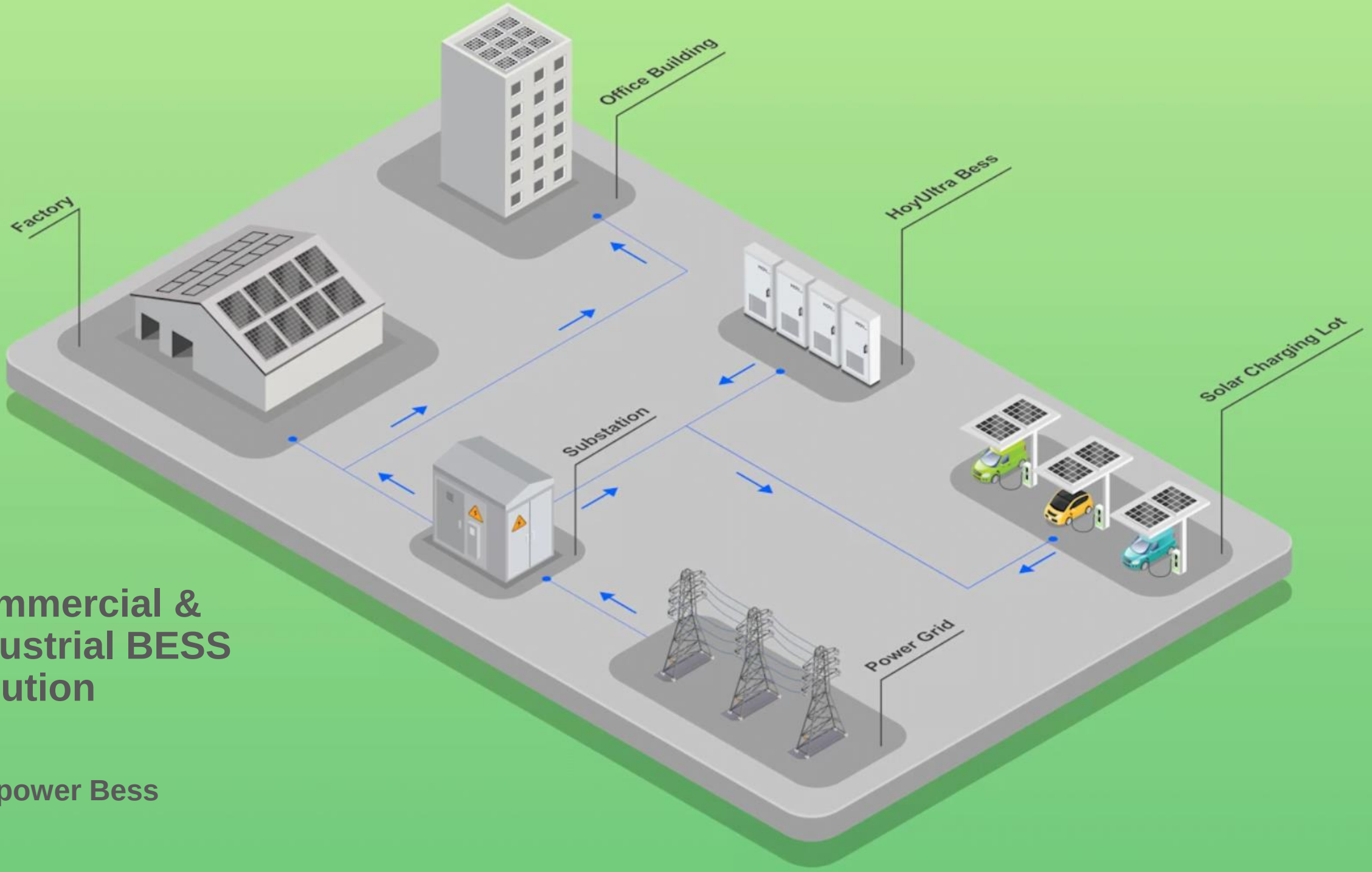
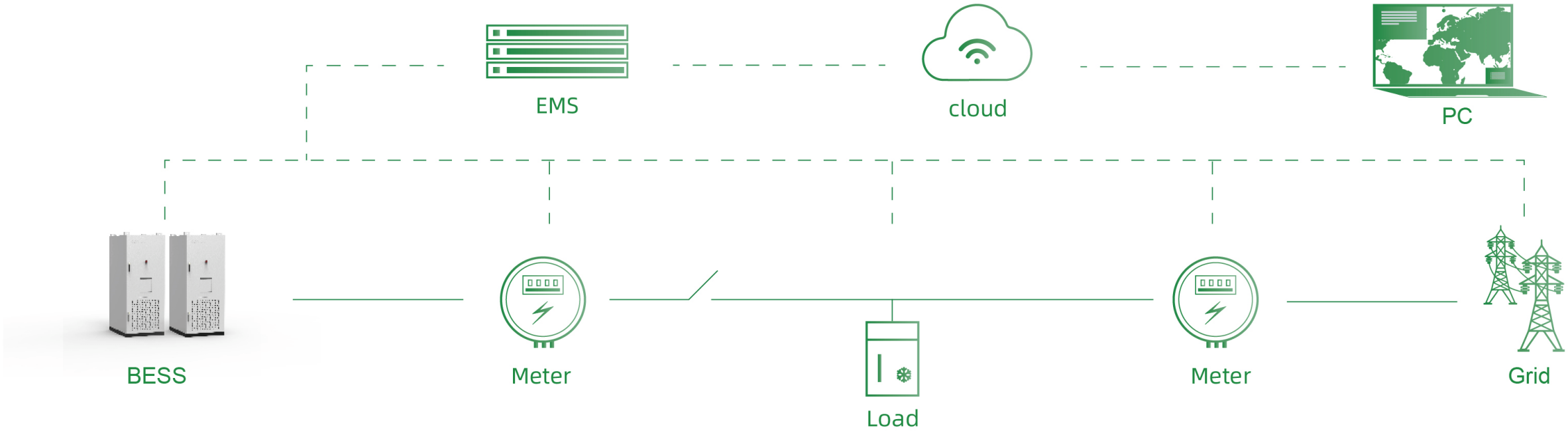


Commercial & Industrial BESS Solution

Hoypower Bess

Commercial& Industrial BESS Solution



HoyUltra

All-in-One Integration
100KW/215KWh

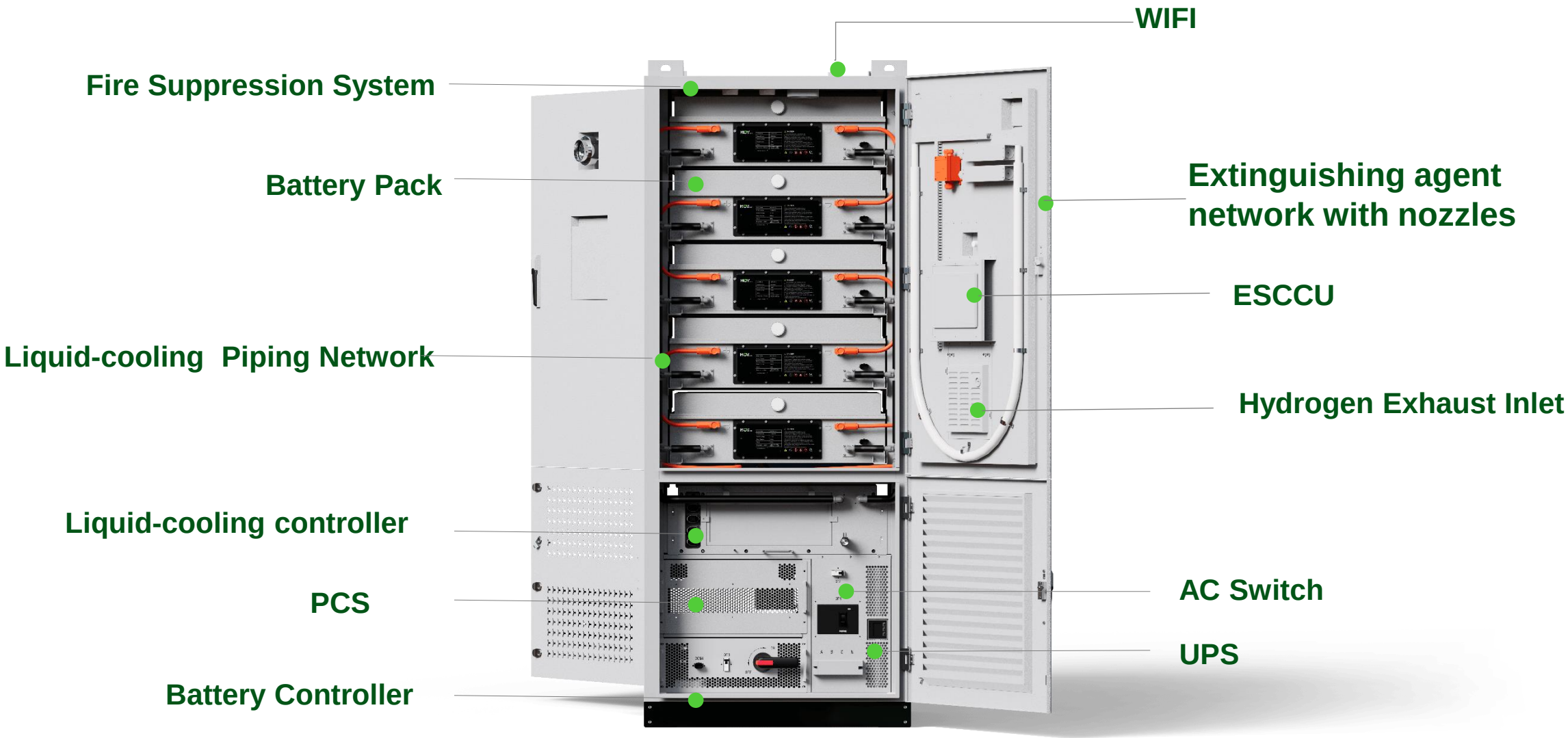
Outdoor Liquid-cooling
Battery Energy Storage Cabinet

Safe and Scalable

HOY POWER

The All-in-One liquid-cooled energy storage terminal adopts the design concept of 'ALL in one,' integrating high-security, long-life liquid-cooled batteries, modular liquid-cooled PCS, intelligent energy management system, battery management system, efficient liquid-cooled thermal management system, fire safety system, all within a single standardized outdoor cabinet. It helps customers establish distributed energy storage capabilities.

No.	Component part	Qty	Remark
1	Battery pack	5	1P48S
2	battery Controller	1	The battery Controller mainly includes a detection device and a protection device
3	Liquid cooling system (chiller unit+cooling pipe)	1	Including cooling mode,Heating mode,Self-cycle mode, standby mode
4	PCS	1	AC/DC conversion between grid and battery,Single-phase three-phase active and reactive power control,Solve the problem of three-phase imbalance,Support multi-machine parallel,Support multi-machine parallel
5	FSS	1	Smoke sensor,Temperature sensor ,Combustible gas sensor
6	BMS	1	5BMU+1BCU+1CCU


WIFI
Fire Suppression System
Battery Pack
Extinguishing agent network with nozzles
ESCCU
Liquid-cooling Piping Network
Hydrogen Exhaust Inlet
Liquid-cooling controller
PCS
AC Switch
UPS
Battery Controller

Ultimate Safety

3-level fire extinguishing

PACK-----Stack------Cabinet

3-level fuse protection

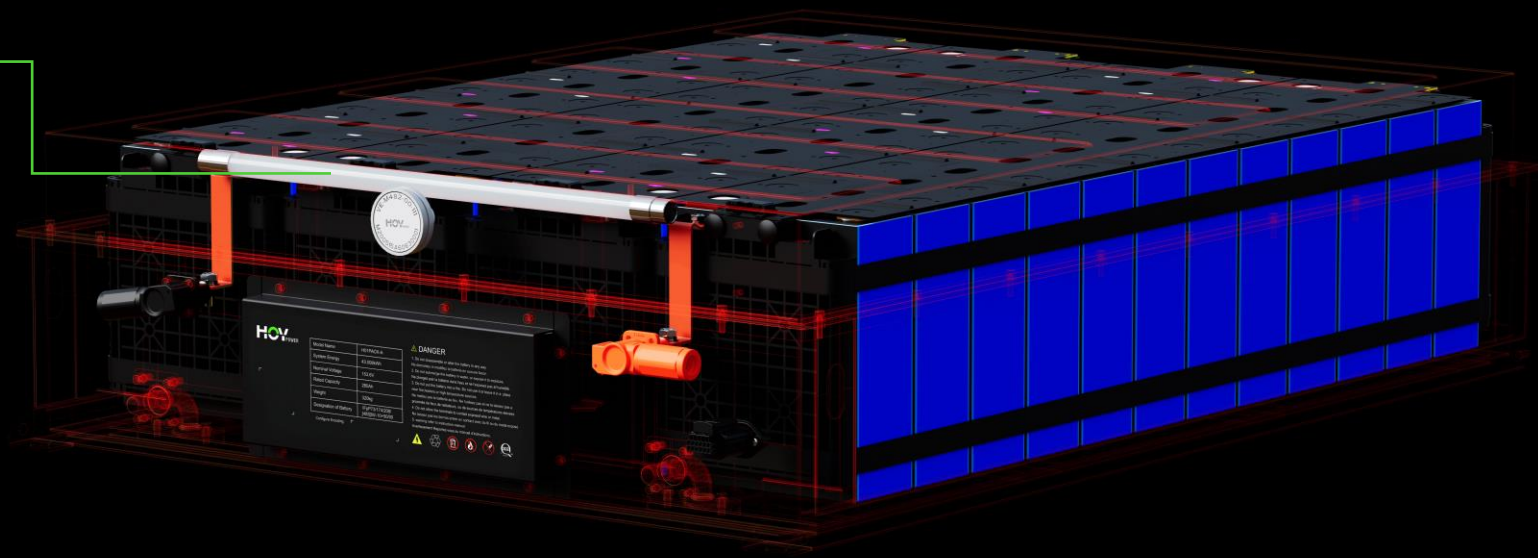
Cell-----PACK-----Cabinet

Early warning

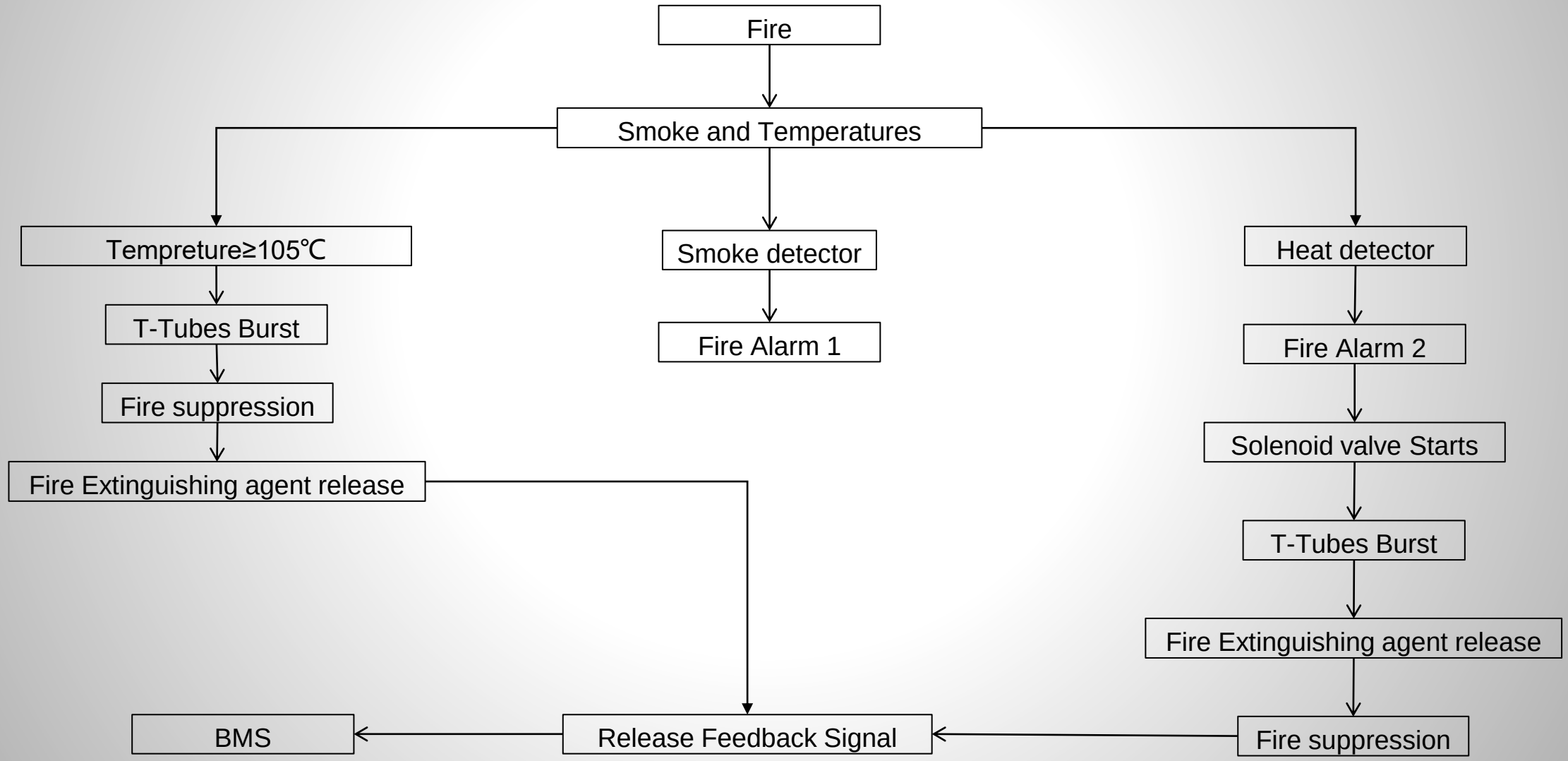
Pack-level fire suppression

Enhanced Safety

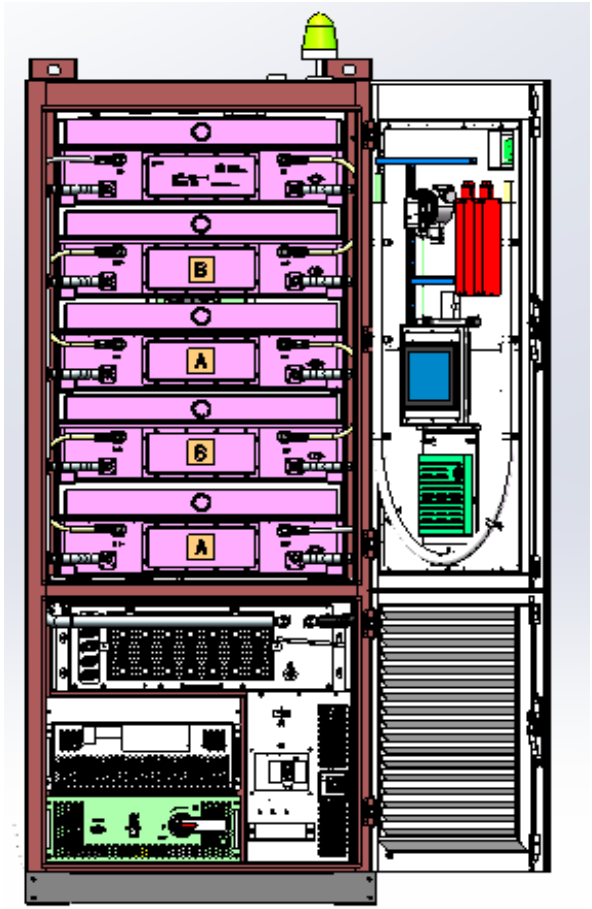
Pre-built
Tube with
NOVEC1230

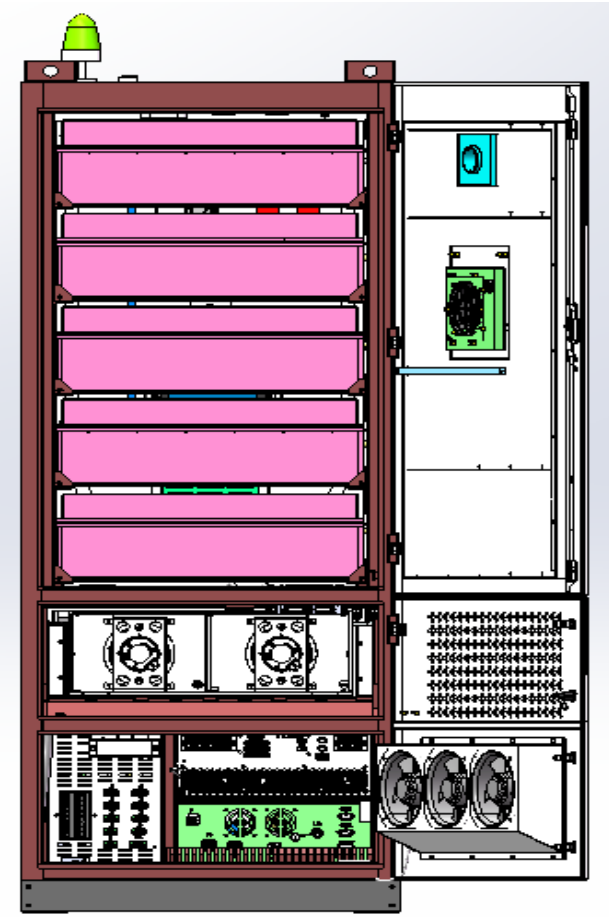


Multiple security monitoring via software and hardware



Electrical compartment separation in the battery compartment effectively prevents potential hazards caused by the accumulation of flammable gases.





High Energy density 78.6Wh/L

215KWh
(W*D*Hmm):935*1250*2340mm

Economical

Highly efficient thermal stability, 20% increase for life cycle

DC Round trip Rate up to 91%;

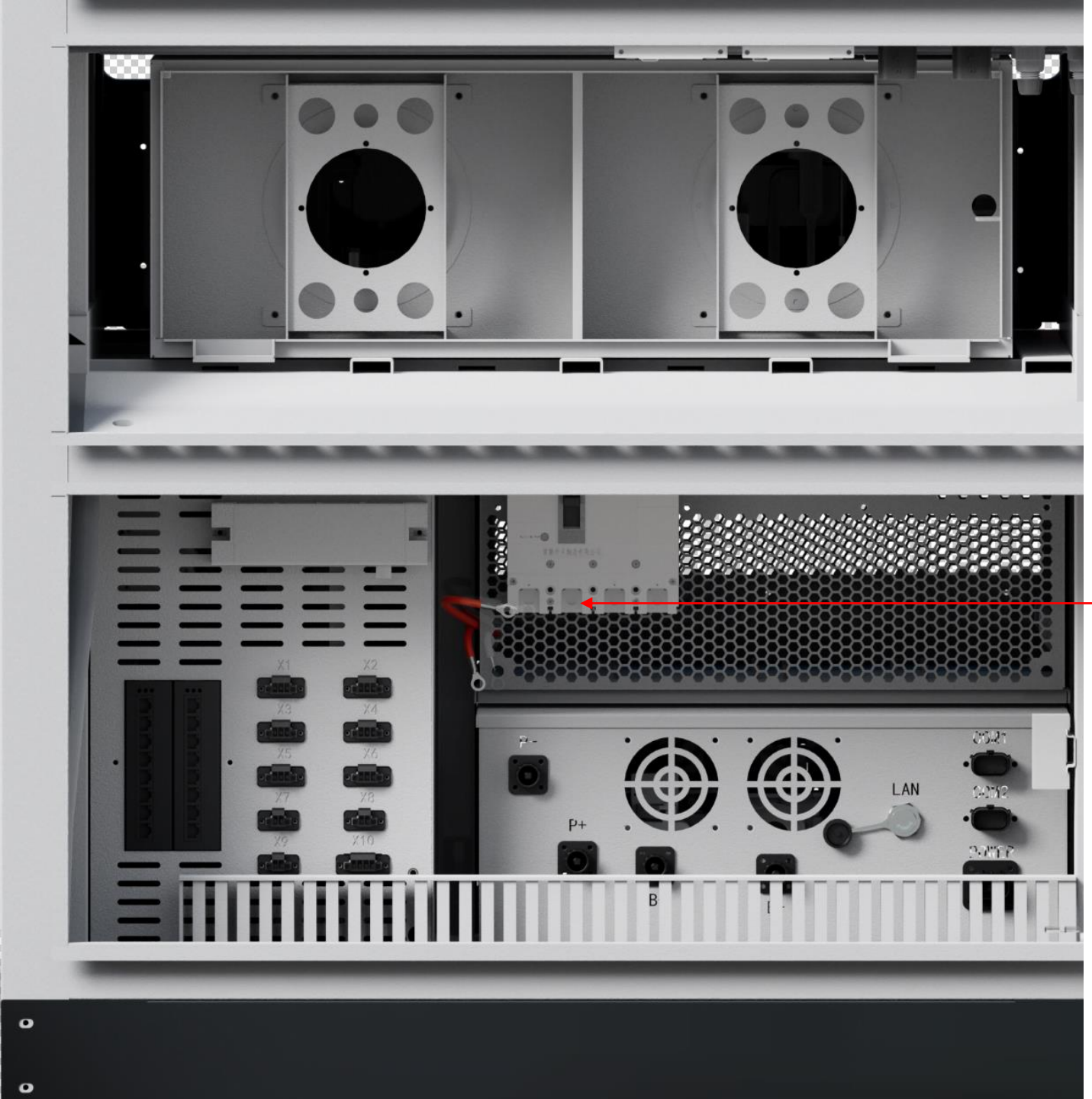
Seamless parallel operation without capacity loss

Supports mixed usage of new and old battery cells

Smart and Flexible

Modular design, Scalable up to 10 cabinets in Parallel
Play -and –Plug on site
Automatic on & off-grid switch in s/ms
Easy installation， High availability

Supports multiple communication protocols such as Modbus TCP/RTU, MQTT, IEC 104, etc., for a more user-friendly centralized control



3 Phase 4 Wire System

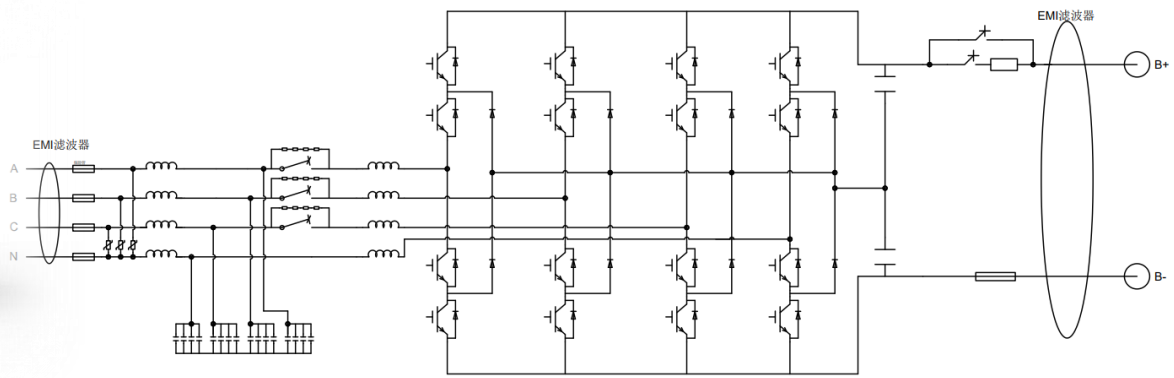
Individually controllable three-phase power

Technical Specification of Battery Pack

No.	Item		Specification	Remark
1	Basic parameters	Rated Energy (kWh)	43.008kWh	
2		Quantity of cells	48	
3		Cell self-discharge/month	≤3%	25℃,30%SOC,3 Months after new Battery produced
4		Voltage range (V)	134.4~172.8V DC	CELL:2.8~3.6V
5		Rated voltage (V)	153.6VDC	
6		Rated charge rate	0.5P	
7		Rated discharge rate	0.5P	
8		Max continuous current	160A 1min	
9		IP level of the electrical box	IP55	
10	General Parameters	Dimension（W*D*H mm）	761mm*1036mm* 246mm	
11		Weight (Kg)	315±5kg	
12		Cooling mode	Liquid cooling	
13		Communication mode	Multi stream transport ISO SPI	
14	Testing and certification	Battery Pack	UN38.3	
			UL9540A	
15			ANSI/CAN/UL 1973	
16			IEC 62619	

PCS

Flexible Configuration
High Efficiency & Stability Intelligent Collaboration
Peak efficiency ＞99%
Module can be used in outdoor with IP54 protection
Built-in MPPT
Supports different applications on DC-coupled systems.



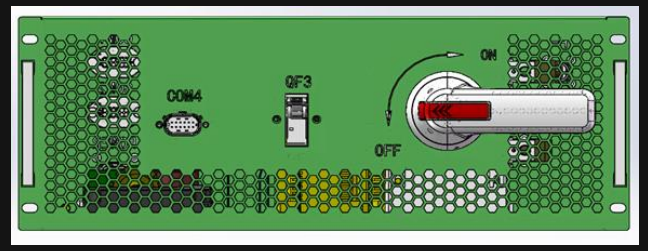
Circuit Diagram

Technical Specification of PCS

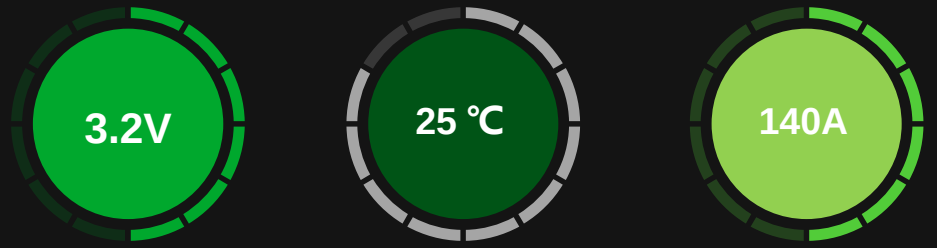
Parameters at DC side	Circuits	1
	DC voltage range	DC600V~950V（630-900V Full load output)
	DC maximum current	192A
	Rated DC power	100kW
	Stabilized voltage precision	≤±2%
	Stabilized current precision	≤±5%
	Voltage limiting characteristics	Yes
	Current limiting characteristics	Yes
Parameters at AC side	Rated AC power	100kW
	AC overload capacity	1.1 times long-term, 1.2 times 1min
	AC access method	Three-phase four-wire
	Allowable grid voltage	380V（-20%～+15%）Vac
	Allowable grid frequency	50Hz/60Hz±2.5Hz
	THDI	≤3%（the full load）
	Power factor	-0.99～+0.99
	Stabilized voltage precision	≤±1%
	Stabilized current precision	≤±1%
	Maximum conversion efficiency	≥98%
	Cooling mode	Forced air cooling

BMS+EMS

3 –level Architecture



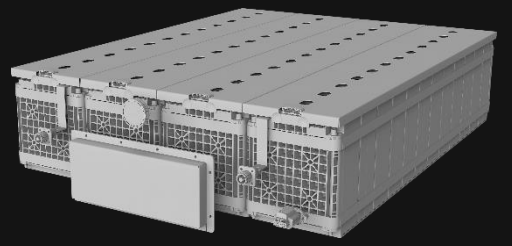
Measuring cell current, voltage and temperature of singe cell



Passive Balancing Control

28 temperature detectors

Early Detection of failures
Auto-grade ccs, Short-circuit proof on single cell



Compliance

GB/T36276-2018

UL1973

IEC62619

UL9540A

UN38.3

C&I application

C&I application

Contact us

Sales@hoypower.com