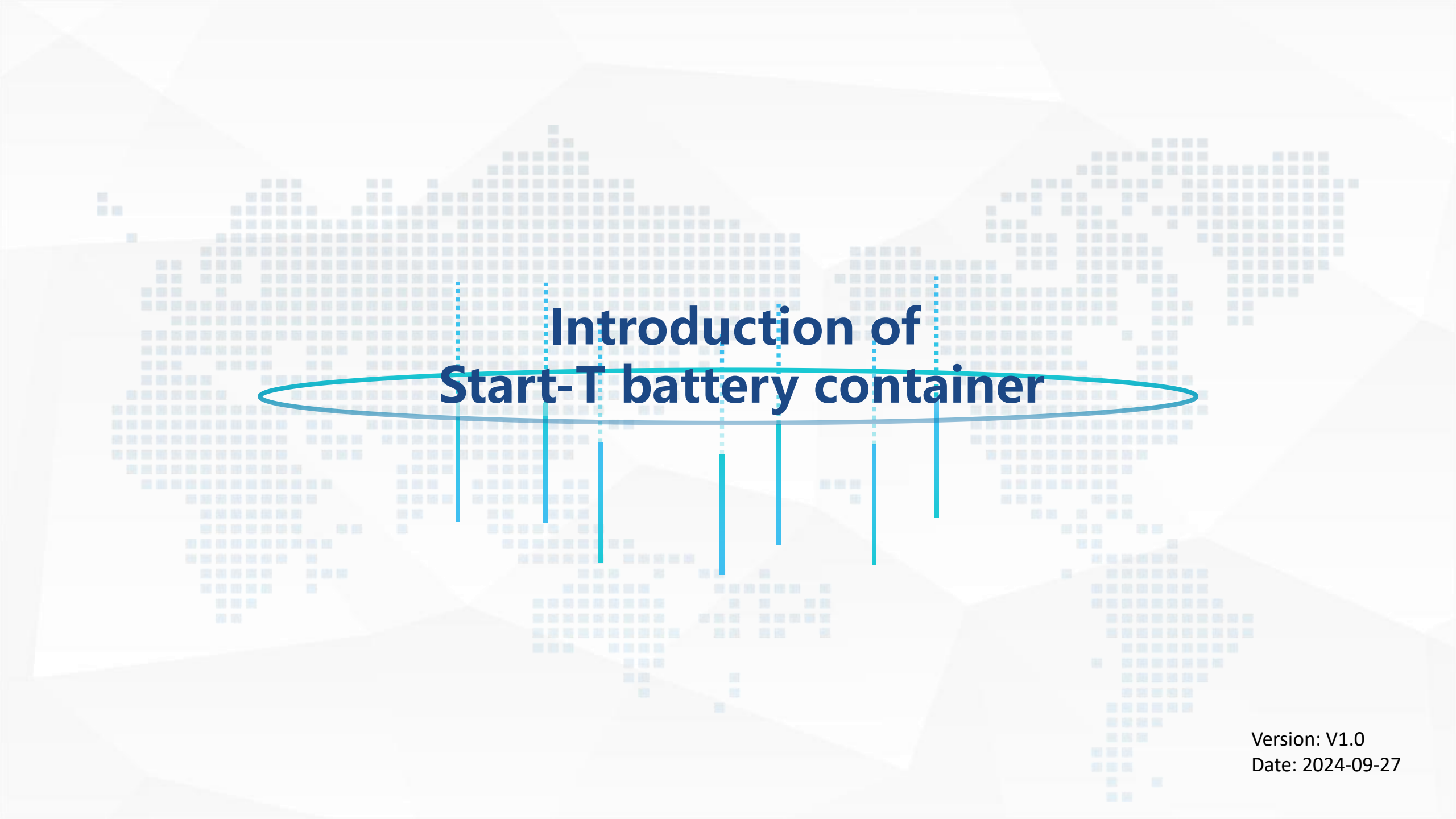
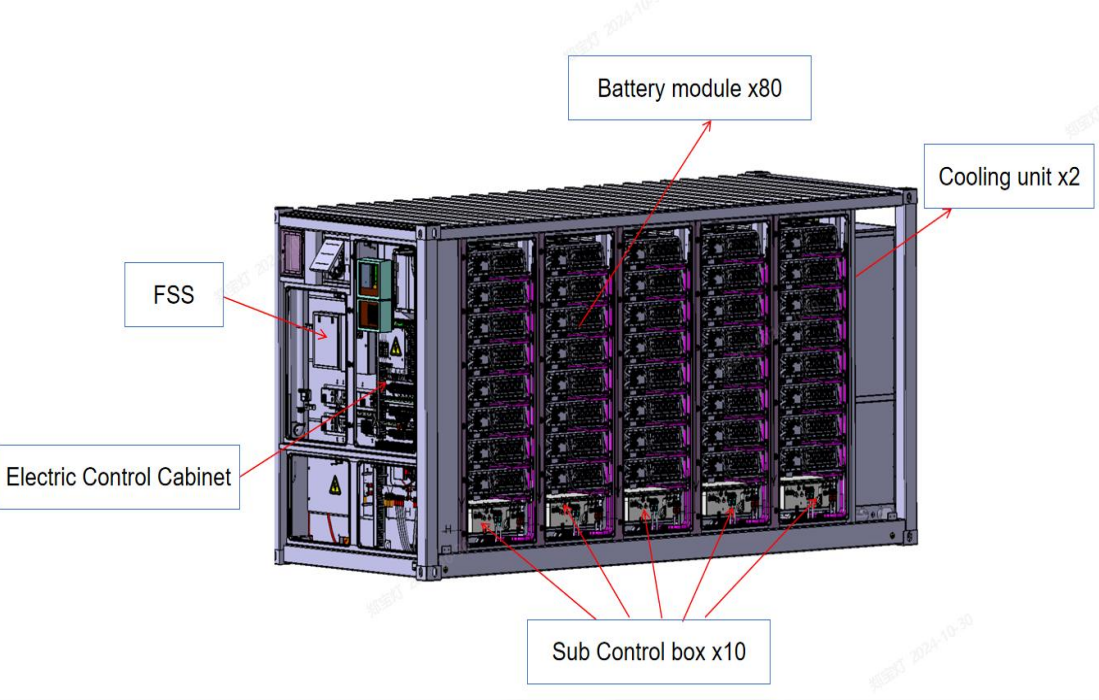




Introduction of Start-T battery container

Version: V1.0
Date: 2024-09-27

1. Battery Container - Overview



Battery Container Overview

Item	Specification
Configuration	10P416S
*Nominal Power (kWh)	4073kWh
Rated Voltage	1331.2VDC
Voltage Range	1164.8~1497.6VDC
Operating Temperature	-25~55℃
Operating humidity	≤95%, without condensation
Cooling method	Liquid Cooling
Battery management system	Intergration
Battery type	Lithium iron phosphate batteries
Protection level	IP55 (Battery Room) IP55 (Electrical Room) IPX5(Cooling unit)
Dimension	2896mm(H)*2462mm(W)*6058mm(D)
Weight	37t

* The equipment and parameter will vary according to real project .

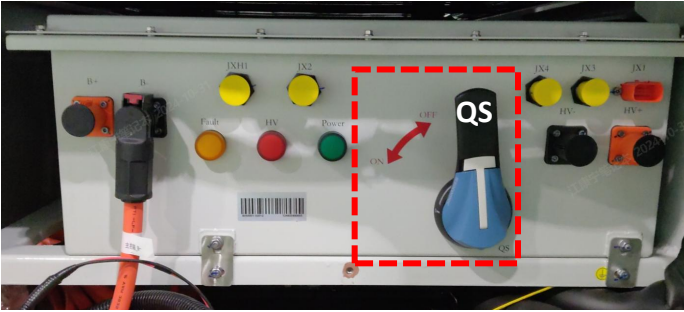
2. Battery Container - Spec and parameters

No	item		spec					
1	Product type-Centralized type		STF-1331 V-4073H- 01L-IN	STF-1331 V-3666H- 01L-IN	STF-1331 V-3258H- 01L-IN	STF-1331 V-2851H- 01L-IN	STF-1331 V-2444H- 01L-IN	STF-1331 V-2036H- 01L-IN
2	Product type-string type		STF-1331 V-4073H- 10L-IN	STF-1331 V-3666H- 09L-IN	STF-1331 V-3258H- 08L-IN	STF-1331 V-2851H- 07L-IN	STF-1331 V-2444H- 06L-IN	STF-1331 V-2036H- 05L-IN
3	Configuration		(52S8S)*10	(52S8S)*9	(52S8S)*8	(52S8S)*7	(52S8S)*6	(52S8S)*5
4	Rated energy		4073kWh	3666kWh	3258kWh	2851kWh	2444kWh	2036kWh
5	Rated voltage		1331.2VDC					
6	Range of voltage		1164.8~1497.6VDC					
7	Charging power	Rated	0.5P					
8		Maximum	0.5P					
9	Discharging power	Rated	0.5P					
10		Maximum	0.5P					
11	Aux. power supply	Voltage range	3AC 380---480V					
12		Power	35kW					
13	Operating temperature	Charge	-25~55℃					
14		Discharge	-25~55℃					
15	Optimum Operating temperature	Storage temperature & storage humidity	25~60℃, RH ≤95%					
16		Altitude	≤2000m					
17	General parameters	Dimension	20 feet container 2896mm(H)*2438mm(W)*6058mm(D)					
18		Weight	About 37T	About 34.5T	About 32T	About 29.5T	About 27T	About 24.5T
19		Ingress protection	IP54					
20		Battery cooling mode	Liquid cooling					
21		Communication protocol	CAN, RS485, TCP/IP					
22		Aux. Power connection	Terminal					
23		Coolant	50% Ethylene glycol aqueous solution					
24		Cell	UN38.3, UL1973, IEC62619, UL9540A					

Water
Water Pipes

3. Battery Container - Battery Rack

Sub Control box

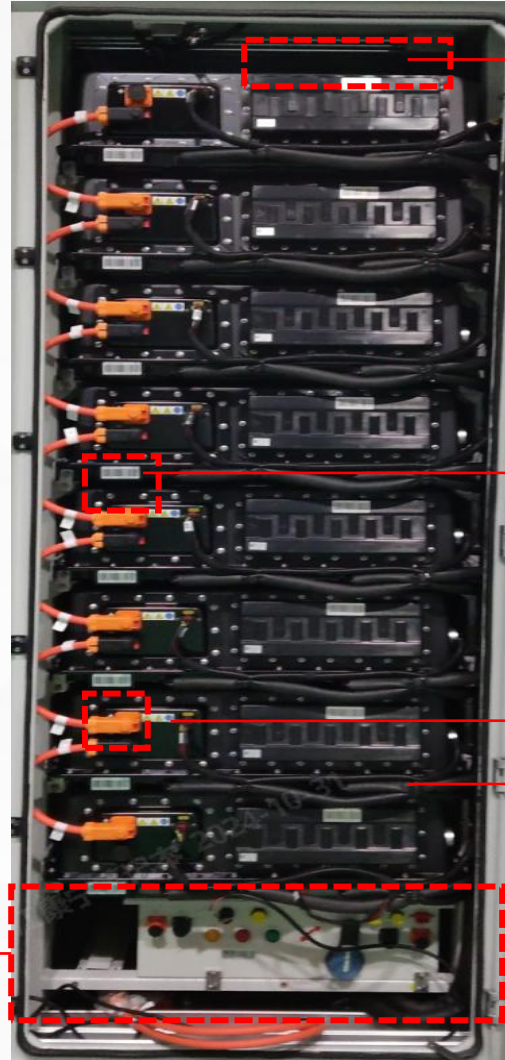


Sub control box can control battery rack and send battery status to SBMU by CAN bus.

Switch of definition:

QS: isolation switch to control output of battery system.

**Socket assignment need to be connected according to cable wiring diagram.



FSS:Fire suppression system (Only for reference)



HV harness



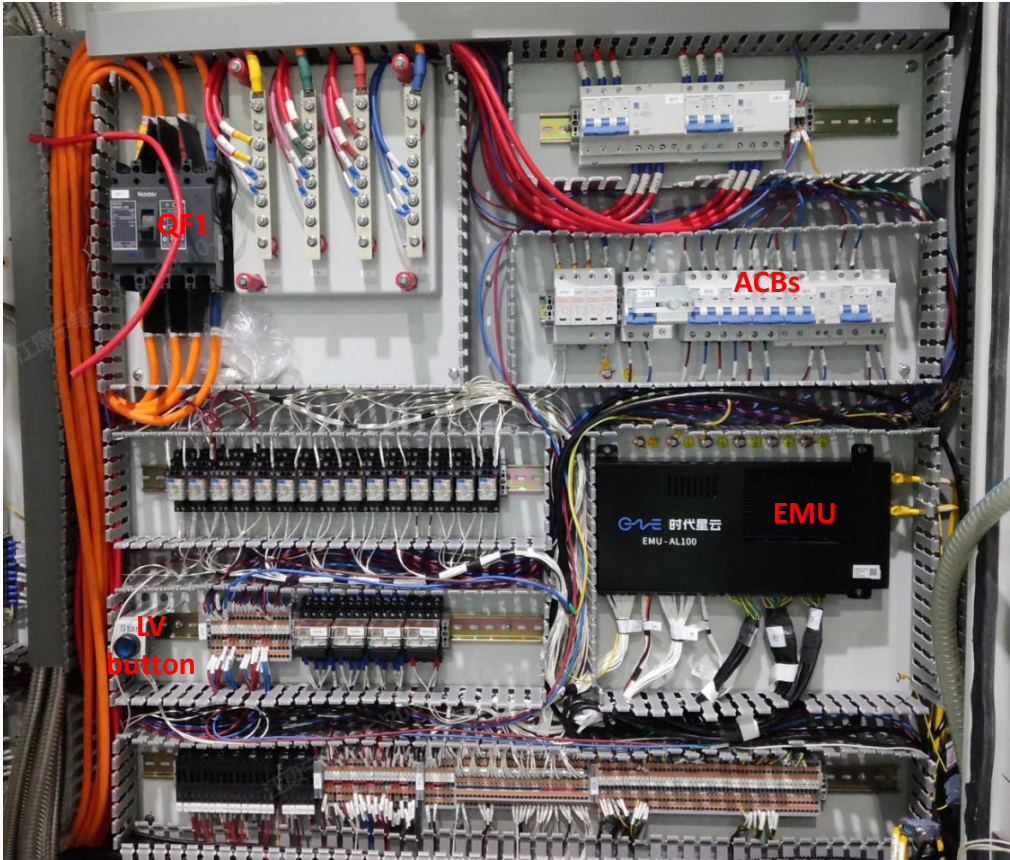
MSD:Manual service disconnect



Battery module

4. Battery Container - Electric control cabinet

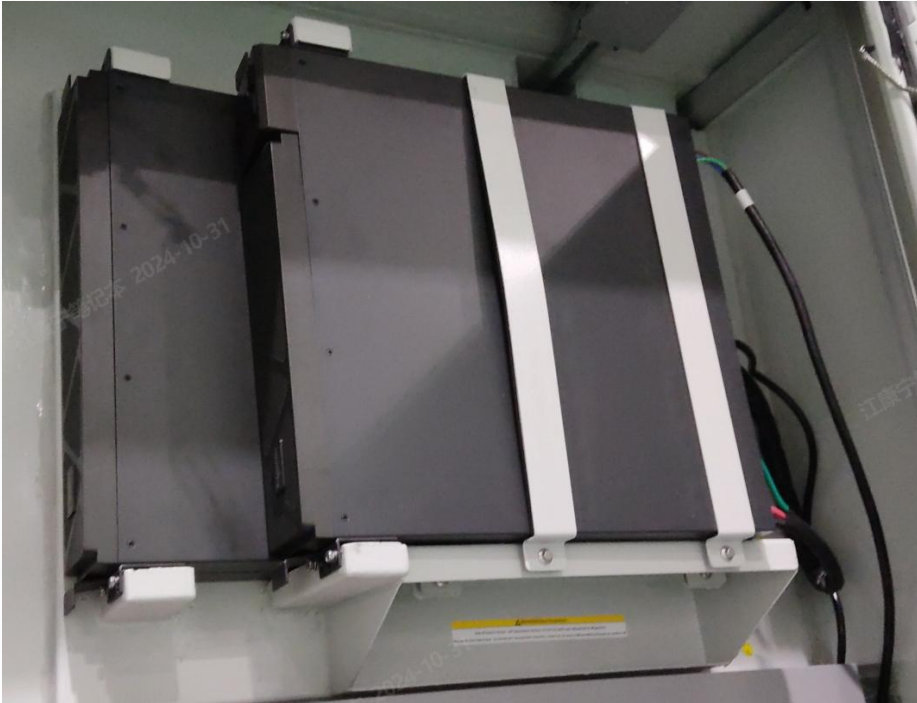
>> -Master control part consist of EMU、ACBs、 LV button、 SPD and Relays.



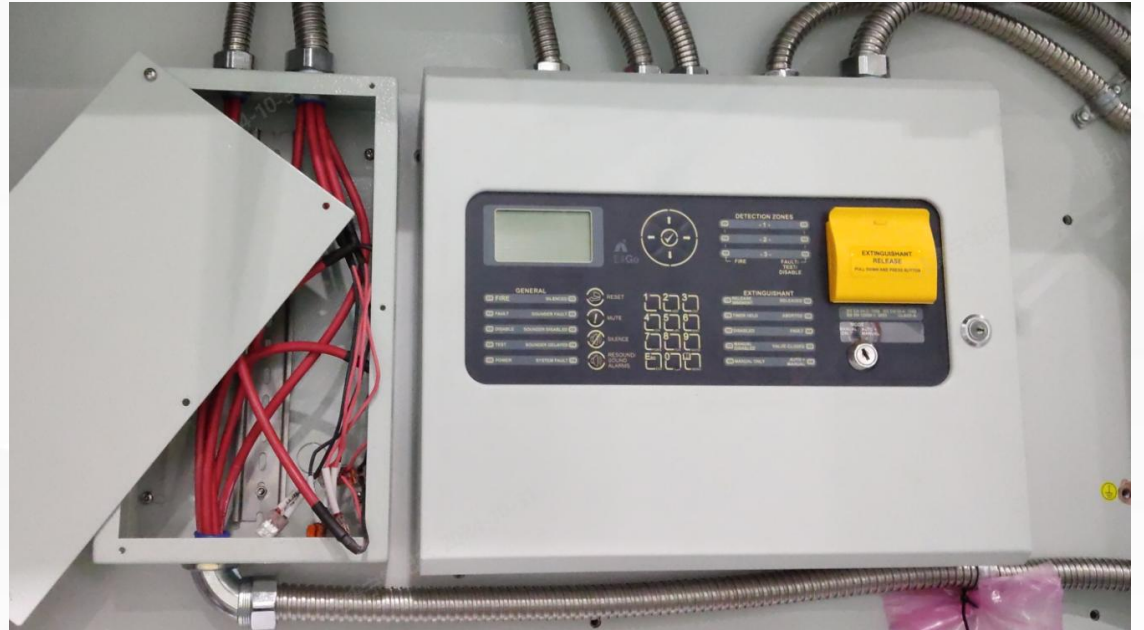
Main connectors definition

No.	Connector	Remark
1	QF1	The breaker for grid and device
2	EMU	CAN /RS485 communication and control the whole system
3	LV button	Push the LV button can make LV on
5	ACBs	ACBs for different part

5. Battery Container--UPS and FSS



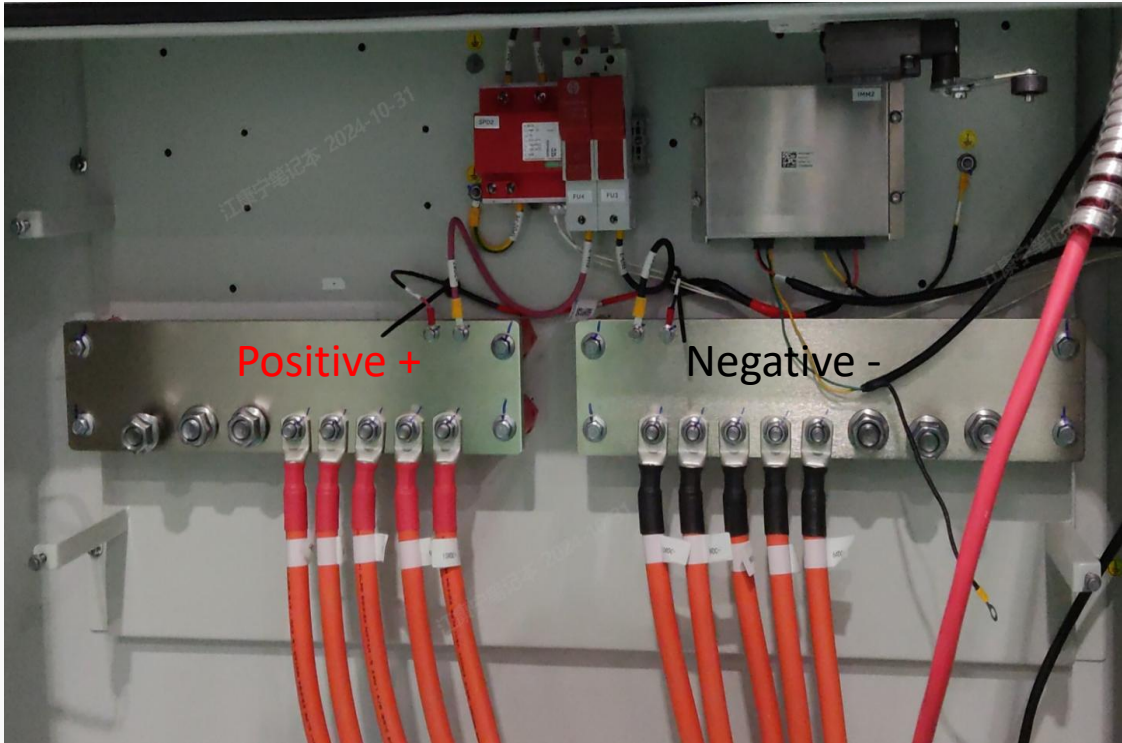
UPS



FSS system

4. Battery Container--DC Bar

>> -DC Bus is connected the PCS' s DC side and battery DC Cable.



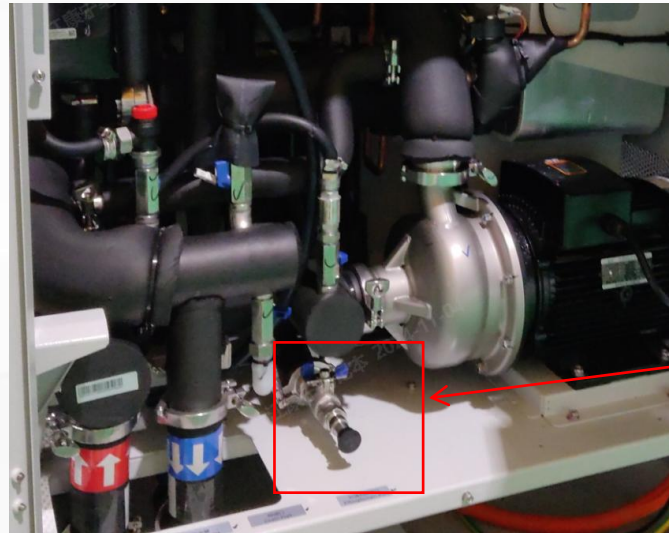
DC Bus--left side



DC Bus--right side

6. Battery Container--Cooling System

>> -Chiller is composed of pipes, heat dissipation components and pumps.



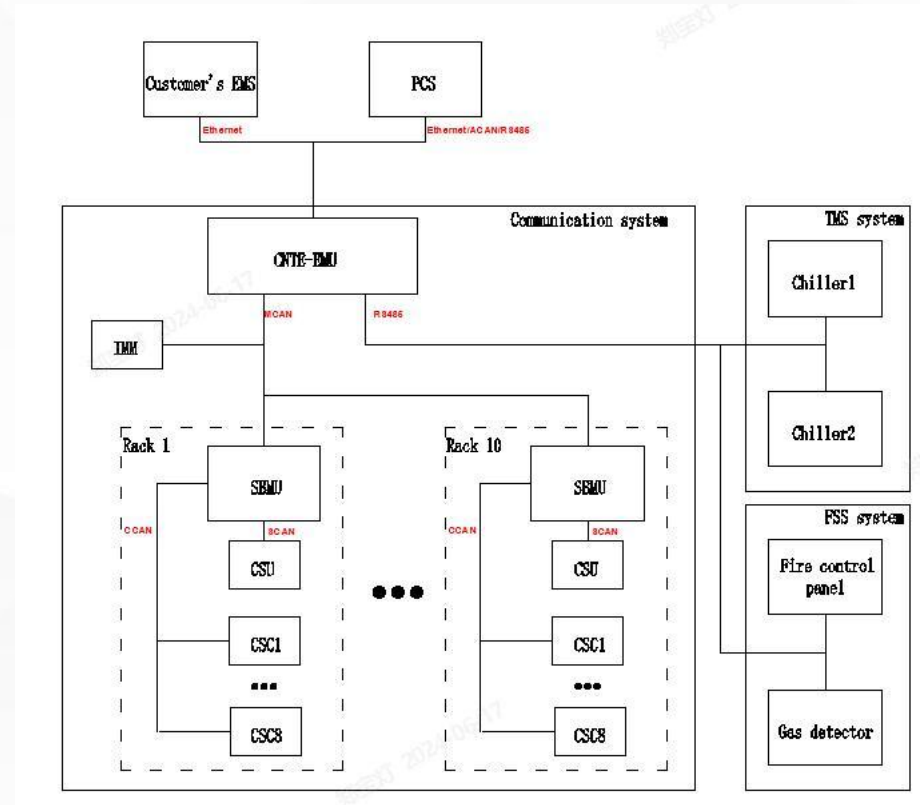
Injection port



Cooling System

4. Battery Container--System frame

- BMS is used in conjunction with the ESS energy storage system, which can monitor the battery voltage, current, temperature, managing energy absorption and release, thermal management, low voltage power supply, high voltage security monitoring, fault diagnosis and management, external communication with PCS and EMS, ensure the stable operation of the energy storage system.
- The BMS system is composed of 1 unit of EMU, 2unit of IMM, 10 units of SBMUs, 80 units of CSCs.



Cooling System



感谢您的聆听

THANK YOU FOR LISTENING