

Modular high-voltage battery cabinet **SMALL-SCALE C&I ESS SOLUTION**

20KWH/40KWH/60KWH/77KWH





Product Introduction

Solarthon's DQ2910 series is an advanced system. The system consists of rack-mounted battery modules, each with a capacity of 5.12 kWh. Multiple modules can be connected in series and parallel to achieve the required storage capacity, and its modular and scalable architecture provides flexible capacities from 20.48kWh to 76.8kWh. Standardized 3U chassis design for easy installation and maintenance.

Key features of this battery pack include a service life of more than 10 years, integrated battery management system protection, an operating temperature range of -20°C to 55°C, and a depth of discharge of up to 90% for excellent energy. The intrinsically safe LiFePO₄ chemistry also makes the system reliable and environmentally friendly. Advanced monitoring and control capabilities to optimize system performance and longevity.



Safe and reliable



Flexible configuration



Convenient



Intelligent BMS



Eco friendly





Product Features

Convenient

Quick installation standard of 19-inch embedded designed module is comfortable for installation and maintenance.

Safe and reliable

Cathode material is made from LiFePO₄ with safety performance and long cycle life, The module has less self-discharge, up to 6 months without charging it on shelf, nomemory effect, excellent performance of shallow charge and discharge.

Intelligent BMS

It has protection functions including over-discharge, over-charge, over-current and over-high or low temperature. The system can automatically manage charge and discharge state and balance current and voltage of each cell.

Eco-friendly

The whole module is non-toxic, non-polluting and environmentally friendly

Flexible configuration

Multiple battery modules can be in parallel for expanding capacity and power. Support USB upgrade, wifi upgrade(optional), remote upgrade(Compatible with Deye inverter).

Wide temperature

Working temperature range is from -20°C to 55°C, with excellent discharge performance and cycle life.

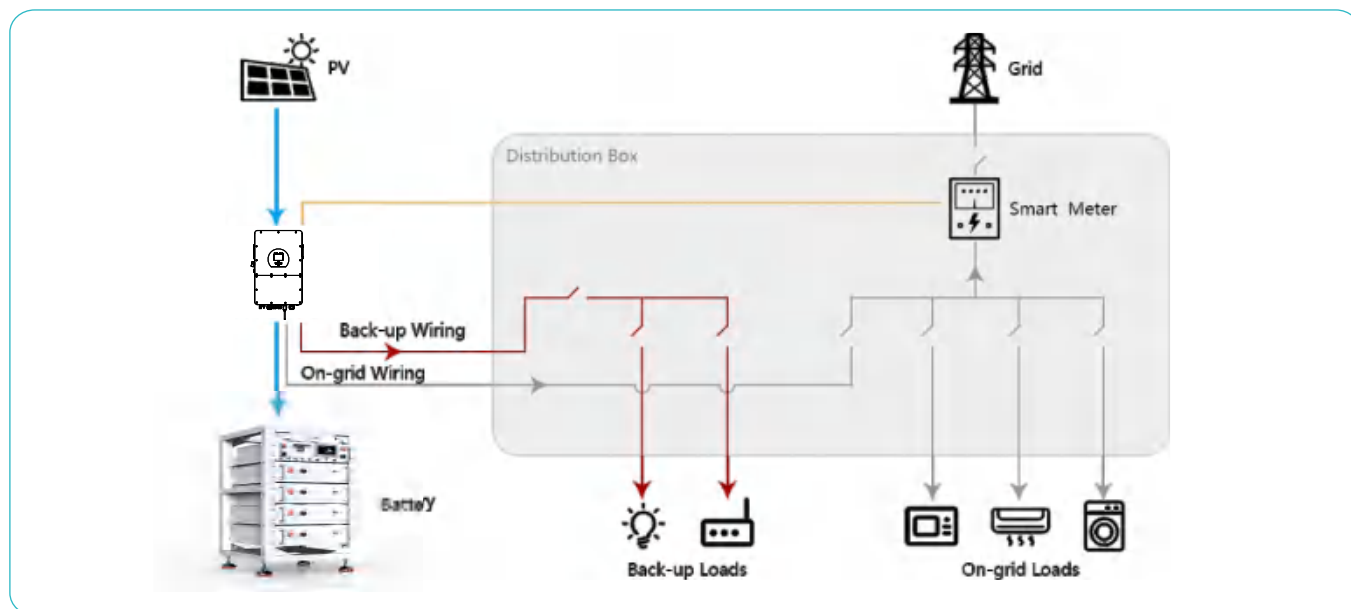




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Datasheet



Product Diagram



204.8V/20KWH
DQ2910A20-01

409.6V/40KWH
DQ2910B40-01

614.4V/60KWH
DQ2910C60-01

768V/77KWH
DQ2910D77-01



Specification

Model	DQ2910A20-01	DQ2910B40-01	DQ2910C60-01	DQ2910D77-01
Battery Type	LiFePO4			
Module Energy	5.12KWh			
Single Module Nominal Voltage	51.2V			
Module Capacity	100AH			
Number of Battery Modules (Optional)	4	8	12	15
System Energy	20.48kWh	40.96kWh	61.44kWh	76.8kWh
System Nominal Voltage	204.8V	409.6V	614.4V	768V
Charging Cut-off Voltage	230.4V	460.8V	691.2V	865V
Discharging Cut-off Voltage	179.2V	358.4V	537.6V	672V
Max. Cont. Charging/Discharging Current	100A			
Max. Instantaneous Charge/Discharge Current	100A			
Depth of Discharge(DOD)	≥95%			
Display type	LED+LCD(Touch)			
Protection Level	Ip21			
OperatingTemperature Range	Charge:0~+55°C/Discharge:-20°C~+55°C			
Storge Temperature Range	0°C~+35°C			
Humidity	5%~95%			
Altitude	≤2000m			
Cycle Life	≥6000 Cycles			
Installation	Rack-Mounting			
Protection	Built-in smart BMS, Breaker			
Communication Port	RS485/CAN			
Dimension (W*D*H,mm)	610.5*549*1020	610.5*549*1604	610.5*549*2188	1099*610.5*1454
Warranty Period	5 Year			

- 1 DC Usable Energy, test conditions: 90% DOD, 1C charge & discharge at 25°C . System usable energy may vary due to system configuration parameters.
- 2 The current is affected by temperature and SOC.
- 3 The warranty is due whichever reached first of warranty period or life cycle power.





System Components

High voltage box

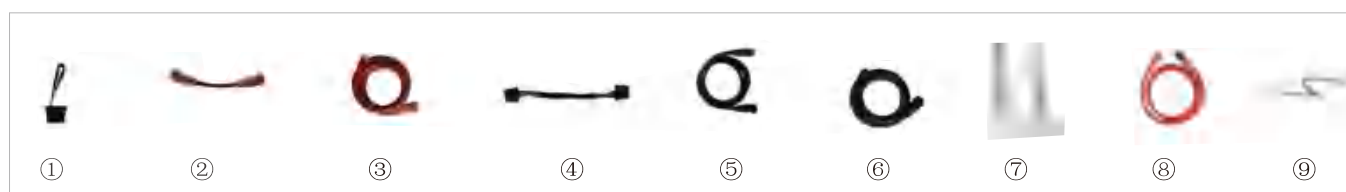
High Voltage Battery cluster control box conforming to European or British Standards

Operating Voltage	200~1000Vdc
Nominal Charge/Discharge Current	100A
Max.Charge/Discharge Current	120A
Operating Temperature Range	-20~60°C
Ingress Protection	IP20



High voltage box Standard configuration

- ① 120 ohm terminal resistance
- ② 250mm communication cable
- ③ 140mm power cable
- ④ 2.1m power cable
- ⑤ EPCable2.0 (Standard 2-meter power cable connected to the positive pole of the external PCS)
- ⑥ ENCable2.0 (Standard 2-meter power cable connected to the negative pole of the external PCS)
- ⑦ 1000mm communication cable between two battery racks
- ⑧ 1000mm power cable between the two battery racks
- ⑨ 140 mm ground wire





System Components

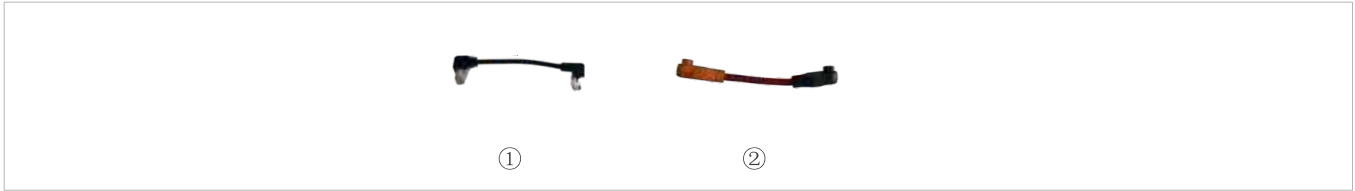
5.12 kwh battery module

Battery Type	LiFePO4(LFP)
Nominal Voltage	51.2Vdc
Rated Capacity	100Ah
Rated Energy	5.12kWh
Nominal Charge/Discharge Current	100A
Peak.Discharge Current	120A
Charge Temperature	0~55°C
Discharge Temperature	-20°C~55°C
Storage Temperature	0°C~35°C
Ingress Protection	IP20



Battery module Standard configuration

- ① 160mm communication cable
- ② 200mm power cable





System Components

Product parameters

Standard 19 inch rack, caninstall 4 pcs batteries and 1 pcs High Voltage Battery cluster control box

Dimension (W*D*H)	610.5*549*1020mm
Weight Approximate	242kg



Standard 19 inch rack, caninstall 8 pcs batteries and 1 pcs High Voltage Battery cluster control box

Dimension (W*D*H)	610.5*549*1604mm
Weight Approximate	443kg



Standard 19 inch rack, caninstall 12 pcs batteries and 1 pcs High Voltage Battery cluster control box

Dimension (W*D*H)	610.5*549*2188mm
Weight Approximate	644kg



Standard 19 inch rack, caninstall 15 pcs batteries and 1 pcs High Voltage Battery cluster control box

Dimension (W*D*H)	1099*610.5*1454mm
Weight Approximate	813kg

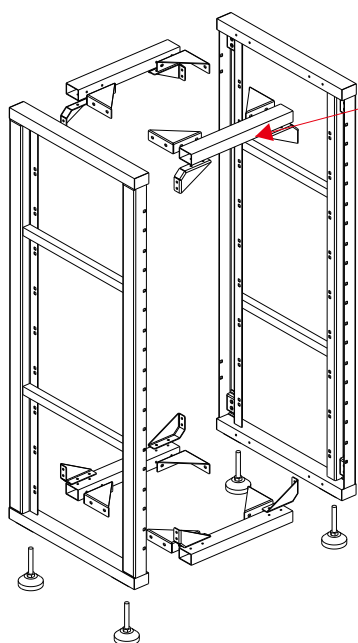




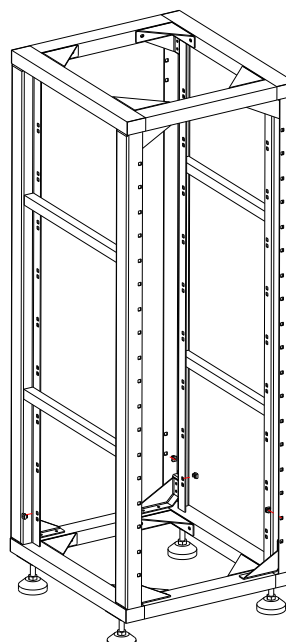
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Installation Instructions

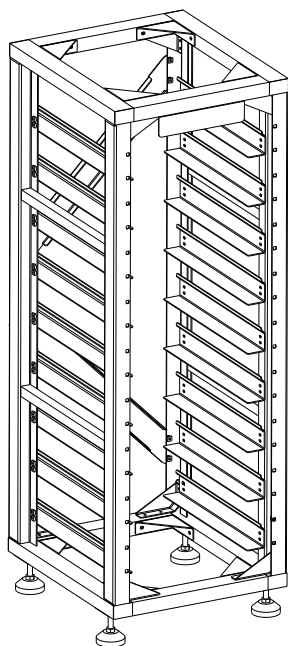


Note: There are two more teeth in the middle of this connecting tube

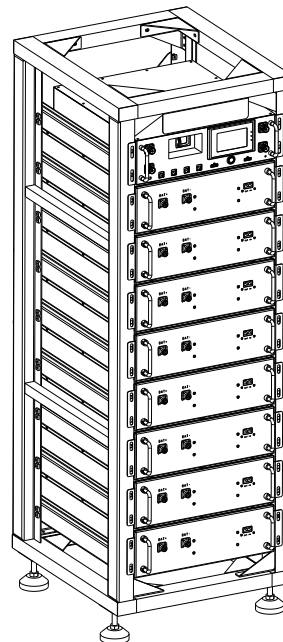


First, assemble the left frame, right frame, connecting tube, fixed connecting plate, and foot cup to stand upright

All square holes are fitted with M6 snap-on nuts



Lock all the remaining hardware fittings to the stand



Finally, the battery and the high voltage are loaded into the stand



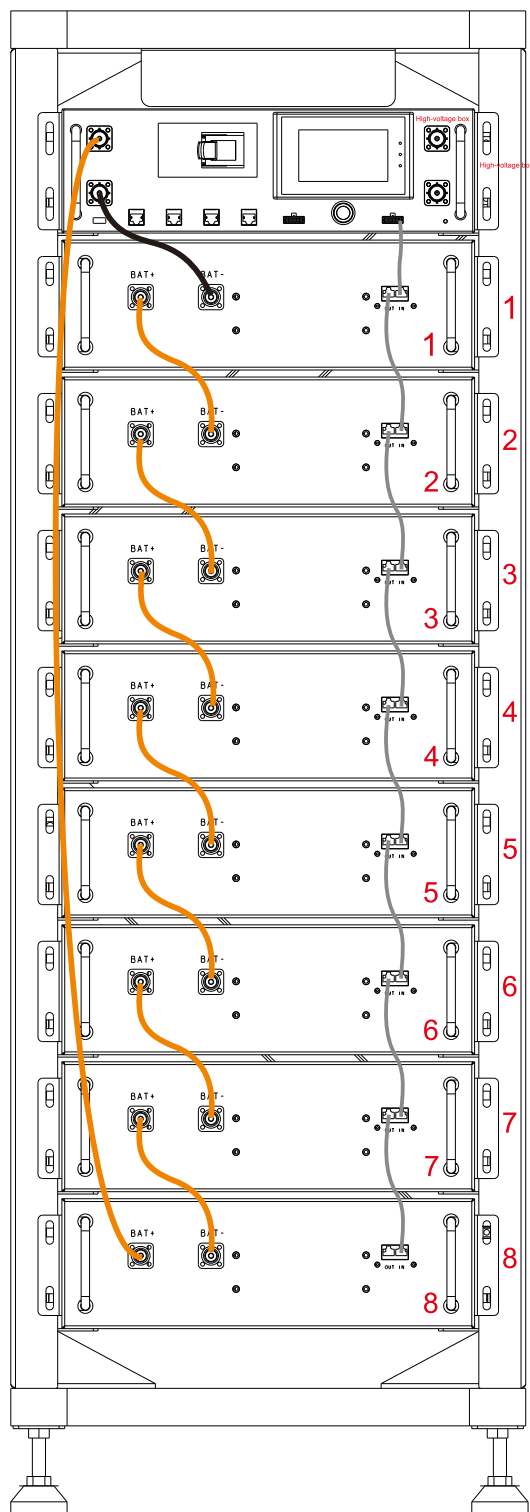


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Installation Instructions

Wiring diagram:



Caution

Batteries should be assembled in the order of the serial numbers on their frames, and the order must not be changed.

