ERIC DRIVE

C&I BES

Driven By ERIC DRIVE

ERIC DRIVE

- Energy Storage -

ERIC DRIVE

ENERGY STORAGE SOLUTION

Energy Storage Inverter Commercial Class

PWS2-30K-CN-M

Features :

- Dual-level system structure, made for micro-grid systems
- Wide voltage range, suitable for different types of batteries
- Applicable for Taiwan, Europe grid regulations
- Multiple installation designs, easy to use
- Light weight, high efficiency, compact size
- Automatic power management strategy for shifting power; supplying power from the grid to loads at low cost time to achieve energy and cost saving

Application :

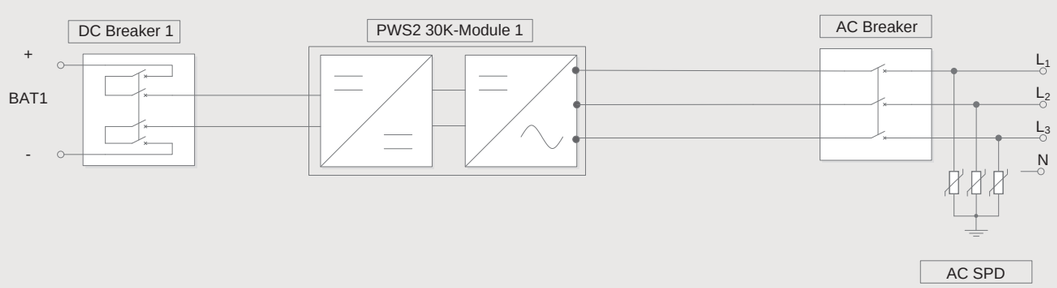
Small Size Micro-grid System

Emergency Power Supply System

Commercial Application

Light Current Power Supply

System Structure :



Specification :

Model Number	PWS2-30K-CN-M
DC Specification	
DC Voltage Range	200~750 V
DC Max. Current	90 A
DC Max. Power	33 kW
AC Grid Specification	
Rated Output Power	30 kW
Rated Grid Voltage	400 V
Grid Voltage Range	-20%~+15 %
Grid Frequency Range	50Hz / 60Hz ±2.5 Hz
AC Rated Current	43.3 A
Output ITHD	＜＝3%
Grid Power Factor	-0.8 ~ +0.8
Standalone Specification	
AC Voltage	380V/400 V
AC Voltage Range	±5 %
AC Frequency	50Hz/60Hz
Output VTHD	＜＝1% (Linear Load)
System Specification	
Max. Efficiency	97.10 %
Connection	3 Phase 4Wire +PE
Installation	Rack Style
Cooling	Forced Air Cooling
Acoustic Noise	60 dB
Temperature	-20 ~ 60℃
Enclosure Protection	IP20
Max. Altitude	4000 m
Humidity	0 ~ 95 %
Dimension (W x H x D)	440x173x550 mm
Weight	30 kg
Interface	
Display	LCD Monitor
User Interface Protocol	Modbus TCP/IP
Communication	LAN , RS-485 , CAN

Solar Power Storage System Commercial Class

PWG2-50/100K

Features :

- Dual-level system structure, wide input voltage range
- Available for PV panel input, supporting solar charging
- With MPPT (Maximum Power Point Tracking) function
- With STS to switch between on-grid operation and off-grid operation seamlessly
- Applicable for North America and Australia grid regulations

Application :

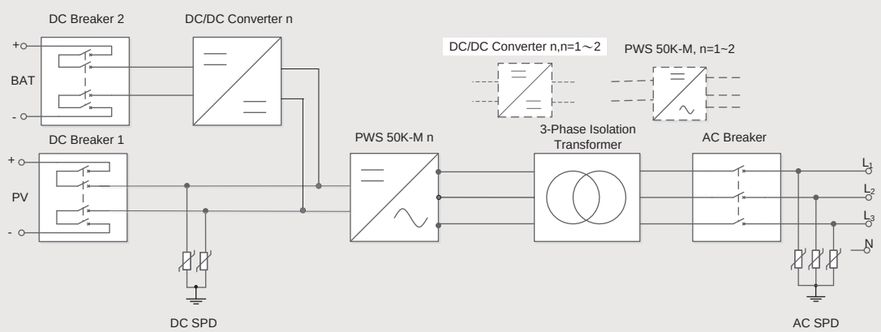
America Europe Grid

Emergency Power Supply System

Commercial Application

Light Current Power Supply

System Structure :



Specification :

Model Number	PWG2-50K	PWG2-100K
Battery Specification		
DC Voltage Range	250~520 V (Rated 400V)	
DC Max. Current	130 A	260 A
DC Max. Power	50 kW	100 kW
PV Specification		
PV Voltage Range	520~900 V	
PV Max. Current	110 A	220 A
PV Max. Power	100 kW	200 kW
AC Grid Specification		
Rated Output Power	50 kW	100 kW
Rated Grid Voltage	400 V	
Grid Voltage Range	±15 %	
Grid Frequency Range	50Hz / 60Hz ±2.5 Hz	
AC Rated Current	72A	144 A
Output ITHD	＜＝3%	
Grid Power Factor	-1 ~ +1	
Standalone Specification		
AC Voltage	400 V	
AC Frequency	50Hz / 60Hz	
Output VTHD	＜＝2% (Linear Load)	
System Specification		
Max. Efficiency	96.1 %	
Connection	3 Phase 4Wire	
Isolation	Transformer Isolation	
Cooling	Forced Air Cooling	
Acoustic Noise	70 dB	
Temperature	-20 ~ 50℃	
Enclosure Protection	IP20	
Max. Altitude	3000 m	
Humidity	0 ~ 95 %	
Dimension (W x H x D)	800x2160x800 mm	
Weight	520 kg	750 kg
Interface		
Display	Touch Screen	
User Interface Protocol	Modbus TCP/IP	
Communication	LAN , RS-485 , CAN	

Energy Storage Cabinet Commercial Class

PWS1-50/100/150K

Features :

- Three level PWM, small harmonics, high efficiency
- Modular design, easy to be transported and maintained
- Suitable for different types of batteries with different charging/discharging algorithm
- Adjustable actual power, virtual power, power factor independently for the optimal power management. Dynamic grid support can support the low voltage period and the all black starting function
- With STS to switch between on-grid operation and off-grid operation seamlessly

Application :

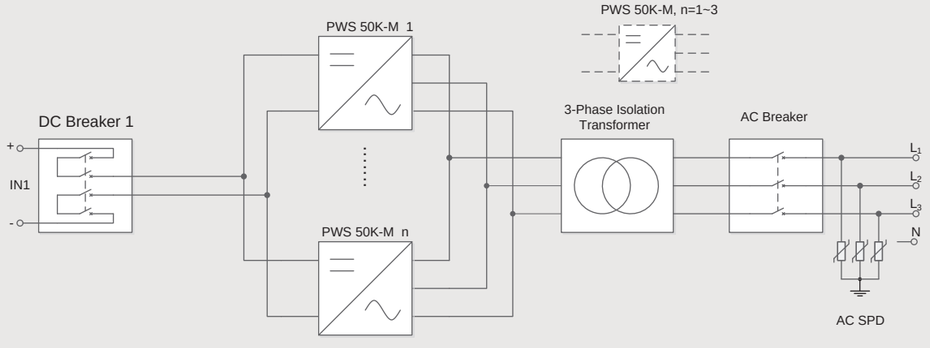
Small Size Micro-grid System

Emergency Power Supply System

Commercial Application

Light Current Power Supply

System Structure :



Specification :

Model Number	PWS1-50K	PWS1-100K	PWS1-150K
DC Specification			
DC Voltage Range	500~850 V		
DC Max. Current	110 A	220 A	330 A
DC Max. Power	55 kW	110 kW	165 kW
AC Grid Specification			
Rated Output Power	50 kW	100 kW	150 kW
Rated Grid Voltage	400 V		
Grid Voltage Range	±15 %		
Grid Frequency Range	50Hz / 60Hz ±2.5 Hz		
AC Rated Current	72 A	144 A	216 A
Output ITHD	＜＝3%		
Grid Power Factor	-1 ~ +1		
Standalone Specification			
AC Voltage	400 V		
AC Voltage Range	±10 %		
AC Frequency	50Hz / 60Hz		
Output VTHD	＜＝2% (Linear Load)		
System Specification			
Max. Efficiency	97.3 %	97.3 %	97.3 %
Connection	3 Phase 4Wire +PE		
Isolation	Transformer Isolation		
Cooling	Forced Air Cooling		
Acoustic Noise	70 dB		
Temperature	-20 ~ 50℃		
Enclosure Protection	IP20		
Max. Altitude	3000 m		
Humidity	0 ~ 95 %		
Dimension (W x H x D)	800x2160x800 mm		
Weight	465 kg	680 kg	910 kg
Interface			
Display	Touch Screen		
User Interface Protocol	Modbus TCP/IP		
Communication	LAN , RS-485 , CAN		

Energy Storage Cabinet Commercial Class

PWS2-50/100K

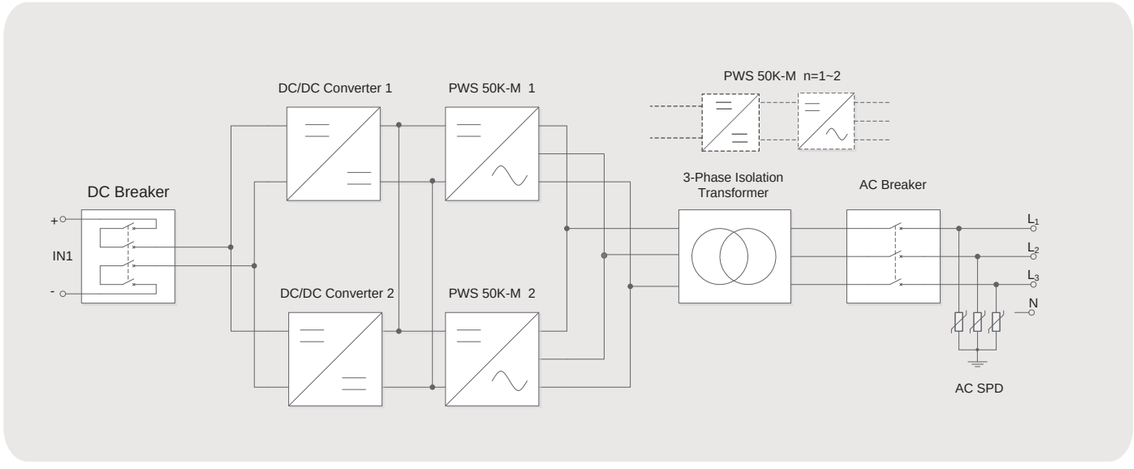
Features :

- Three level PWM, small harmonics, high efficiency
- Modular design, easy to be transported and maintained
- Suitable for different types of batteries with different charging/discharging algorithm
- Adjustable actual power, virtual power, power factor independently for the optimal power management. Dynamic grid support can support the low voltage period and the all black starting function
- With STS to switch between on-grid operation and off-grid operation seamlessly
- Wide input voltage range: 250-800V

Application :

Small Size Micro-grid System | America Europe Grid | Commercial Application | Light Current Power Supply

System Structure :



Specification :

Model Number	PWS2-50K	PWS2-100K
DC Specification		
DC Voltage Range	250~800 V	
DC Max. Current	130 A	260 A
DC Max. Power	55 kW	110 kW
AC Grid Specification		
Rated Output Power	50 kW	100 kW
Rated Grid Voltage	400 V	
Grid Voltage Range	±15 %	
Grid Frequency Range	50Hz / 60Hz ±2.5 Hz	
AC Rated Current	72A	144 A
Output ITHD	＜＝3%	
Grid Power Factor	-1 ~ +1	
Standalone Specification		
AC Voltage	400 V	
AC Voltage Range	±10 %	
AC Frequency	50Hz / 60Hz	
Output VTHD	＜＝2% (Linear Load)	
System Specification		
Max. Efficiency	95.5 %	
Connection	3 Phase 4Wire	
Isolation	Transformer Isolation	
Cooling	Forced Air Cooling	
Acoustic Noise	70 dB	
Temperature	-20 ~ 50℃	
Enclosure Protection	IP20	
Max. Altitude	3000 m	
Humidity	0 ~ 95 %	
Dimension (W x H x D)	800x2160x800 mm	
Weight	490 kg	720 kg
Interface		
Display	Touch Screen	
User Interface Protocol	Modbus TCP/IP	
Communication	LAN , RS-485 , CAN	

Energy Storage Cabinet Industrial Class

PWS1-250K PWS1-250K-4H

Features :

- Three level PWM, small harmonics, high efficiency
- Modular design, easy to be transported and maintained
- Suitable for different types of batteries with different charging/discharging algorithm
- Adjustable actual power, virtual power, power factor independently for the optimal power management. Dynamic grid support can support the low voltage period and the all black starting function
- With STS to switch between on-grid operation and off-grid operation seamlessly
- Supports 4 DC inputs, independent control, solving loop current problem
- Supports the communications protocols of IEC60870-5-104, IEC61850...etc.

Application :

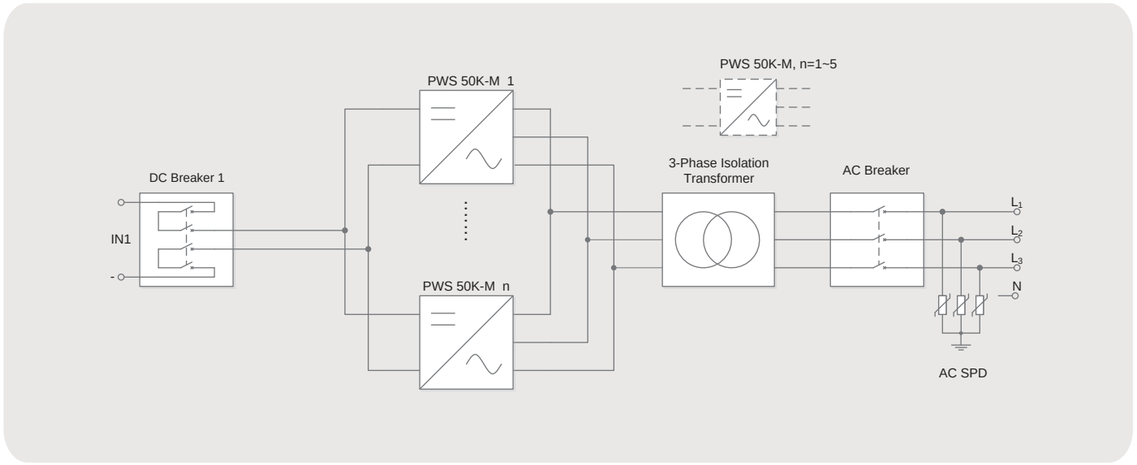
America Europe Grid

Emergency Power Supply System

Commercial Application

Light Current Power Supply

System Structure :



Specification :

Model Number	PWS1-250K	PWS1-250K-4H
DC Specification		
DC Voltage Range	500~850 V	600~900 V
DC Max. Current	550 A	440 A
DC Max. Power	275 kW	
AC Grid Specification		
Rated Output Power	250 kW	
Rated Grid Voltage	400 V	
Grid Voltage Range	±15 %	
Grid Frequency Range	50Hz / 60Hz ±2.5 Hz	
AC Rated Current	360 A	
Output ITHD	＜＝3%	
Grid Power Factor	-1 ~ +1	
Standalone Specification		
AC Voltage	400 V	
AC Voltage Range	±10 %	
AC Frequency	50Hz / 60Hz	
Output VTHD	＜＝2% (Linear Load)	
System Specification		
Max. Efficiency	97.3 %	
Connection	3 Phase 4Wire	
Isolation	Transformer Isolation	
Cooling	Forced Air Cooling	
Acoustic Noise	70 dB	
Temperature	-20 ~ 50℃	
Enclosure Protection	IP20	
Max. Altitude	3000 m	
Humidity	0 ~ 95 %	
Dimension (W x H x D)	1200x2160x800 mm	
Weight	1280 kg	1300 kg
Interface		
Display	Touch Screen	
User Interface Protocol	Modbus TCP/IP	
Communication	LAN , RS-485 , CAN	

Energy Storage Cabinet Grid Class

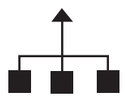
PWS1-500KTL PWS1-500K

Features :

- Three level PWM, small harmonics, high efficiency
- Modular design, easy to be transported and maintained
- Suitable for different types of batteries with different charging/discharging algorithm
- Adjustable actual power, virtual power, power factor independently for the optimal power management. Dynamic grid support can support the low voltage period and the all black starting function
- With STS to switch between on-grid operation and off-grid operation seamlessly
- Unique design of multiple inputs to reduce the batteries in strings for the optimal recycle life of battery cells
- Adjustable peak and adjustable frequency for the grid specifications
- Supports the communications protocols of IEC60870-5-104, IEC61850...etc.

Application :

Big Size Energy Storage Station

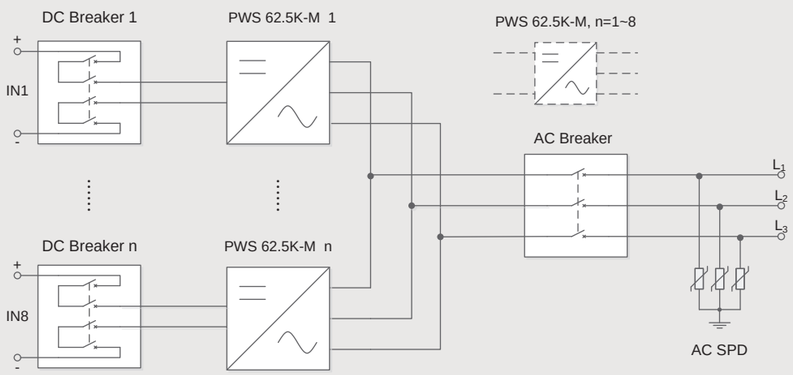


Big Size Renewable Energy Station

Power Management

Big Size Island Micro-grid

System Structure :



Specification :

Model Number	PWS1-500KTL	PWS1-500K
DC Specification		
DC Voltage Range	600~900 V	
DC Max. Current	873 A	
Battery Connection	1/4/8	
AC Grid Specification		
Rated Output Power	500 kW	
Rated Grid Voltage	380 V	400 V
Grid Voltage Range	±15 %	
Grid Frequency Range	50Hz / 60Hz ±2.5 Hz	
AC Rated Current	760 A	720 A
Output ITHD	＜=3%	
Grid Power Factor	-1 ~ +1	
Standalone Specification		
AC Voltage	380 V	400 V
AC Voltage Range	±10 %	
AC Frequency	50Hz / 60Hz	
Output VTHD	＜=2% (Linear Load)	
System Specification		
Max. Efficiency	98.2 %	97.3 %
Connection	3P3W	3P4W
Isolation	No Isolation	Transformer Isolation
Cooling	Forced Air Cooling	
Acoustic Noise	70 dB	
Temperature	-20 ~ 50℃	
Enclosure Protection	IP20	
Max. Altitude	3000 m	
Humidity	0 ~ 95 %	
Dimension (W x H x D)	1100x2160x800 mm	2200x2160x800 mm
Weight	600 kg	2000 kg
Interface		
Display	Touch Screen	
User Interface Protocol	Modbus TCP/IP	
Communication	LAN , RS-485 , CAN	

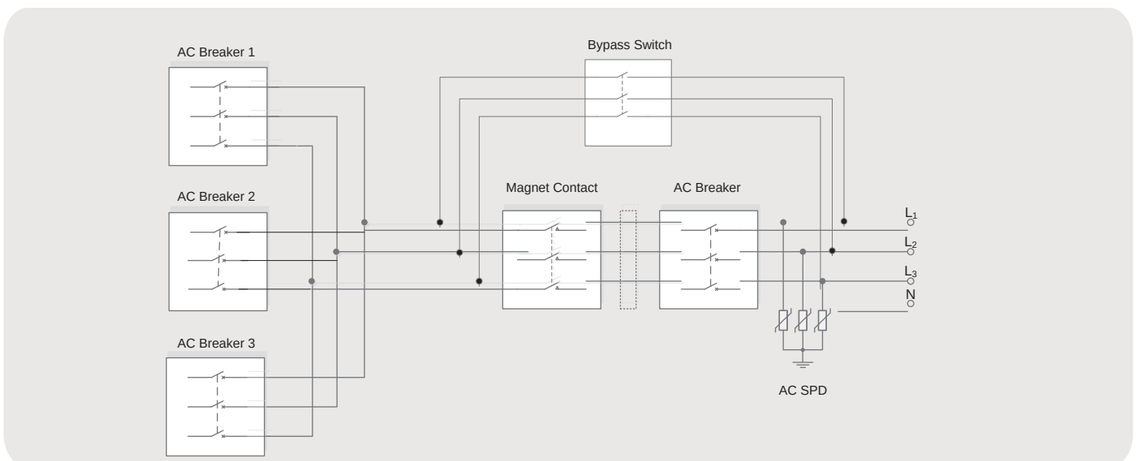
Intelligent Switching Cabinet System Style

PW-STS-500K-S PW-STS-1000K-S

Features :

- Integrated cabinet design, multiple power source connections
- millisecond switching between on-grid operation and off-grid operation
- Energy management for the economical energy operation
- Automatic operation, no surveillance requested
- 15 inch color screen to monitor the operation status of each device

System Structure :



Specification :

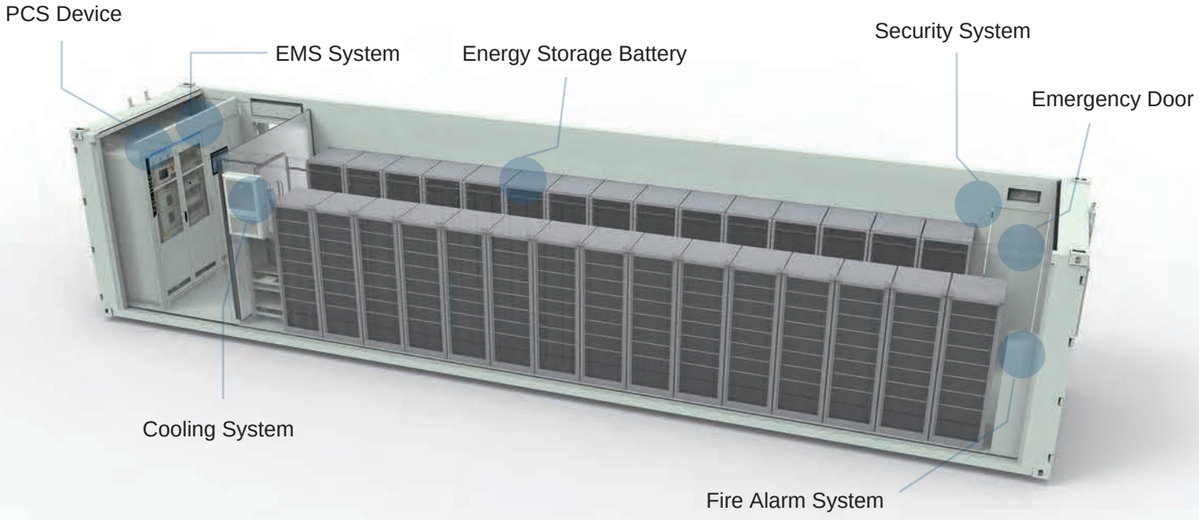
Model Number	PW-STS-500K-S	PW-STS-1000K-S
Rated Output Power	500 kW	1000 kW
Rated Grid Voltage	380V/400V	
Input Voltage Range	-25%~15%	
Output Voltage Range	-25%~15%	
AC Rated Current	765 A	1530 A
Overload Capacity	1.1	
Grid Frequency Range	50Hz / 60Hz ±4.5 Hz	
On/Off Grid Switching Time	0ms~80ms	
Max. Efficiency	99.50 %	
Cooling	Forced Air Cooling	
Installation	Cabinet Style	
Acoustic Noise	70 dB	
Temperature	-20 ~ 50℃	
Enclosure Protection	IP20	
Max. Altitude	3000 m	
Humidity	0 ~ 95 %	
Dimension (W x H x D)	800x2160x800 mm	
Weight	400 kg	450 kg
Input Loop	Micro-grid Power: 1, Grid: 1	
Output Loop	Local Load: 1~4	

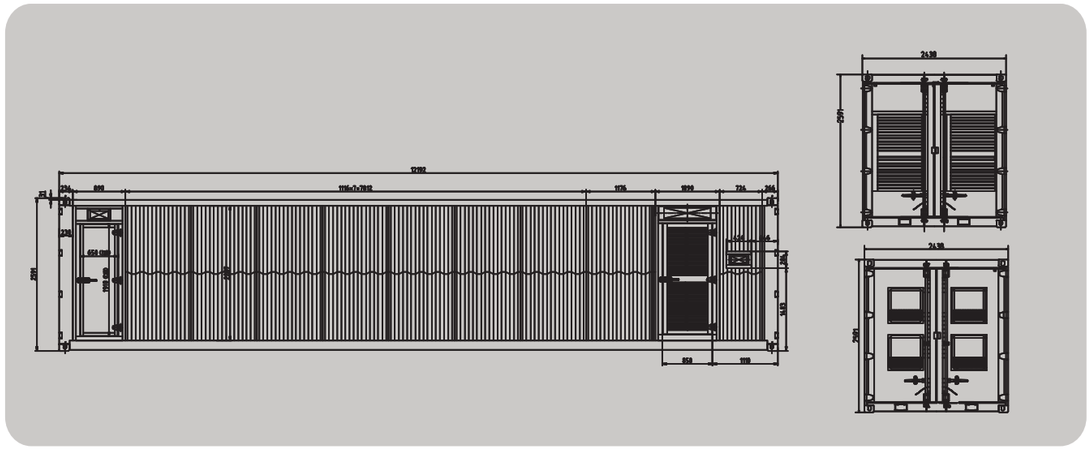
Container Energy Storage System

Features :

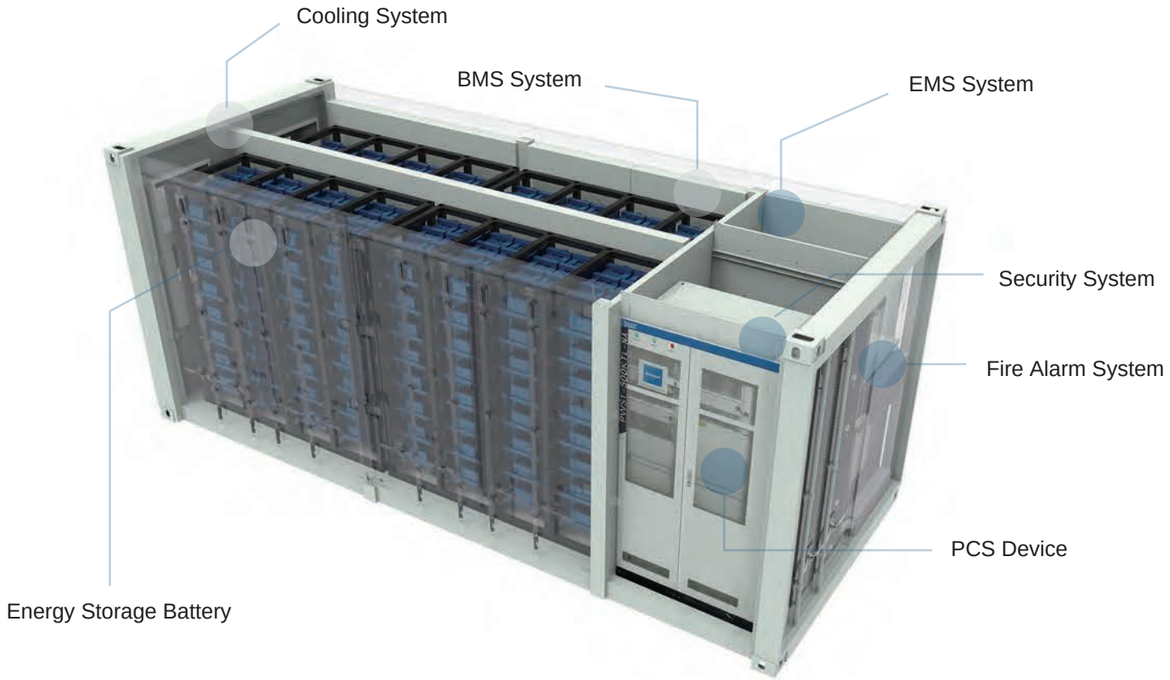
- Available for custom made request, the battery type, capacity and all the details can be discussed with the supplier upon request
- PCS adopts the flexible modular structure, easy to be maintained, parallel operation for multiple units
- Supports on-grid/off-grid operation mode, seamless switching to support all black starting
- No surveillance requested, local control, remote monitor for operation
- Operation Modes: Power Management, Power Demand Response, Anti-reversing Current Operation, Backup Power, Command Response...etc.
- Comprehensive fire extinguisher system, automatic fire detection, fire alarm system, sound-light alarm and the remote alarm messages upload
- Comprehensive cooling system to ensure the battery cabinet in the proper temperature range

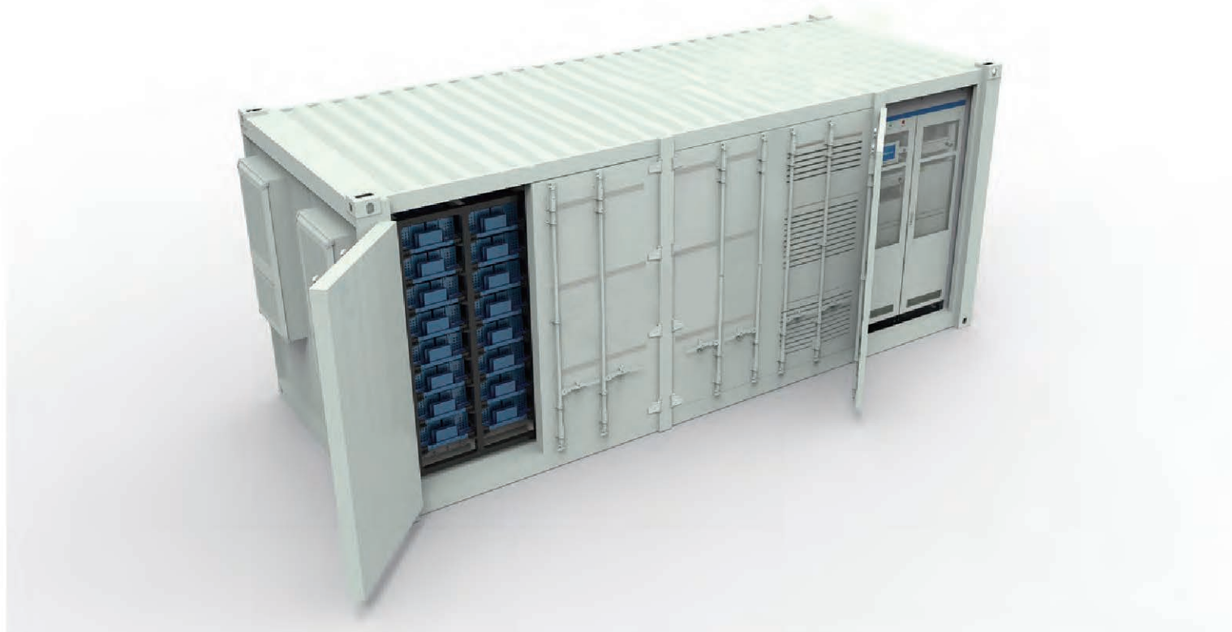
Specification	40 Inch Container Energy Storage System
Power	100-1000kW
Capacity	100-1000kWh (Subject to customers request)
Enclosure Protection	IP54
Temperature	-20 ~ 50℃
Max. Altitude	3000 m
Dimension (W x H x D)	12192mm x 2438mm x 2591mm
Cooling	Industrial Air Conditioning/ Forced Air Cooling
Fire System	Air Fire Extinguisher





Container Energy Storage System

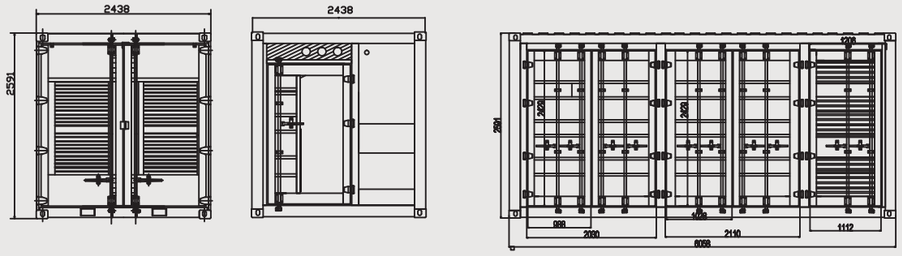




Features :

- Available for custom made request, the battery type, capacity and all the details can be discussed with the supplier upon request
- PCS adopts the flexible modular structure, easy to be maintained, parallel operation for multiple units
- Supports on-grid/off-grid operation mode, seamless switching to support all black starting
- No surveillance requested, local control, remote monitor for operation
- Operation Modes: Power Management, Power Demand Response, Anti-reversing Current Operation, Backup Power, Command Response...etc.
- Comprehensive fire extinguisher system, automatic fire detection, fire alarm system, sound-light alarm and the remote alarm messages upload
- Comprehensive cooling system to ensure the battery cabinet in the proper temperature range

Specification	20 Inch Container Energy Storage System
Power	50-500kW
Capacity	50-500kWh (Subject to customers request)
Enclosure Protection	IP54
Temperature	-20 ~ 50℃
Max. Altitude	3000 m
Dimension (W x H x D)	6058mm x 2438mm x 2591mm
Cooling	Industrial Air Conditioning/ Forced Air Cooling
Fire System	Air Fire Extinguisher



Energy Storage Commercial Applications

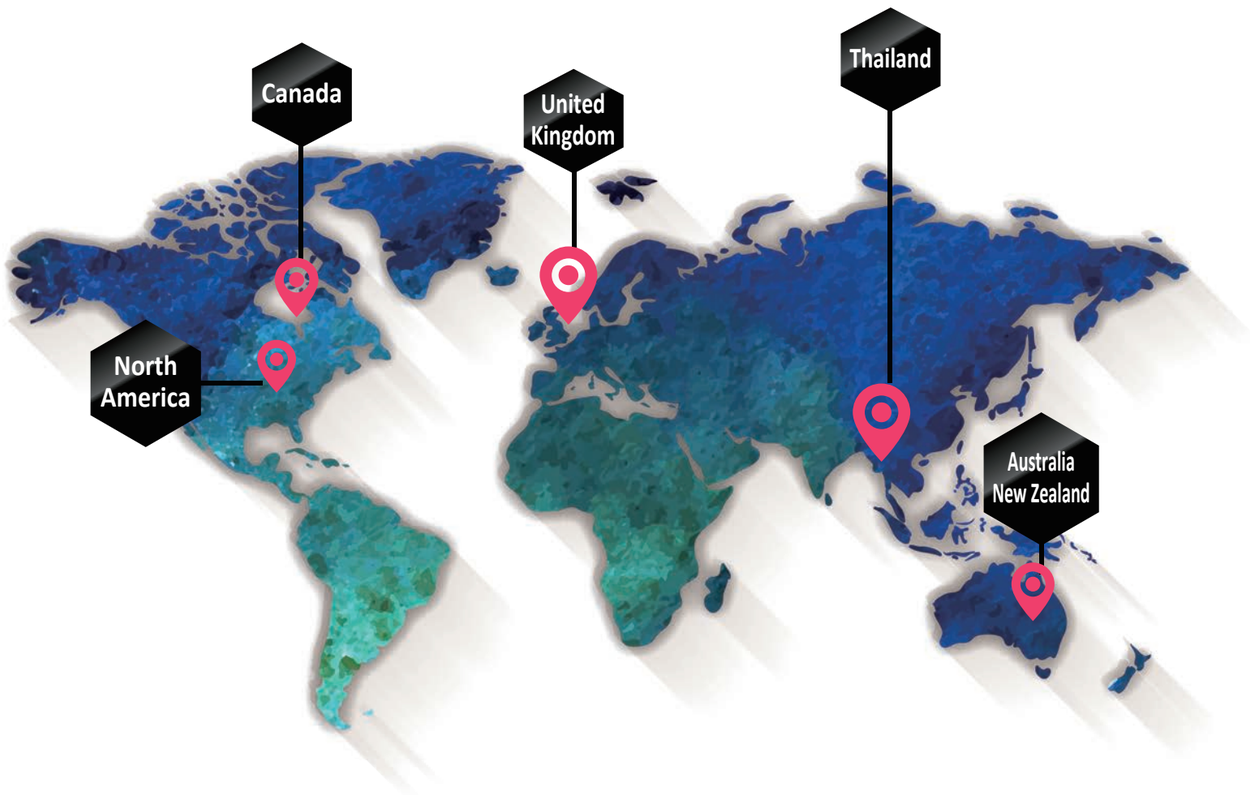
Rich Electric Co., Ltd. specializes in solutions of industrial and commercial energy storage, the products are widely used in the industrial and commercial applications. We supply the advanced integrated energy storage systems that can be flexible to match different types of the battery systems in order to help users easily set up the high efficiency energy storage system.

The products applications spread over North America, South America, Europe, Asia, Oceania and conform to local grid regulations.

Application :

- Commercial Application
- Industrial Applications
- Island Micro-grid System
- Solar Energy Storage Station
- Multiple Energy Storage System

Rich Electric, Energy Storage Expert, in Worldwide Distribution



Certified Models: 48 Models 5 Continents, 20 Areas

NA North America Model Types: 30K 50K 100K 150K 250K 500KTL

U.S.A.: UL1741, UL9540
Hawaii: UL1741SA, HECO RULE 14H, HECO CGS listing, HECO CSS listing
California: UL1741SA, CPUC RULE 21, CEC efficiency listing
Others: UL1741SA, IEEE1547
Canada: CS22.2

EU Europe Model Types: 50K 100K 150K 250K 500KTL

Europe: CE LVD (IEC62477), CE EMC (IEC61000)
United Kingdom: G59
Germany: VDE4105, IEC62477, IEC61000

SEA Asia Model Types: 125K

Grid connected inverter regulation 2013 by MEA

AU Australia Model Types: 50K 100K

AS4777, IEC62109, IEC61000

NZ New Zealand Model Types: 50K 100K

ERAC listing, CEC listing