance			
Fire suppression system	Combustible gas detector, Smoke detector, Heat detector, Explosion-proof fan, Alarm sounder, Cabinet-level Aerosol, Top explosion vent, Water-based fire suppression		Combustible gas detector, Smoke detector, Heat detector, Explosion-proof fan, Alarm sounder, Cabinet-level Aerosol,		
System ingress protection rating		IP55			
EMC protection rating		Class B			
Anti-corrosion protection		C4-M			
Noise		≤ 60			dB
Communication		WLAN, Fast Ethernet, RS485			
Communication protocol		Modbus-TCP, IEC61850			

1. SigenCube must be paired with Sigen Energy Gateway to enable backup operation.
2. This refers to the load-side disruption time. Test conditions: In the open-circuit state of the power grid, the total power of the SigenCube is higher than the total power of the loads.
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