SHUANG DENG GROUP

THE SMART ENERGY
STORAGE EXPERT OF
BIG DATA ERA

Air-cooling BESS

shoto

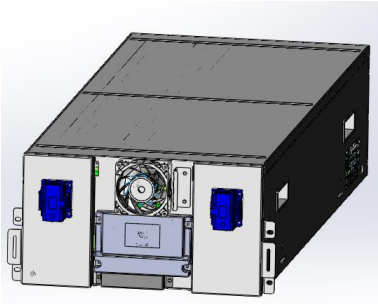
Air-cooling LV lithium-ion BESS

双登集团 SHUANGDENG GROUP

Low voltage rack: SDC-ESS-R768V215kWh

SDC-ESS-R768V215kWh is a lithium-ion energy storage cluster for large-capacity energy storage applications. It can be used for frequency regulation, wind and solar power ramp control and time shifting, peaks having, transmission and distribution (T&D) system upgrade deferring, distributed generation and microgrid.

It is modularized designed with good scalability and can meet the power and energy need of different scenarios. The rated voltage of the battery cluster is 768V (10 SDC-ESS-M76V21kWh modules are connected in series) and the rated capacity is 280Ah.



SDC-ESS-M76V21kWh

Air-cooling LV BESS—Product characteristics

◆ High Safety:

1. Employ LFP material system with higher safety and reliability;
2.The BMS system can monitor the voltage, current, temperature and state of the cell in real time to ensure the safe operation of the battery;
3.The battery compartment adopts unit divisions, and each division is protected by flame retardant materials. In case of extreme thermal runaway accident, it can ensure the safety of other unit divisions.

◆ Advanced Heat Management:

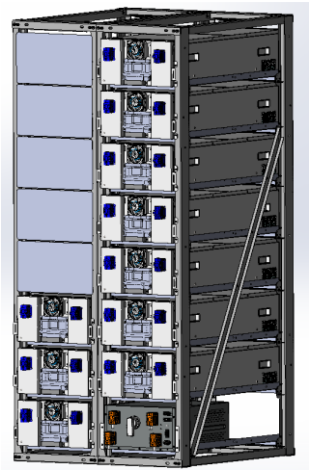
1. Battery module with active heat dissipation ensuring efficient and uniform heat dissipation of the energy storage battery;
2.The battery compartment adopts modular thermal management technology to improve the temperature balance of the battery cell;
3.The cooling air duct adopts multi-point segmented type, and the cooling air can directly and rapidly reach target zone. so as to improve the performance and reduce the operation and maintenance cost.

◆ High Discharge Rate:

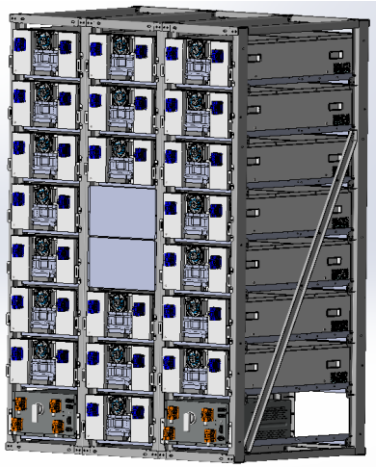
The module has excellent rate charging/discharging performance, maximum sustainable 0.5C charging and discharging, to meet different application demand.

◆ Standardized Module:

It is standardized designed with expansibility and can meet the power and energy requirements of different scenarios. Integrated BMS design and standardized communication protocol ensure plug and play of the energy storage module.



one rack(two columns)



two racks(three columns)

SDC-ESS-R768V215kWh

Beijing Shoto Energy Storage Technology Co., Ltd.
Web: www.shotosolar.com/ Tel: 0086 10-56533600 E-mail: marketing@shotosolar.com

Air-cooling LV BESS: technical parameter of battery module and rack

Parameter of Lithium-ion Battery Module: SDC-ESS-M76V21kWh	Nominal Voltage	76.8V
	Available Energy (Nominal)	21.504kWh(1P24S)
	Nominal Capacity	280Ah
	Charge Current	140A
	Discharge Current	140A
	Operating Voltage Range	60V~87.6V
	Recommended Operating Temperature	10℃~30℃
	Storage Temperature and Humidity Range	Temperature:-20℃~55℃ Humidity:45%~85%RH
	Dimensions(W*D*H)	470mm×1103mm×230mm
	Weight	150kg
	Certification	GB/T 36276、IEC62619、UN38.3、UL1973*、UL9540A*

Parameter of Lithium-ion Battery Rack: SDC-ESS-R768V215kWh	Nominal Voltage	768V
	Available Energy(Nominal)	215.04kWh(10*1P24S)
	Operating Voltage Range	672VDC~876VDC
	Rated Charge Current	140A
	Rated Discharge Current	140A
	Maximum Charge Current	140A
	Maximum Discharge Current	140A
	Communication	CAN/RS485
	Operating Temperature Range	0~45℃
	Recommended Operating Temperature Range	15℃~30℃
	Storage Temperature Range	-20℃~55℃
	Relative Humidity	5%~95%RH
	Dimensions(W*D*H)	1120mm×1125mm×2220mm
	Certification	GB/T 36276、IEC62619、UN38.3, UL9540A*

Remark:
1. * means that certification is in progress.

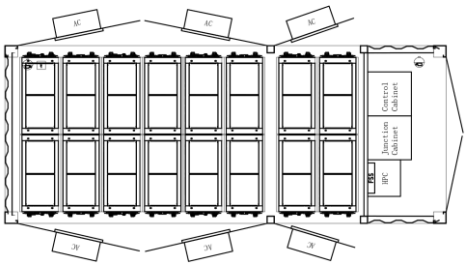
Beijing Shoto Energy Storage Technology Co., Ltd.
Web： www.shotosolar.com/ Tel：0086 10-56533600 E-mail：marketing@shotosolar.com

Air-cooling LV BESS: technical parameter of battery container

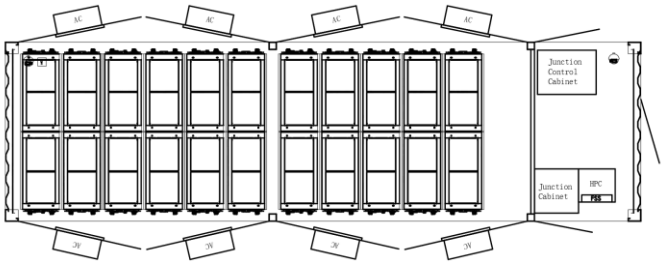
LV scheme	SDC-ESS-S768V2.2MWh	SDC-ESS-S768V3.4MWh	SDC-ESS-S768V5.2MWh
Nominal Power	2*500kW	3*500kW/3*630kW	4*630kW
Nominal Energy	2.15MWh(10*10*1P24S)	3.01MWh(14*10*1P24S)	5.16MWh(24*10*1P24S)
Nominal Charge/Disacharge rate	0.5C		
Operating Temperature Range	-20-50℃		
Communication	Modbus RTU、Modbus TCP/IP、CAN、IEC61850 etc.		
Altitude	<3000m		
IP	IP54		
Dimension	20ft(6058*2438*2896mm)	28ft(8672*2438*2896mm)	40ft(12192*2438*2896mm)
Weight	24t	31t	51t
Transport	Whole system ocean shipping/land transpotation	Whole system land transportation	Determined by actural capacity
Certifictaion	IEC62619, UN38.3, UL9540A*		

Remark:
1. * means that certification is in progress;
2. 20-ft and 30-ft are standard products; 40-ft can be customized according to actual needs.

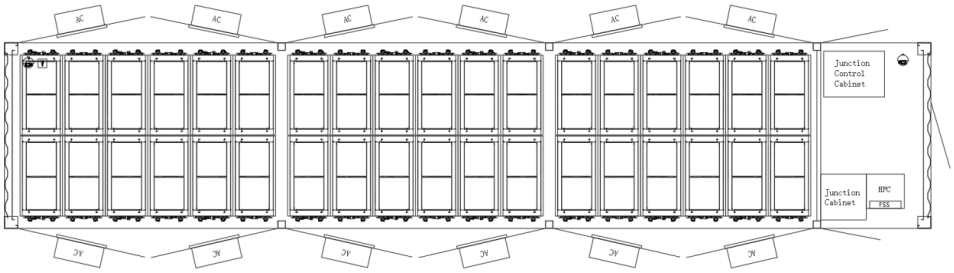
SDC-ESS-S768V2.2MWh



SDC-ESS-S768V3.4MWh



SDC-ESS-S768V5.2MWh



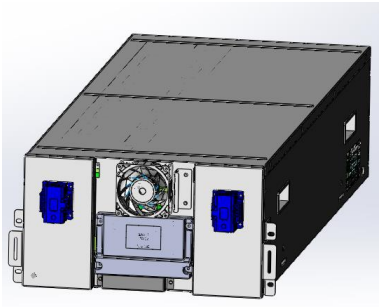
Beijing Shoto Energy Storage Technology Co., Ltd.
Web： www.shotosolar.com/ Tel：0086 10-56533600 E-mail：marketing@shotosolar.com

双登集团 SHUANGDENG GROUP

High voltage rack: SDC-ESS-R1152V322kWh

SDC-ESS-R1152V322kWh is a lithium-ion energy storage cluster for large-capacity energy storage applications. It can be used for frequency regulation, wind and solar power ramp control and time shifting, peaks having, transmission and distribution (T&D) system upgrade deferring, distributed generation and microgrid.

It is modularized designed with good scalability and can meet the power and energy need of different scenarios. The rated voltage of the battery cluster is 1152V (15 SDC-ESS-M76V21kWh modules are connected in series) and the rated capacity is 280Ah.



SDC-ESS-M76V21kWh

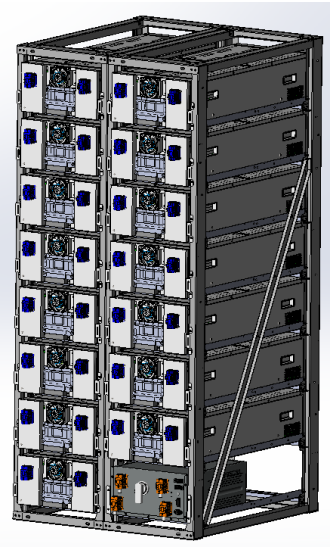
Air-cooling HV BESS—Product characteristics

◆ High Safety:

1. Employ LFP material system with higher safety and reliability;
2.The BMS system can monitor the voltage, current, temperature and state of the cell in real time to ensure the safe operation of the battery;
3.The battery compartment adopts unit divisions, and each division is protected by flame retardant materials. In case of extreme thermal runaway accident, it can ensure the safety of other unit divisions.

◆ Advanced Heat Management:

1. Battery module with active heat dissipation ensuring efficient and uniform heat dissipation of the energy storage battery;
2.The battery compartment adopts modular thermal management technology to improve the temperature balance of the battery cell;
3.The cooling air duct adopts multi-point segmented type, and the cooling air can directly and rapidly reach target zone. so as to improve the performance and reduce the operation and maintenance cost.



SDC-ESS-R1152V322kWh

◆ High Discharge Rate：

The module has excellent rate charging/discharging performance, maximum sustainable 0.5C charging and discharging, to meet different application demand.

◆ Standardized Module：

It is standardized designed with expansibility and can meet the power and energy requirements of different scenarios. Integrated BMS design and standardized communication protocol ensure plug and play of the energy storage module.

Beijing Shoto Energy Storage Technology Co., Ltd.
Web： www.shotosolar.com/ Tel：0086 10-56533600 E-mail：marketing@shotosolar.com

Air-cooling HV BESS: technical parameter of battery module and rack

Parameter of Lithium-ion Battery Module: SDC-ESS-M76V21kWh	Nominal Voltage	76.8V
	Available Energy (Nominal)	21.504kWh(1P24S)
	Nominal Capacity	280Ah
	Charge Current	140A
	Discharge Current	140A
	Operating Voltage Range	60V~87.6V
	Recommended Operating Temperature	10℃~30℃
	Storage Temperature and Humidity Range	Temperature:-20℃~55℃ Humidity:45%~85%RH
	Dimensions(W*D*H)	470mm×1103mm×230mm
	Weight	150kg
	Certification	GB/T 36276、IEC62619、UN38.3、UL1973*、UL9540A*

Parameter of Lithium-ion Battery Rack: SDC-ESS-R1152V322kWh	Nominal Voltage	1152V
	Available Energy(Nominal)	322.56kWh(15*1P24S)
	Operating Voltage Range	1008VDC~1314VDC
	Rated Charge Current	140A
	Rated Discharge Current	140A
	Maximum Charge Current	140A
	Maximum Discharge Current	140A
	Communication	CAN/RS485
	Operating Temperature Range	0~45℃
	Recommended Operating Temperature Range	15℃~30℃
	Storage Temperature Range	-20℃~55℃
	Relative Humidity	5%~95%RH
	Dimensions(W*D*H)	1120mm×1125mm×2220mm
	Certification	GB/T 36276、IEC62619、UN38.3, UL9540A*

Remark:
1. * means that certification is in progress.

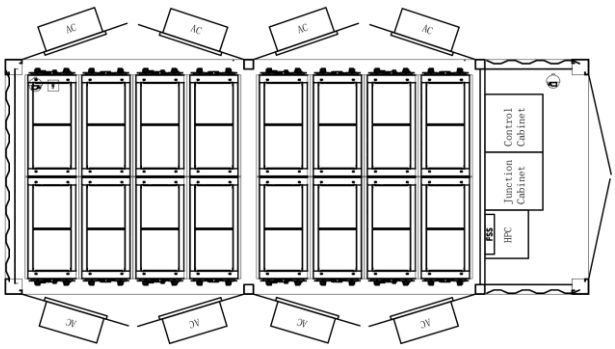
Beijing Shoto Energy Storage Technology Co., Ltd.
Web： www.shotosolar.com/ Tel：0086 10-56533600 E-mail：marketing@shotosolar.com

Air-cooling HV BESS: technical parameter of battery container

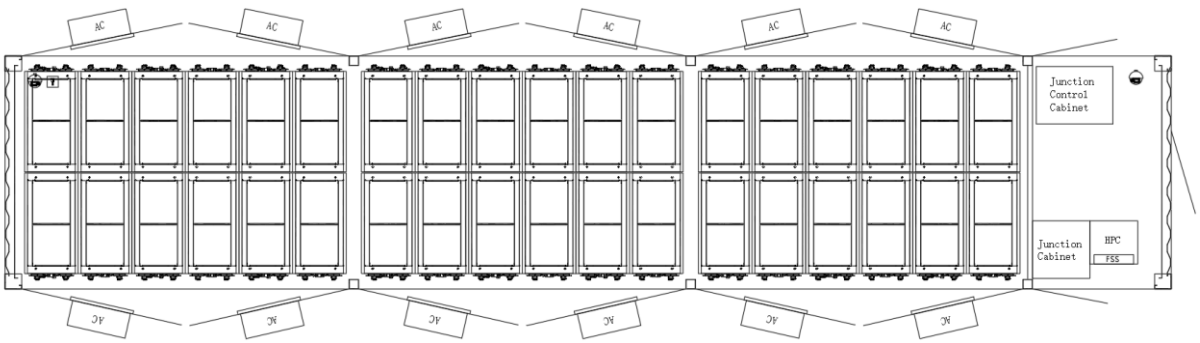
LV scheme	SDC-ESS-S1152V2.6MWh	SDC-ESS-S1152V5.8MWh
Nominal Power	1.25MW	2*1.25MW/2*1.5MW
Nominal Energy	2.58MWh(8*15*1P24S)	5.8MWh(18*15*1P24S)
Nominal Charge/Disacharge rate	0.5C	
Operating Temperature Range	-20-50℃	
Communication	Modbus RTU、Modbus TCP/IP、CAN、IEC61850 etc.	
Altitude	<3000m	
IP	IP54	
Dimension	20ft(6058*2438*2896mm)	40ft(12192*2438*2896mm)
Weight	26t	53t
Transport	Whole system ocean shipping/land transpotation	Determined by actural capacity
Certifictaion	IEC62619, UN38.3, UL9540A*	

Remark:
1. * means that certification is in progress;
2. 20-ft is standard product; 40-ft can be customized according to actual needs.

SDC-ESS-S1152V2.6MWh



SDC-ESS-S1152V5.8MWh



Beijing Shoto Energy Storage Technology Co., Ltd.
Web： www.shotosolar.com/ Tel：0086 10-56533600 E-mail：marketing@shotosolar.com