



*Create better life with green energy*



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**Manual**

# Residential / Commercial & Industrial PV-Storage System



Item	Product Parameters			
	System Parameters			
Model	ICESS-T 0-30/40/A	ICESS-T 0-40/80/A	ICESS-T 0-50/102/A	ICESS-T 0-60/122/A
Capacity	40.96kWh	81.92kWh	102.4kWh	122.88kWh
Rated Voltage	409.6V		512V	614V
Operating Voltage Range	371.2V~454.4V		464V~568V	556.8V~681.6V
Battery Cell	LFP3.2V/100Ah			
Communication Method	LAN, RS485/CAN, 4G			
Operating Temperature Range	Charging: 0°C~55°C Discharging: -20°C~55°C			
Maximum Charge/Discharge Current	100A			
IP Rating	IP54			
Relative Humidity	10%RH~90%RH			
Altitude	≤2000m			
Installation Method	Rack-mounted			
Dimensions (mm)	600*520*1300	1200*520*1300	1800*520*1300	1800*520*1550
Inverter Parameters				
Battery Voltage Range	160 ~800V	160 ~800V	160 ~800V	160 ~1000V
Maximum Charging Current	2 ×50A			
Maximum Discharging Current	2 ×50A			
Maximum Charge/Discharge Power	33kW	44kW	55kW	66kW
Number of Battery Input Channels	2			
Battery Charging Strategy	Adaptive BMS			
PV Maximum DC Input Power	39kW	52kW	65kW	96kW
PV Maximum DC Input Voltage	1000V			
MPPT (Maximum Power Point Tracking) Range	150 ~850V			
Full Load DC Voltage Range	360 ~850V	360 ~850V	450 ~850V	365~850V
Rated DC Input Voltage	600V	600V	600V	650V
PV Input Current	3 ×36A	4 ×36A	4 ×36A	6 ×36A
Number of MPPTs	3	4	4	6

## Product Features

 Rack-mounted design for easy installation and flexible expansion

 Full-Dimension Remote Intelligent Control

 Fast Charging, Ultra-Long Endurance

 Intelligent Temperature Control, Multiple Safety Protections

 Concise appearance design for clear visibility of equipment status

 Compatible with Multiple Operating Modes and Flexible Capacity Configuration

# Residential / Commercial & Industrial PV-Storage System



Item	Product Parameters			
	System Parameters			
Model	ICESS-T 0-60/112/A	ICESS-T 0-100/225/A	ICESS-T 0-160/321/A	ICESS-T 0-160/482/A
Capacity	112.532kWh	225.075kWh	321.536kWh	482.304kWh
Rated Voltage	358.4V		512V	
Operating Voltage Range	324.8V~397.6V		464V~568V	
Battery Cell	LFP3.2V/314Ah			
Communication Method	LAN, RS485/CAN, 4G			
Operating Temperature Range	Charging: 0°C ~ 55°C Discharging: -20°C ~ 55°C			
Maximum Charge/Discharge Current	157A		314A	
IP Rating	IP54			
Relative Humidity	10%RH~90%RH			
Altitude	≤2000m			
Installation Method	Rack-mounted			
Dimensions (mm)	1900*500*800	1900*1000*800	1900*1500*800	1900*2000*800
Inverter Parameters				
Battery Voltage Range	160 ~1000V			
Maximum Charging Current	1 × 157A		2 × 157A	
Maximum Discharging Current	1 × 157A		2 × 157A	
Maximum Charge/Discharge Power	66kW	110kW	176kW	
Number of Battery Input Channels	1	2	2	
Battery Charging Strategy	Adaptive BMS			
PV Maximum DC Input Power	40-180kW			
PV Maximum DC Input Voltage	1000V			
MPPT (Maximum Power Point Tracking) Range	150 ~850V			
Full Load DC Voltage Range	365~850V		485 ~850V	
Rated DC Input Voltage	650V			650V
PV Input Current	4 ×36A		6 ×36A	
Number of MPPTs	4		6	

## Product Features

 Rack-mounted design for easy installation and flexible expansion

 Full-Dimension Remote Intelligent Control

 Fast Charging, Ultra-Long Endurance

 Intelligent Temperature Control, Multiple Safety Protections

 Concise appearance design for clear visibility of equipment status

 Compatible with Multiple Operating Modes and Flexible Capacity Configuration

# Commercial & Industrial Energy Storage System



## Product Features

### Safe and reliable

- Full-range battery cell temperature collection + AI monitoring and early warning
- Intelligent temperature control system, temperature/smoke detection + PACK-level and cluster-level composite fire protection
- Two-stage overcurrent protection, suitable for harsh and complex environments

### Flexible and stable

- Intelligent AI technology and smart energy management system (EMS) to improve equipment operating efficiency
- QR code-based fault query + data monitoring for clear display of equipment status data
- Professional operation and maintenance as well as monitoring software support to ensure safe, stable and reliable operation of equipment

### Intelligent operation and maintenance

- Flexible customization of operation strategies, better matching load characteristics and power consumption habits
- High-efficiency and flexible PCS configuration + 314Ah battery cell large-capacity system
- PV-storage intelligent integrated system with multiple options and on-demand expansion

Product Parameters				
Equipment Model	ICESS-T 0-30/160/A	ICESS-T 0-100/225/A	ICESS-T 0-120/241/A	ICESS-T 0-125/257/A
AC Side Parameters (Grid-connected)				
Apparent Power	30kVA	110kVA	135kVA	137.5kVA
Rated Power	30kW	100kW	120kW	125kW
Rated Voltage	400Vac			
Voltage Range	400Vac±15%			
Rated Current	44A	144A	173A	180A
Frequency Range	50/60Hz±5Hz			
Power Factor	0.99			
THDi	≤3%			
AC System	Three-Phase Five-Wire System			
AC Side Parameters (Off-grid)				
Rated Power	30kW	100kW	120kW	125kW
Rated Voltage	380Vac			
Rated Current	44A	152A	173A	190A
Rated Frequency	50/60Hz			
THDu	≤5%			
Overload Capacity	110% (10min) , 120% (1min)			
Battery Side Parameters				
Battery Capacity	160.768KWh	225.075KWh	241.152KWh	257.228KWh
Battery Type	LFP			
Rated Voltage	512V	716.8V	768V	819.2V
Voltage Range	464~568V	649.6V~795.2V	696~852V	742.4V~908.8V
Basic Characteristics				
AC/DC Startup Function	Equipped with			
Islanding Protection	Equipped with			
Forward/Reverse Switching Time	≤10ms			
System Efficiency	≥89%			
Protection Functions	Overvoltage/Undervoltage, Overcurrent, Overtemperature/Low Temperature, Islanding, Overhigh/Overlow SOC, Low Insulation Resistance, Short Circuit Protection, etc.			
Operating Temperature	-20°C~+50°C			
Cooling Method	Air Cooling + Intelligent Air Conditioning			
Relative Humidity	≤95%RH, No Condensation			
Altitude	3000m			
IP Protection Rating	IP54			
Noise	≤70dB			
Communication Method	LAN, RS485, 4G			
Overall Dimensions (mm)	1820*1254*2330 (Including Air Conditioning)			

# Commercial & Industrial Energy Storage System



## Product Features

- Safe and reliable
  - Independent liquid cooling system + compartment isolation, featuring high protection and safety performance
  - Full-range battery cell temperature collection, intelligent temperature control system + AI monitoring and early warning
  - Two-stage overcurrent protection, temperature/smoke detection + PACK-level and cluster-level composite fire protection
- Flexible and stable
  - Intelligent AI technology and smart Energy Management System (EMS) to improve equipment operating efficiency
  - QR code-based fault query + data monitoring for clear display of equipment status data
  - Professional operation and maintenance and monitoring software support to ensure safe, stable and reliable operation of the equipment
- Intelligent operation and maintenance
  - Flexible customization of operation strategies, better matching load characteristics and power consumption habits
  - Centralized control and management of multi-unit parallel connection, with hot-swapping and hot-disconnection technology to reduce fault impacts
  - PV-storage intelligent integrated system with multiple options and flexible expansion

Product Parameters		
Equipment Model	ICESST 0-105/208/L	ICESST 0-130/261/L
AC Side Parameters (Grid Connection)		
Apparent Power	115.5kVA	143kVA
Rated Power	105kW	130kW
Rated Voltage	400Vac	
Voltage Range	400Vac±15%	
Maximum Current	151.5A	188A
Frequency Range	50/60Hz±5Hz	
Power Factor	0.99	
THDi	≤3%	
AC System	Three-Phase Five-Wire System	
AC Side Parameters (Off-Grid)		
Rated Power	105kW	130kW
Rated Voltage	380Vac	
Rated Current	151.5A	188A
Rated Frequency	50/60Hz	
THDu	≤5%	
Overload Capacity	110% (10min), 120% (1min)	
Battery Side Parameters		
Battery Capacity	208.998KWh	261.248KWh
Battery Type	LFP	
Rated Voltage	665.6V	832V
Voltage Range	603.2V~738.4V	754V~923V
Basic Characteristics		
AC/DC Startup Function	Equipped with	
Islanding Protection	Equipped with	
Forward/Reverse Switching Time	≤10ms	
System Efficiency	≥89%	
Protection Functions	Overvoltage/Undervoltage, Overcurrent, Overtemperature/Low Temperature, Islanding, Overhigh/Overflow SOC, Low Insulation Resistance, Short Circuit Protection, etc.	
Operating Temperature	-25°C~+55°C	
Cooling Method	Liquid Cooling	
Relative Humidity	≤95%RH, No Condensation	
Altitude	3000m	
IP Rating	IP54	
Noise Level	≤70dB	
Communication Method	LAN, RS485, 4G	
Overall Dimensions (mm)	1000*1350*2350	

# Distributed Microgrid System



## Product Features

- Split modular design for more flexible deployment and expansion
  - Adopts a highly protective split structure of "one unit per cabin / one cabinet per cabin"
  - Independent temperature control and independent operation & maintenance; capacity ranges from 241 to 723 kWh
  - PACK-level and cluster-level composite fire protection
- Intelligent Operation and Maintenance
  - Equipped with intelligent BMS + AI energy management system to improve equipment operating efficiency
  - Supports LAN/RS485/CAN remote monitoring
  - Enables multi-module linkage and centralized dispatching of "source-storage-load"
- Full-Dimensional Safety Protection
  - Equipped with full-range battery cell status collection + AI predictive early warning
  - Smoke/temperature detection + perfluorohexane/aerosol fire protection (optional)
  - Customizable on demand, flexible matching of battery systems and flexible power selection

Battery Cabinet Product Parameters					
Equipment Model	TCESS-S 60-120/241/A	TCESS-S 120-120/482/A	TCESS-S 180-120/723/A		
AC Side Parameters (Grid-Connected)					
Apparent Power	132kVA				
Rated Power	120kW				
Rated Voltage	400Vac				
Voltage Range	400Vac±15%				
Rated Current	180A				
Frequency Range	50/60Hz				
Power Factor (PF)	0.99				
THDi	≤3%				
AC System	Three-Phase Five-Wire System				
AC Side Parameters (Off-Grid)					
Rated Power	120kW				
Rated Voltage	380Vac				
Rated Current	190A				
Rated Frequency	50/60Hz				
THDu	≤5%				
Overload Capacity	110% (10min) , 120% (1min)				
DC Side Parameters (Battery, PV)					
PV Open-Circuit Voltage (Voc)	700V				
PV Voltage Range	300V~670V				
Rated PV Power	240~300kW	200~500kW			
Maximum Supported PV Power	1.1~1.4 times				
Number of PV MPPTs	16 Channels				
Rated Battery Capacity	241.152kWh	482.304kWh	723.456kWh		
Battery Voltage Range	696~852V				
BMS Three-Level Display & Control	be equipped with				
Maximum Charging Current	190A				
Maximum Discharging Current	190A				
Maximum Number of Battery Clusters	1 Battery Cluster	2 Battery Cluster	3 Battery Cluster		
Basic Characteristics					
Diesel Generator Interface	be equipped with				
Grid-Connected/Off-Grid Switching	be equipped with				
Seamless Switching	≤10ms				
Cooling Method	Forced Air Cooling				
Communication Interface	LAN/CAN/RS485				
IP Protection Class / IP Rating	IP54				

# Distributed Microgrid System

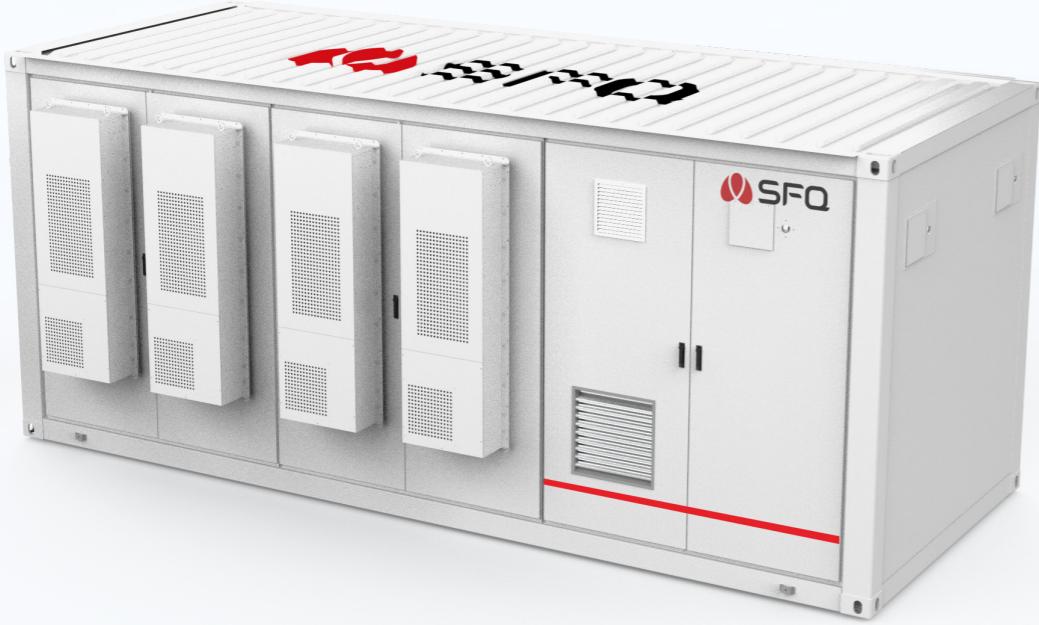


## Product Features

- Split modular design for more flexible deployment and expansion
  - Adopts a split modular structure that allows combined deployment on demand
  - One temperature control system per cluster, one fire protection system per cluster, full-range battery cell temperature collection + AI monitoring and early warning
  - Suitable for different microgrid scenarios such as remote areas and industrial & commercial distributed energy systems
- Full-Dimensional Protection + Wide-Range Environmental Compatibility
  - IP54 high protection rating, supporting a wide temperature range of -30°C ~ +55°C
  - Equipped with multiple protections including over-voltage, under-voltage, over-current and over-temperature
  - Supported by professional operation and maintenance as well as monitoring software to ensure safe, stable and reliable operation of the equipment
- Dedicated Collaboration for Microgrids
  - Supports AC/DC startup, with grid-connected/off-grid switchover time ≤ 10ms
  - THDi as low as 0.99%, delivering high-quality and stable output power
  - Features 110% (10min) and 120% (1min) overload capacity

Battery Cabinet Product Parameters			
Equipment Model	TCESS-S 60-130/261/L	TCESS-S 120-130/261/L	TCESS-S 180-130/783/L
AC Side Parameters (Grid-Connected)			
Apparent Power	143kVA		
Rated Power	130kW		
Rated Voltage	400Vac		
Voltage Range	400Vac±15%		
Rated Current	188A		
Frequency Range	50/60Hz±5Hz		
Power Factor (PF)	0.99		
THDi	≤3%		
AC System	Three-Phase Five-Wire System		
AC Side Parameters (Off-Grid)			
Rated Power	130kW		
Rated Voltage	380Vac		
Rated Current	197A		
Rated Frequency	50/60Hz		
THDu	≤5%		
Overload Capacity	110% (10min) , 120% (1min)		
DC Side Parameters (Battery, PV)			
PV Open-Circuit Voltage (Voc)	700V		
PV Voltage Range	300V~670V		
Rated PV Power	240~300kW	200~500kW	
Maximum Supported PV Power	1.1~1.4 times		
Number of PV MPPTs	16 Channels		
Rated Battery Capacity	261.245kWh	522.496kWh	783.744kWh
Battery Voltage Range	754V ~923V		
BMS Three-Level Display & Control	be equipped with		
Maximum Charging Current	188A		
Maximum Discharging Current	188A		
Maximum Number of Battery Clusters	1 Battery Cluster	2 Battery Cluster	3 Battery Cluster
Basic Characteristics			
Diesel Generator Interface	be equipped with		
Grid-connected / Off-grid Switching	be equipped with		
Seamless Switching	≤10ms		
Cooling Method	Forced Liquid Cooling		
Communication Interface	LAN/CAN/RS485		
IP Rating	IP54		

# Containerized Microgrid System



## Product Features

### • High-efficiency air cooling + wide-range environmental compatibility

- Adopts forced air cooling solution, supporting wide-temperature operation from -25°C to +55°C
- Equipped with IP54 protection rating, suitable for complex outdoor scenarios
- Power coverage ranges from 250kW to 720kW, compatible with photovoltaic input of 300V to 670V

### • Intelligent EMS + Grid Collaborative Operation and Maintenance

- Equipped with an AI Energy Management System (EMS) to enhance equipment operating efficiency
- Compatible with multiple communication interfaces including LAN/CAN/RS485, enabling remote monitoring of operating status
- Supports customized multi-energy integration of "wind/solar/diesel (gas)-storage-grid"

### • Full-link high-security protection

- Standard container + independent compartment structure, equipped with a full range of battery cells
- Temperature collection + AI predictive early warning
- Intelligent integration of wind, solar, diesel (gas), storage and grid, with multiple options and flexible expansion

Product Parameters					
Device Model	SCES-T 250-250/1028/A	SCES-T 400-400/1446/A	SCES-T 720-720/1446/A		
AC-side Parameters (Grid-connected)					
Apparent Power	275kVA	440kVA	810kVA		
Rated Power	250kW	400kW	720kW		
Rated Current	360A	577.3A	1039.26A		
Rated Voltage	400Vac				
Voltage Range	400Vac±15%				
Frequency Range	50/60Hz				
Power Factor	0.99				
THDi	≤3%				
AC System	Three-phase Five-wire System				
AC-side Parameters (Off-grid)					
Rated Power	250kW	400kW	720kW		
Rated Current	380A	608A	1094A		
Rated Voltage	380Vac				
Rated Frequency	50/60Hz				
THDu	≤5%				
Overload Capacity	110% (10min) , 120% (1min)				
DC-side Parameters (PV, Battery)					
Number of PV MPPTs	16 Channels	28 Channels	48 Channels		
Rated PV Power	240~300kW	200~500kW			
Maximum Supported PV Power	1.1 to 1.4 times				
PV Open-circuit Voltage	700V				
PV Voltage Range	300V~670V				
Rated Battery Capacity	1028.915kWh	1446.912kWh			
Battery Voltage Range	742.2V~908.8V	696V~852V			
Maximum Charging Current	337A	575A	1034A		
Maximum Discharging Current	337A	575A			
Maximum Number of Battery Clusters	4 Clusters	6 Clusters			
Three-level Monitoring and Control of BMS	Be Equipped with				
Basic Characteristics					
Diesel Generator Interface	Be Equipped with	Be Equipped with	/		
Seamless Switching	≤10ms	≤10ms	/		
Grid-connected/Off-grid Switching	Be Equipped with				
Cooling Method	Forced Air Cooling				
Communication Interface	LAN/CAN/RS485				
IP Rating	IP54				
Operating Ambient Temperature Range	-25°C~+55°C				
Relative Humidity	≤95% RH, Non-condensing				
Altitude	3000m				
Noise Level	≤70dB				
HMI	Touch Screen				
Dimensions (mm)	6058*2438*2896				

# Containerized Microgrid System

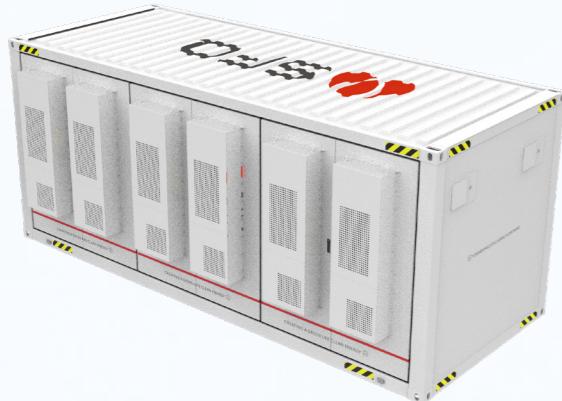


## Product Features

- Precision liquid cooling for heat dissipation, suitable for large-capacity and high-load scenarios
  - Adopts liquid cooling solution with superior temperature control precision
  - Can stably support the operation of ultra-high power loads ranging from 250kW to 780kW
  - Comes standard with full-range battery cell temperature collection + AI predictive early warning to identify potential risks in advance
- Intelligent EMS + High-efficiency Grid Collaboration
  - Equipped with an AI Energy Management System (EMS) to improve equipment operating efficiency
  - Compatible with multiple communication interfaces including LAN/CAN/RS485, enabling real-time remote monitoring of operating status
  - Professional operation and maintenance/monitoring software provides support to ensure the equipment is safe, stable and reliable
- Wide-range adaptation + Multi-energy integration
  - Photovoltaic input voltage ranges from 200V to 1100V (supports 1-20 channels of MPPT)
  - Large-capacity battery system + high-power energy supply, suitable for various scenarios
  - Supports customized multi-energy integration of "wind/solar/diesel (gas)-storage-grid"

Product Parameters					
Device Model	SCESS-T 250-250/1044/L	SCESS-T 400-400/1567/L	SCESS-T 780-780/1567/L		
AC-side Parameters (Grid-connected)					
Apparent Power	275kVA	440kVA	810kVA		
Rated Power	250kW	400kW	780kW		
Rated Current	360A	577A	1125A		
Rated Voltage	400Vac				
Voltage Range	400Vac±15%				
Frequency Range	50/60Hz				
Power Factor	0.99				
THDi	≤3%				
AC System	Three-phase Five-wire System				
AC-side Parameters (Off-grid)					
Rated Power	250kW	400kW	780kW		
Rated Current	380A	530A	1034A		
Rated Voltage	380Vac				
Rated Frequency	50/60Hz				
THDu	≤5%				
Overload Capacity	110% (10min), 120% (1min)				
DC-side Parameters (PV, Battery)					
Number of PV MPPTs	16 Channels	32 Channels	48 Channels		
Rated PV Power	240~300kW	200~500kW	200~800kW		
Maximum Supported PV Power	1.1 to 1.4 times				
PV Open-circuit Voltage	700V	700V	1100V		
PV Voltage Range	300V~670V	300V~670V	200V~1000V		
Rated Battery Capacity	1044.992kWh	1567.488kWh			
Battery Voltage Range	754V~923V	603.2V~738.4V			
Maximum Charging Current	415A	690A			
Maximum Discharging Current	415A	690A			
Maximum Number of Battery Clusters	5 Clusters	6 Clusters			
Three-level Monitoring and Control of BMS	Be Equipped with				
Basic Characteristics					
Diesel Generator Interface	Be Equipped with	Be Equipped with	/		
Seamless Switching	≤10ms	Be Equipped with	/		
Grid-connected/Off-grid Switching	Be Equipped with				
Cooling Method	Liquid Cooling				
Communication Interface	LAN/CAN/RS485				
IP Rating	IP54				
Operating Ambient Temperature Range	-25°C~+55°C				
Relative Humidity	≤95% RH, Non-condensing				
Altitude	3000m				
Noise Level	≤70dB				
HMI	Touch Screen				
Dimensions (mm)	6058*2438*2896				

# Containerized Energy Storage System



## Product Features

- High-efficiency temperature control + High-level protection

- Adopts independent liquid cooling/air cooling dual cooling solutions (optional selection as required)
- Equipped with compartment physical isolation, suitable for stable heat dissipation of large-capacity energy storage
- Temperature/smoke detection + PACK-level and cluster-level composite fire protection

- Full-dimensional intelligent monitoring + Remote operation and maintenance

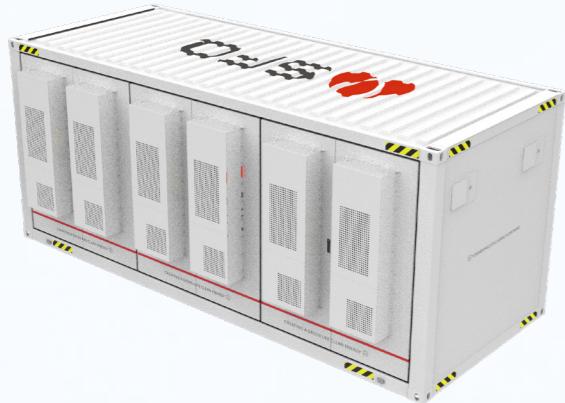
- Full-range battery cell temperature collection combined with AI predictive monitoring enables early warning of abnormalities
- Compatible with multiple communication interfaces including LAN/CAN/RS485, allowing remote monitoring of operating status
- Supports customized multi-energy integration of "wind/solar/diesel (gas)-storage-grid"

- Ultra-large capacity + Flexible adaptation

- Capacity covers an ultra-wide range from 2170kWh to 5015kWh
- Supports customized busbar output, compatible with various PCS access and configuration schemes
- Intelligent integration of wind, solar, diesel (gas), storage and grid, with multiple options and flexible expansion

Battery Container Product Parameters		
Equipment Model	ICS-DC 2170/A/10	ICS-DC 2351/L/10
Cell Parameters		
Cell Specifications	3.2V/314Ah	
Battery Type	LFP	
Battery Module Parameters		
Packaging Configuration	1P16S	1P52S
Nominal Voltage	51.2V	166.4V
Nominal Capacity	16.076kWh	52.249kWh
Nominal Charge/Discharge Current	157A	
Nominal Charge/Discharge Rate	0.5C	
Cooling Method	Air Cooling	Liquid Cooling
Battery System Parameters		
Maximum Number of Battery Clusters	9	9
Nominal Voltage	768V	832V
Nominal Capacity	2170.368kWh	2351.232kWh
Voltage Range	696~852V	754V~923V
Nominal Charge/Discharge Current	1256A	1413A
Nominal Charge/Discharge Rate	0.5C	
Cooling Method	Air Cooling	Liquid Cooling
Fire Protection	Perfluorohexane / Heptafluoropropane / Aerosol (Optional)	
Smoke Detection & Temperature Detection	Per Cluster: 1 Smoke Detector, 1 Temperature Detector	
Basic Parameters		
Communication Interface	LAN/RS485/CAN	
IP Rating	IP54	
Operating Ambient Temperature Range	-25°C~+55°C	
Storage Temperature Range	-20~45°C (1 month) / 0~35°C (3 months)	
Relative Humidity	≤95% RH, Non-condensing	
Altitude	3000m	
Noise Level	≤70dB	
Dimensions (mm)	6058*2438*2896	

# Containerized Energy Storage System



## Product Features

### • High-efficiency temperature control + High-level protection

- Adopts independent liquid cooling/air cooling dual cooling solutions (optional selection as required)
- Equipped with compartment physical isolation, suitable for stable heat dissipation of large-capacity energy storage
- Temperature/smoke detection + PACK-level and cluster-level composite fire protection

### • Full-dimensional intelligent monitoring + Remote operation and maintenance

- Full-range battery cell temperature collection combined with AI predictive monitoring enables early warning of abnormalities
- Compatible with multiple communication interfaces including LAN/CAN/RS485, allowing remote monitoring of operating status
- Supports customized multi-energy integration of "wind/solar/diesel (gas)-storage-grid"

### • Ultra-large capacity + Flexible adaptation

- Capacity covers an ultra-wide range from 2170kWh to 5015kWh
- Supports customized busbar output, compatible with various PCS access and configuration schemes
- Intelligent integration of wind, solar, diesel (gas), storage and grid, with multiple options and flexible expansion

Battery Container Product Parameters		
Equipment Model	ICS-DC 2507/L/15	ICS-DC 5015/L/15
Cell Parameters		
Cell Specifications	3.2V/314Ah	
Battery Type	LFP	
Battery Module Parameters		
Packaging Configuration	1P52S	
Nominal Voltage	166.4V	
Nominal Capacity	52.249kWh	
Nominal Charge/Discharge Current	157A	
Nominal Charge/Discharge Rate	0.5C	
Cooling Method	Liquid Cooling	
Battery System Parameters		
Maximum Number of Battery Clusters	6	12
Nominal Voltage	1331.2V	1331.2V
Nominal Capacity	2507.980kWh	5015.961kWh
Voltage Range	1206.4V~1476.8V	1206.4~1476.8V
Nominal Charge/Discharge Current	942A	1884A
Nominal Charge/Discharge Rate	0.5C	
Cooling Method	Liquid Cooling	
Fire Protection	Perfluorohexane / Heptafluoropropane / Aerosol (Optional)	
Smoke Detection & Temperature Detection	Per Cluster: 1 Smoke Detector, 1 Temperature Detector	
Basic Parameters		
Communication Interface	LAN/RS485/CAN	
IP Rating	IP54	
Operating Ambient Temperature Range	-25°C~+55°C	
Storage Temperature Range	-20~45°C (1 month) / 0~35°C (3 months)	
Relative Humidity	≤95% RH, Non-condensing	
Altitude	3000m	
Noise Level	≤70dB	
Dimensions (mm)	6058*2438*2896	

# Multi-Energy Integrated Intelligent Microgrid System



## Product Features

### Safe and reliable

- Standard container design with high protection rating, adaptable to various harsh environments
- Multi-level energy protection, fault monitoring and early warning
- Intelligent AI technology with multiple safeguard linkage to ensure system safety and reliability

### Intelligent operation and maintenance

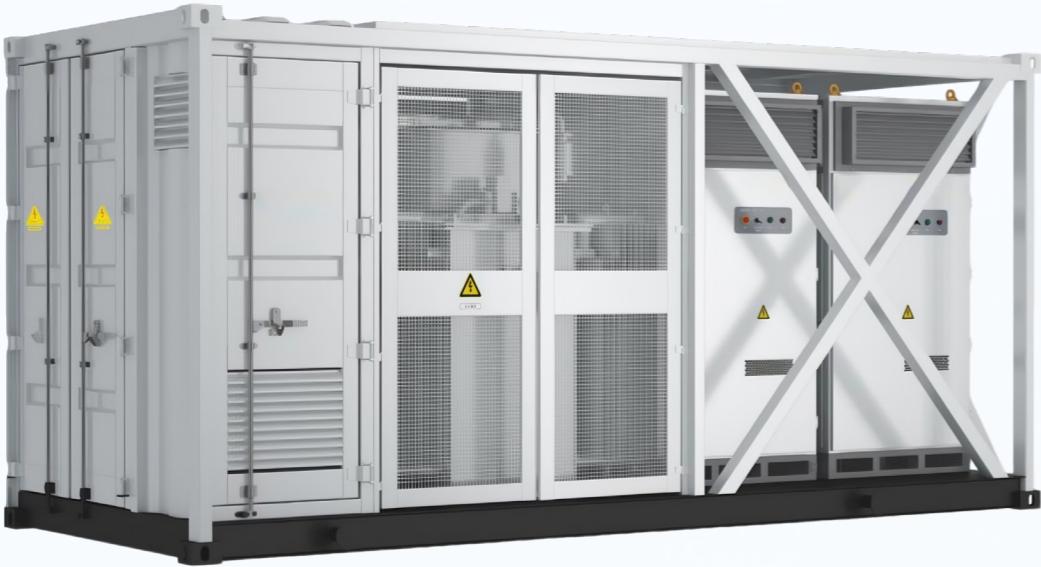
- Intelligent AI technology and an intelligent Energy Management System (EMS) to improve equipment operating efficiency
- Intelligent microgrid management technology and a random fault exit strategy to ensure stable system operation
- Professional operation and maintenance/monitoring software provides support to guarantee the equipment is safe, stable and reliable

### Flexible and stable

- Intelligent integration system of wind, solar, diesel (gas), storage and grid, with optional selection and on-demand expansion
- Combined with local resources, it maximizes the access to multiple energy sources and improves energy collection capacity
- Multi-energy module combination and centralized power management enable the realization of one-source-one-management

Power Container Product Parameters		
Equipment Model	ICS-AC XX-400/54	ICS-AC XX-1000/54
AC Side Parameters (Grid-Connected)		
Apparent Power	440kVA	1100kVA
Rated Power	400kW	1000kW
Rated Voltage	400Vac	
Voltage Range	400Vac±15%	
Rated Current	582A	1443A
Frequency Range	50/60Hz±5Hz	
Power Factor (PF)	0.99	
THDi	≤3%	
AC System	Three-phase five-wire system	
AC Side Parameters (Off-Grid)		
Rated Power	400kW	1000kW
Rated Voltage	380Vac±15%	
Rated Current	1519A	
Rated Current	50/60Hz±5Hz	
THDU	≤5%	
Overload Capacity	110% (10min) , 120% (1min)	
DC Side Parameters (Battery, PV)		
PV Open-Circuit Voltage	700V	
PV Voltage Range	300V~670V	
Rated PV Power	100~1000kW	
Maximum Supported PV Power	1.1~1.4 Times	
Number of PV MPPT Trackers	8~80 Channels	
Battery Voltage Range	300V~1000V	
BMS Three-Level Display & Control	Be Equipped With	
Maximum Charging Current	1470A	
Maximum Discharging Current	1470A	
Basic Parameters		
Cooling Method	Forced Air Cooling	
Communication Interface	LAN/RS485	
IP Rating	IP54	
Operating Ambient Temperature Range	-25°C~+55°C	
Relative Humidity (RH)	≤95% RH, No Condensation	
Altitude	3000m	
Noise Level	≤70dB	
Human-Machine Interface (HMI)	Touch Screen	
Overall Dimensions (mm)	3029*2438*2896	

## 2.5MW Step-up Integrated Machine



MV SKID GENERAL	
<b>Transformer</b>	
Rated Power (kVA)	2500
Transformer Model	Oil type
Transformer Vector	Dy11
Protection Level	IP54/ IP55
Anti-corrosion Grade	C4-H / C4-VH / C5-M / C5-H / C5-VH
Cooling Method	ONAN/ ONAF
Temperature Rise	60K (Top Oil) 65K (Winding) @40°C
Oil Retention Tank	None/ Galvanized steel
Winding Material	Aluminum/ Copper
Transformer Oil	25# /45# mineral oil/ Natural ester insulation oil
Transformer Efficiency	IEC standard/ IEC Tier-2
MV Operating Voltage Range (kV)	6.6~33±5%
Nominal Frequency (Hz)	50 / 60
Altitude (m)	Optional

Switchgear	
Switchgear Type	Ring Main Unit, CCV
Rated voltage (kV)	12/24/36
Insulating medium	SF6
Rated frequency (Hz)	50/60
Enclosure protection degree	IP3X
Gas tank protection degree	IP67
Gas leakage rate per year	≤0.1%
Rated Operating Current (A)	630
Switchgear Short Circuit Rating (kA/s)	20kA/3s/ 25kA/3s
Switchgear IAC (kA/s)	A FL 20kA 1S
<b>PCS * 2</b>	
DC Input Voltage Range (V)	1050~1500
Max. DC input Current (A)	1833
DC Voltage Ripple	< 1%
DC Current Ripple	< 3%
LV Nominal Operating Voltage (V)	690
LV Operating Voltage Range (V)	621~759
PCS Efficiency	98.50%
Max. AC Output Current (A)	1588
Total Harmonic Distortion Rate	< 3%
Reactive Power Compensation	Four quadrant operation
Nominal Output Power (kVA)	1750
Max. AC Power (kVA)	1897
Power Factor Range	>0.99
Nominal Frequency (Hz)	50 / 60
Operating Frequency (Hz)	45~55 / 55~65
Connection Phases	Three-phase-three-wire
<b>Communication Interface</b>	
Communication Method	CAN / RS485 / RJ45 / Optical fiber
Supported Protocol	CAN / Modbus / IEC60870-103 / IEC61850
Ethernet Switch Qty	One for standard
UPS	1kVA for 15min/ 1h/ 2h
<b>Skid General</b>	
Dimensions (W*H*D)(mm)	6058*2896*2438 (20ft)
Weight (kg)	19000
Protection Level	IP54
Operating Temperature (°C)	-35~60C, >45C derating
Storage Temperature (°C)	-40~70
Maximum Altitude (above sea level) (m)	5000, ≥3000 derating
Environment Humidity	0~ 100% , No condensation
Type of Ventilation	Nature air cooling/ Forced air cooling
Auxiliary Power Consumption (kVA)	11.6 (peak)
Auxiliary Transformer (kVA)	Without

## 5MW Step-up Integrated Machine



MV SKID GENERAL	
<b>Transformer</b>	
Rated Power (kVA)	5000
Transformer Model	Oil type
Transformer Vector	Dy11
Protection Level	IP54 / IP55
Anti-corrosion Grade	C4-H / C4-VH / C5-M / C5-H / C5-VH
Cooling Method	ONAN / ONAF
Temperature Rise	60K (Top Oil) 65K (Winding) @40°C
Oil Retention Tank	None / Galvanized steel
Winding Material	Aluminum / Copper
Transformer Oil	25# /45# mineral oil / Natural ester insulation oil
Transformer Efficiency	IEC standard / IEC Tier-2
MV Operating Voltage Range (kV)	6.6~33±5%
Nominal Frequency (Hz)	50 / 60
Altitude (m)	Optional

Switchgear	
Switchgear Type	Ring Main Unit, CCV
Rated voltage (kV)	12/24/36
Insulating medium	SF6
Rated frequency (Hz)	50/60
Enclosure protection degree	IP3X
Gas tank protection degree	IP67
Gas leakage rate per year	≤0.1%
Rated Operating Current (A)	630
Switchgear Short Circuit Rating (kA/s)	20kA/3s / 25kA/3s
Switchgear IAC (kA/s)	A FL 20kA 1S
<b>PCS * 2</b>	
DC Input Voltage Range (V)	1050~1500
Max. DC input Current (A)	1310*2
DC Voltage Ripple	< 2%
DC Current Ripple	< 3%
LV Nominal Operating Voltage (V)	690
LV Operating Voltage Range (V)	621~759
PCS Efficiency	98.7%
Max. AC Output Current (A)	1151*2
Total Harmonic Distortion Rate	< 3%
Reactive Power Compensation	Four quadrant operation
Nominal Output Power (kVA)	1250*2
Max. AC Power (kVA)	1375*2
Power Factor Range	>0.99
Nominal Frequency (Hz)	50 / 60 Hz
Operating Frequency (Hz)	45~55 / 55~65 Hz
Connection Phases	Three-phase-three-wire
<b>Communication Interface</b>	
Communication Method	CAN / RS485 / RJ45 / Optical fiber
Supported Protocol	CAN / Modbus / IEC60870-103 / IEC61850
Ethernet Switch Qty	One for standard
UPS	1kVA for 15min / 1h / 2h
<b>Skid General</b>	
Dimensions (W*H*D)(mm)	6058*2896*2438 (20ft)
Weight (kg)	24300
Protection Level	IP54
Operating Temperature (°C)	-35~60C, >45C derating
Storage Temperature (°C)	-40~70
Maximum Altitude (above sea level) (m)	5000, ≥3000 derating
Environment Humidity	0~ 100% , No condensation
Type of Ventilation	Nature air cooling / Forced air cooling
Auxiliary Power Consumption (kVA)	11.4 (peak)
Auxiliary Transformer (kVA)	Without

## 6.3MW Step-up Integrated Machine



MV SKID GENERAL	
<b>Transformer</b>	
Rated Power (kVA)	6300
Transformer Model	Oil type
Transformer Vector	Dy11
Protection Level	IP54 / IP55
Anti-corrosion Grade	C4-H / C4-VH / C5-M / C5-H / C5-VH
Cooling Method	ONAN / ONAF
Temperature Rise	60K (Top Oil) 65K (Winding) @40°C
Oil Retention Tank	None / Galvanized steel
Winding Material	Aluminum / Copper
Transformer Oil	25# / 45# mineral oil / Natural ester insulation oil
Transformer Efficiency	IEC standard / IEC Tier-2
MV Operating Voltage Range (kV)	11~33±5%
Nominal Frequency (Hz)	50 / 60
Altitude (m)	Optional

Switchgear	
Switchgear Type	Ring Main Unit, CCV
Rated voltage (kV)	12/24/36
Insulating medium	SF6
Rated frequency (Hz)	50/60
Enclosure protection degree	IP3X
Gas tank protection degree	IP67
Gas leakage rate per year	≤0.1%
Rated Operating Current (A)	630
Switchgear Short Circuit Rating (kA/s)	20kA/3s / 25kA/3s
Switchgear IAC (kA/s)	A FL 20kA 1S
<b>PCS * 4</b>	
DC Input Voltage Range (V)	1050~1500
Max. DC input Current (A)	1833
DC Voltage Ripple	< 1%
DC Current Ripple	< 3%
LV Nominal Operating Voltage (V)	690
LV Operating Voltage Range (V)	621~759
PCS Efficiency	98.5%
Max. AC Output Current (A)	1588
Total Harmonic Distortion Rate	< 3%
Reactive Power Compensation	Four quadrant operation
Nominal Output Power (kVA)	1750
Max. AC Power (kVA)	1897
Power Factor Range	>0.99
Nominal Frequency (Hz)	50 / 60
Operating Frequency (Hz)	45~55 / 55~65
Connection Phases	Three-phase-three-wire
<b>Communication Interface</b>	
Communication Method	CAN / RS485 / RJ45 / Optical fiber
Supported Protocol	CAN / Modbus / IEC60870-103 / IEC61850
Ethernet Switch Qty	One for standard
UPS	1kVA for 15min / 1h / 2h
<b>Skid General</b>	
Dimensions (W*H*D)(mm)	12192*2896*2438 (40ft)
Weight (kg)	32400
Protection Level	IP54
Operating Temperature (°C)	-35~60C, >45C derating
Storage Temperature (°C)	-40~70
Maximum Altitude (above sea level) (m)	5000, ≥3000 derating
Environment Humidity	0~ 100% , No condensation
Type of Ventilation	Nature air cooling / Forced air cooling
Auxiliary Power Consumption (kVA)	21.4 (peak)
Auxiliary Transformer (kVA)	Without / With

# 10MW Step-up Integrated Machine



MV SKID GENERAL	
<b>Transformer</b>	
Rated Power (kVA)	10000
Transformer Model	Oil type
Transformer Vector	Dy11-y11
Protection Level	IP54 / IP55
Anti-corrosion Grade	C4-H / C4-VH / C5-M / C5-H / C5-VH
Cooling Method	ONAN / ONAF
Temperature Rise	60K (Top Oil) 65K (Winding) @40°C
Oil Retention Tank	None / Galvanized steel
Winding Material	Aluminum / Copper
Transformer Oil	25# /45# mineral oil / Natural ester insulation oil
Transformer Efficiency	IEC standard / IEC Tier-2
MV Operating Voltage Range (kV)	11~33±5%
Nominal Frequency (Hz)	50 / 60
Altitude (m)	Optional

Switchgear	
Switchgear Type	Ring Main Unit, CCV
Rated voltage (kV)	12/24/36
Insulating medium	SF6
Rated frequency (Hz)	50/60
Enclosure protection degree	IP3X
Gas tank protection degree	IP67
Gas leakage rate per year	≤0.1%
Rated Operating Current (A)	630
Switchgear Short Circuit Rating (kA/s)	20kA/3s / 25kA/3s
Switchgear IAC (kA/s)	A FL 20kA 1S
<b>PCS * 4</b>	
DC Input Voltage Range (V)	1050~1500
Max. DC input Current (A)	1310*2
DC Voltage Ripple	< 2%
DC Current Ripple	< 3%
LV Nominal Operating Voltage (V)	690
LV Operating Voltage Range (V)	621~759
PCS Efficiency	98.7%
Max. AC Output Current (A)	1151*2
Total Harmonic Distortion Rate	< 3%
Reactive Power Compensation	Four quadrant operation
Nominal Output Power (kVA)	1250*2
Max. AC Power (kVA)	1375*2
Power Factor Range	>0.99
Nominal Frequency (Hz)	50 / 60 Hz
Operating Frequency (Hz)	45~55 / 55~65 Hz
Connection Phases	Three-phase-three-wire
<b>Communication Interface</b>	
Communication Method	CAN / RS485 / RJ45 / Optical fiber
Supported Protocol	CAN / Modbus / IEC60870-103 / IEC61850
Ethernet Switch Qty	One for standard
UPS	1kVA for 15min / 1h/ 2h
<b>Skid General</b>	
Dimensions (W*H*D)(mm)	12192*2896*2438 (40ft)
Weight (kg)	38800
Protection Level	IP54
Operating Temperature (°C)	-35~60C, >45C derating
Storage Temperature (°C)	-40~70
Maximum Altitude (above sea level) (m)	5000, ≥3000 derating
Environment Humidity	0~ 100% , No condensation
Type of Ventilation	Nature air cooling / Forced air cooling
Auxiliary Power Consumption (kVA)	21 (peak)
Auxiliary Transformer (kVA)	Without / With