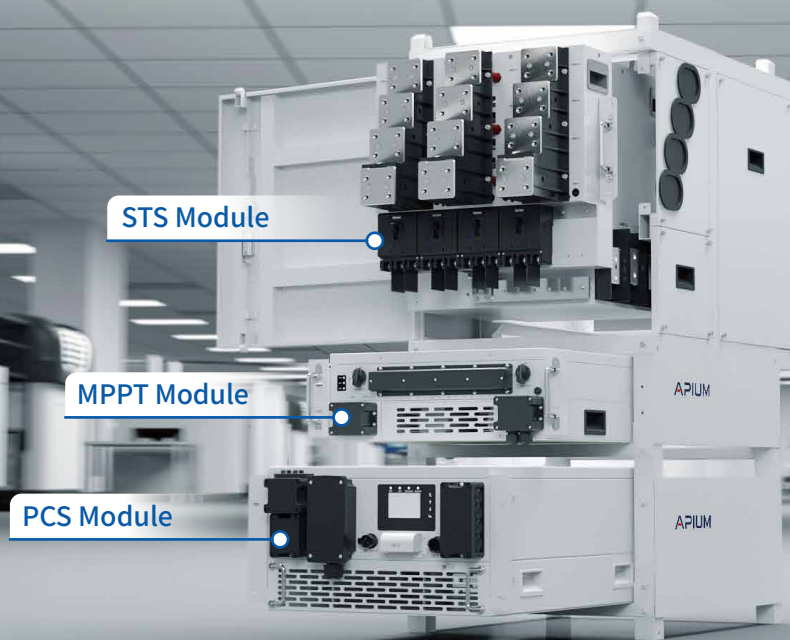


100/125KW-2.5MW C&I ESS SOLUTION

**PCS with Integrated EMS, Supporting Flexible
Integration with MPPT & STS Modules**



- **High PV Capacity**

Up to 200 kWp PV capacity per MPPT module, enabling flexible system scalability.

- **Strong Overload Capability**

Supports continuous AC overloading and 2× peak power output in off-grid mode, ensuring stable operation of critical loads.

- **Flexible Expansion**

100/125kW PCS units enable system scalability up to 2.5 MW.

- **Multi-Tracker MPPT Design**

Equipped with 8 MPPT trackers per MPPT module, with up to 40A per tracker to maximize energy yield.

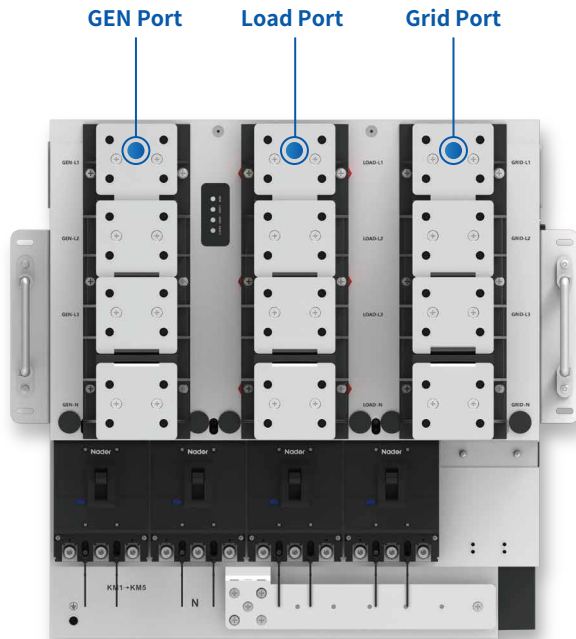
- **UPS-Level Switching**

Supports seamless on-grid/off-grid switching in <10 ms via STS modules.

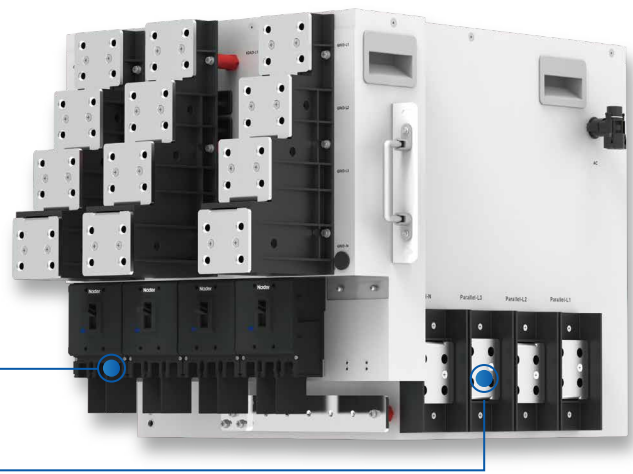
- **Integrated EMS**

Supports zero-export, overload protection, TOU optimization, peak shaving, demand control, and load tracking strategies.

STS Module



- Three independent power paths (diesel / load / grid), with each path supporting 500 kW.
- <10 ms on-grid/off-grid switching*.
- 5 × 100 kW or 4 × 125 kW PCS units per STS module, up to 5 STS modules in parallel.



MPPT Module & PCS Module

MPPT Module (8 MPPT Trackers)

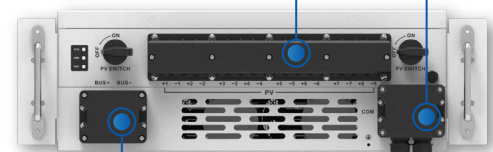
- 8 MPPT Trackers, up to 40A per tracker.
- Up to 200 kWp PV capacity per MPPT module.

PCS Module (100kW/125kW)

- 175A/200A charge and discharge current.
- Maximum efficiency of 98.5%.
- System rated power up to 2.5MW.
- Supports instantaneous peak power up to 200% of rated power.
- Integrates zero-export and time-of-use control functions.
- Built-in EMS for intelligent energy management and optimized system operation.

PV Input
8 MPPT

CAN/RS485



DC Port



Battery Port

CT/Meter/BMS/
MPPT/Parallel

Data Logger

AC Output

* For stable off-grid operation, the continuous off-grid load should not exceed 70% of the PCS rated power.

MPPT Module
SUN-MPPT-L01-EU-AM8
PV String Input Data

Max. PV access power(kW)	200
Max. PV Input Power(kW)	160
Max. PV Input Voltage (V)	800
Start-up Voltage (V)	200
MPPT Voltage Range (V)	180-750
Full Load MPPT Voltage Range (V)	450-750
Rated PV Input Voltage (V)	600
Max. Operating PV Input Current (A)	40+40+40+40+40+40+40+40
Max. Input Short-Circuit Current (A)	60+60+60+60+60+60+60+60
No. of MPP Trackers	8

Efficiency

Max. Efficiency	>99%
MPPT Efficiency	>99.9%

Equipment Protection

DC input reverse protection	YES
DC ARC protection	Optional
Anti-PID(Potential Induced Degradation)	Optional
DC Switch	YES
Surge Protection Level	TYPE II

General Data

Ingress Protection(IP) Rating	IP65
Over Voltage Category	OVC II
Cabinet Size[W×H×D] (mm)	543x198x700
Weight (kg)	41.75
Type Of Cooling	Intelligent air cooling
Safety EMC/Standard	IEC/EN 62109-1

DC Output Data

DC Output Voltage Range(V)	630-1000
Max. DC Output Current(A)	200

STS Module
SUN-ST500L
Grid/PCS Side Data

Rated AC Input/Output Active Power (kW)	500
Rated AC Input/Output Current (A)	758/725
Rated Input/Output Voltage(V)	220/380, 230/400 (three phase)
Grid Connection Form	3L/N/PE
Rated Input/Output Grid Frequency	50Hz/60Hz

Load Side Data

Rated Output Active Power (kW)	500
Rated Output Current (A)	758/725
Rated Output Voltage(V)	220/380, 230/400 (three phase)
Grid Connection Form	3L/N/PE
Rated Output Grid Frequency	50Hz/60Hz

GEN Side Data

Rated AC Input Active Power (kW)	500
Rated AC Input Current (A)	758/725
Rated Input Voltage(V)	220/380, 230/400 (three phase)
Grid Connection Form	3L/N/PE
Rated Input Grid Frequency	50Hz/60Hz

General Data

Off grid switching time	<10ms
Ingress Protection(IP) Rating	IP20
Over Voltage category	OVC III

Cabinet Size[W×H×D] (mm)	543x575x671	
Weight (kg)	108	
Type Of Cooling	Natural Cooling	
Safety EMC/Standard	IEC/EN 61439-1/-2	
PCS Model	SUN-100K-PCS01HP3	SUN-125K-PCS01HP3
Battery Data		
Battery Type	Lithium-ion	
Battery Voltage Range (V)	630-1000	
Max. Charging Current (A)	175	200
Max. Discharging Current (A)	175	200
Charging Strategy for Li-ion Battery	Self-adaption to BMS	
Number of Battery Input	1	
DC Input Data		
DC Input Voltage Range(V)	630-1000	630-1000
Max. DC Input Current(A)	200	200
AC Input/Output Data		
Rated AC Input/Output Active Power (kW)	100	125
Max. AC Input/Output Apparent Power (kVA)	110	125
Rated AC Input/Output Current (A)	151.6/145	189.4/181.2
Max. AC Input/Output Current (A)	166.7/159.5	189.4/181.2
Rated Input/Output Voltage/Range(V)	220/380, 230/400 0.85Un-1.1Un	
Grid Connection Form	3L+N+PE	
Rated Input/Output Grid Frequency/Range	50Hz/45Hz-55Hz 60Hz/55Hz-65Hz	
Power Factor Adjustment Range	-1~1	
Total Current Harmonic Distortion THDi	<3% (of nominal power)	
DC Injection Current	<0.5% In	
Efficiency		
Max. Efficiency	98.5%	
Euro Efficiency	97.8%	
Equipment Protection		
Integrated	AC Output Overcurrent Protection, AC Output Overvoltage Protection, AC Output Short Circuit Protection, Thermal Protection,Anti-islanding Protection, Insulation Impedance Detection, Residual Current Detection	
Surge Protection Level	TYPE II(DC), TYPE II(AC)	
Interface		
LCD/LED display	LCD	
Communication Interface	WIFI, RS485, CAN, Meter	
General Data		
Operating Temperature Range(°C)	-40°C-60°C,> 45°C Derating	
Permissible Ambient Humidity	0-95%	
Permissible Altitude	4000m	
Noise	<75dB	
Ingress Protection(IP) Rating	IP 65(PCS Module)	
Cabinet Size[W×H×D] (mm)	543x310x775 (Excluding connectors and brackets)	
Weight (kg)	81.86	
Inverter Topology	Non-Isolated	
Over Voltage Category	OVC II(DC), OVC III(AC)	
Type of Cooling	Intelligent Air Cooling	
Warranty	5 Years/10 Years the Warranty Period Depends the Final Installation Site of Inverter, More Info Please Refer to Warranty Policy	
Grid Regulation	IEC 61727, IEC 62116, CEI 0-21, EN 50549, NRS 097, RD 140, UNE 217002, OVE-Richtlinie R25, G99, VDE-AR-N 4105	
Safety/EMC Standard	IEC/EN 62477-1	