Flex BESS C2-215

Strong Assurance System

■ Strong R&D team supports creative products and experience engineers support the high quality manufacturing; High-standard testing process ensure quality delivery.

Modular design for multiple Application

■ One cabinet of 215kwh battery as a BESS module, and an energy block, can combine from 215kwh to 2150kwh in one station;

■ Modularization to save maintenance cost

Easy Operation

■ Fully integrated and plug-and-play ;

■ 3L+N PCS without transformer and directly connect to grid

■ DC coupling system ensuring: higher DC/AC ratio, higher round trip efficiency;

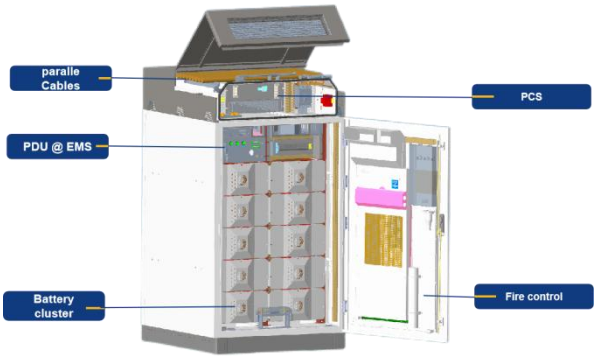
■ Accessible to different sources of powers: PV, Grid or DG, supports both on-grid and off-grid modes;

Reliable & Competitive Quality

■ EN62619 and UL9540 compliant ;

■ electric top bay protection level at IP54 and IP65 for the battery bay;

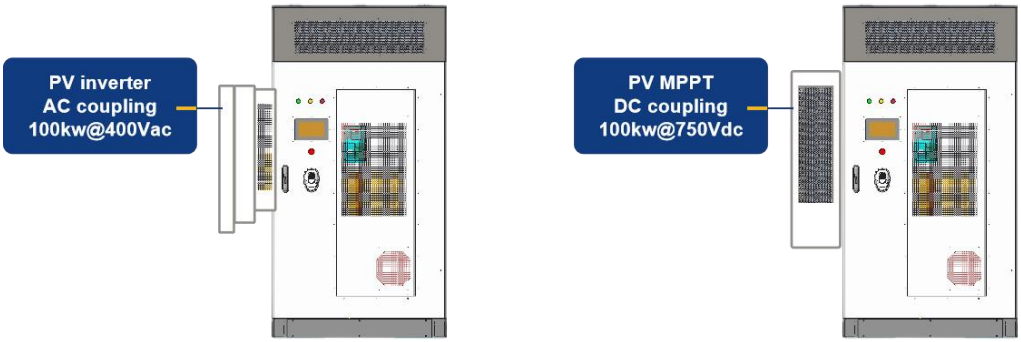
Configuration



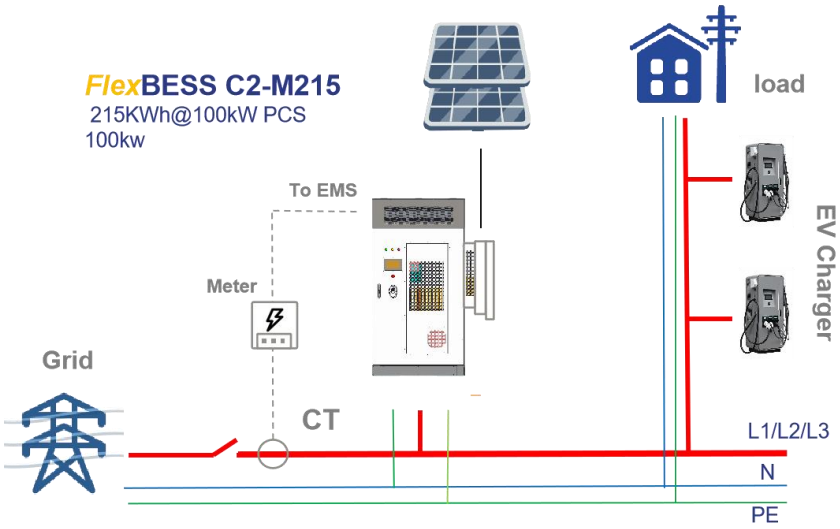
Product family

■ ***Flex*BESS C2-M215**

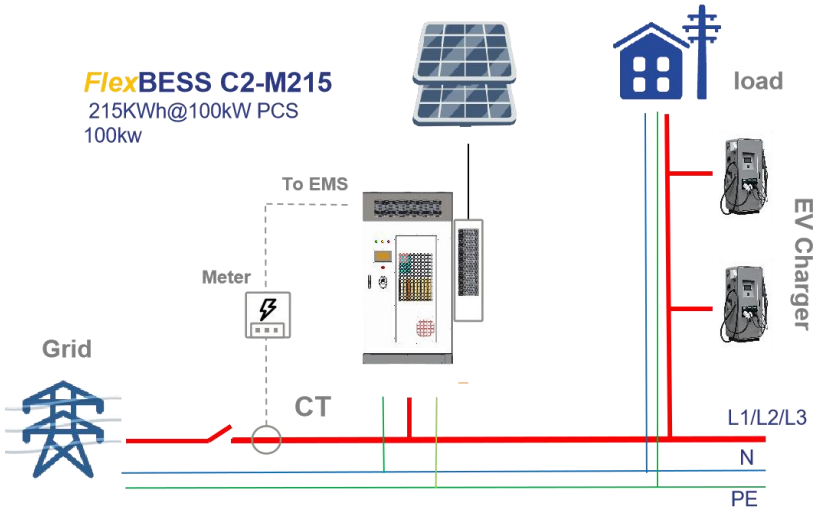
The ***Flex*BESS C2-M215** is the main bay of the ***Flex*BESS C2** series, it can work alone as a Bess system, With typical configuration: 100kw power PCS and 215kwh battery. With the main EMS inside, it can manage the slave bays when parallel.



The ***Flex*BESS C2-M215** is compliant with the AC coupling and DC coupling of the PV.



PV AC Coupling



PV DC Coupling

The PV MPPT device **PVM100** is composed of power coversion module and terminal, SPD. DC coupling Only use for the main bay work alone. The AC Coupling can apply for the battery bay paralleling.

■ ***Flex*BESS C2-S215**

The ***Flex*BESS C2-S215** is the slave bay of the ***Flex*BESS C2** series, it can not work alone and need to parallel with the main bay . It has the typical configuration: 100kw power PCS and 215kwh battery, but with a local EMS, which is managed by the Main EMS.

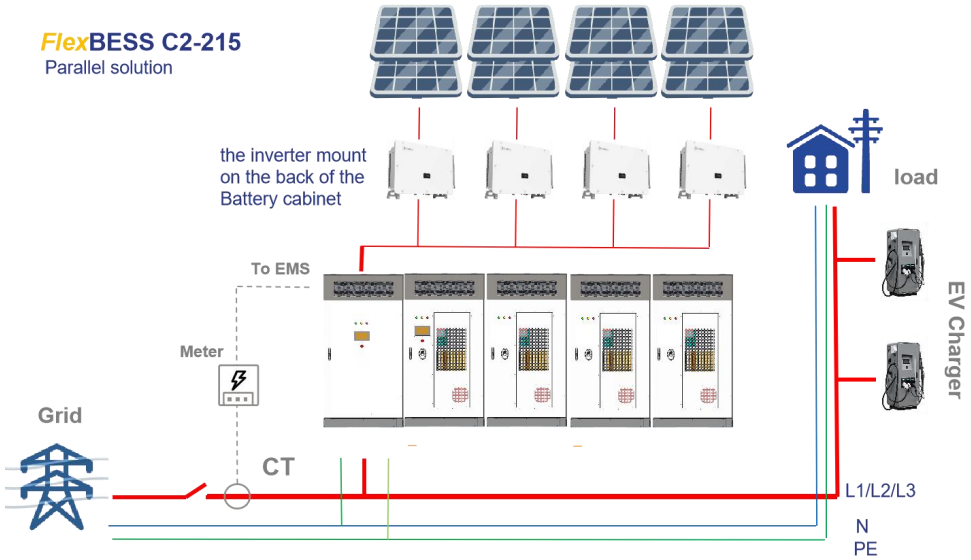
■ ***Flex*BESS C2-Ax**

The ***Flex*BESS C2-Ax** is the side bay of the ***Flex*BESS C2** series, it can not work alone and need to parallel with the main bays and slave bays. Typical function of the C2-Ax is that it combine the AC output of the parallel bays, And connect to the grid.

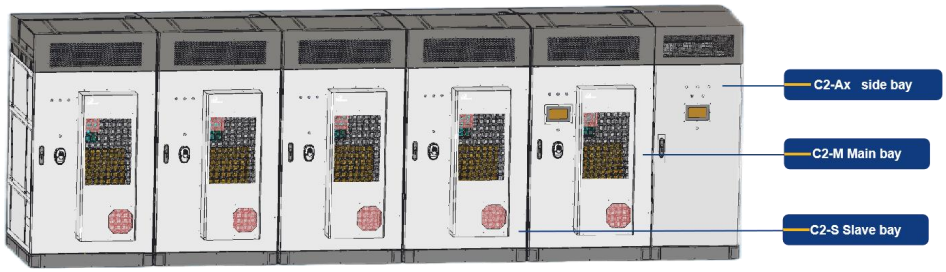
The C2-Ax has an option of the STS function.

■ ***Flex*BESS C2-215 Parallel**

The ***Flex*BESS C2-215** can parallel to more than 10 bays, with the PV inverter mounted on the back, to make a large Scale AC coupling solution. A special design of the C2-Ax bay use to compliant this solution.



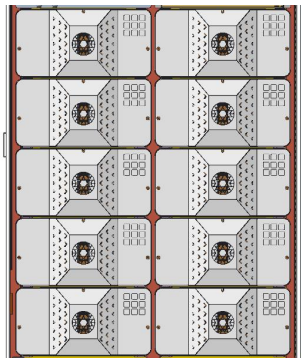
Parallel solution



Configuration

Battery bays	1	2	3	4	5	6	7	8	9	10
***Flex*BESS C2-M215**	1	1	1	1	1	1	1	1	1	1
***Flex*BESS C2-S215**	0	1	2	3	4	5	6	7	8	9
***Flex*BESS C2-Ax**	0	1	1	1	1	1	1	1	1	1
Output power (kw)	100	200	300	400	500	600	700	800	900	1000
Energy capacity (kwh)	215	430	645	860	1075	1290	1505	1720	1935	2150

Key Components



Battery Cluster

- Use BMC(Bulk Molding Compound) instead of Metal to make the pack;
- 0.5C Charge/Discharge;
- Easy configuration and maintenance;

Item	Parameter
Pack Quantity	10
Nominal capacity	215kWh
Discharge cutoff- rated-charge cutoff voltage	672V~768V~852V
Cell	3.2V/280Ah
Cluster measuring voltage range	100~1,000V
Cluster voltage detection accuracy	±1%
Cluster voltage sampling period	100ms
Cluster measuring current range	±300A
Cluster current detection accuracy	≤1%
SOC calculation accuracy	≤7%
Input insulation resistance	≥10MQ, 1,000V DC
Communication	Modubus TCP,CAN,Modubus RTU
System cycle life	≥6,000 cycles@0.5C,25℃
Dimensions (W*D*H)	-
Weight	-
	IEC62619,CE, UN38.3

Power Conversion Module （LV）

- Three phase independent control when Connection with grid ;
- Modular feature support up to 10pcs paralleling ;
- support Support parallel with diesel generator

Item	Parameter
Battery voltage range	600~900V
DC max current	165A
Rated AC power	100kW
Maximum AC current	160A
Rated voltage	400V
Grid voltage range	±15%
AC rate of current	150A
Output THDi	≤3%
Adjustable PF	1 (leading)~ -1(lagging)
Grid frequency range 50/60±2.5Hz	59.5～60.5Hz
Output	3 Phase with neutral
Grid connection	On/Off grid support
Dimensions (W*D*H)	700*220*440mm
Weight	60kg
Certification	EN 62477 ,IEC 61000

Key Components

Solar power Conversion module

- ■ High efficiency up to 99% ;
- ■ Modular feature support up to 16pcs paralleling ;
- ■ Support constant power, constant current, constant voltage control
- ■ Support 0V start at PV side

Item	Parameter
Battery Side	
Voltage range	300~1000V
Max current	80A
Rated power	50kW
voltage stability	Static state ±1% ; Dynamic state ±5%
Current stability	Static state ±1% ; Dynamic state ±3%
Input branch	1
PV Side	
PV side voltage	0-900V
PV side max current	100A
voltage stability	Static state ±1% ; Dynamic state ±5%
Current stability	Static state ±1% ; Dynamic state ±3%
General Parameter	
Dimensions (W*D*H)	440*500*88mm
Weight	17.5kg
Efficiency	99%
Cooling	Fan
Degree of protection	IP20
Communication	RS485

EMS

■ Cloud base EMS

The EMS runs automatically without manual operation. Connect to cloud monitor system to share the data for maintenance at the same time .

System Technical Specifications

Item	C2-M215/S215
DC Side parameters	
Battery chemistry	Lithium Iron Phosphate (LFP)
Cell life cycle	80% Retention with 6,000 Cycles @0.5C 25℃
Cell Spec.	3.2V/280Ah
cluster configuration	1P240S
Number of cluster	1
Cluster rated capacity	215 kWh
DC rated energy capacity	215kwh
Rated voltage	768V
Voltage range	672V~852V
BMS communication interface	RS485, Ethernet
BMS communication protocol	Modbus RTU, Modbus TCP
AC Side Parameters	
Rated AC power	100kW
Maximum AC power	125 kW
Rated voltage	400V
Grid voltage range	±15%
AC rate of current	150A
Output THDi	≤3%
Adjustable PF	+1~ -1
Grid frequency range	50/60±2.5Hz
Output	3 Phase +neutral+PE
General Parameters	
Dimension w/o clearances (W*D*H)	1,080*930*2,450 mm
Weight of the whole system	<2t
Degree of protection	IP54
Operating temperature range	-20~40℃
Relative humidity	0~95%(non-condensing)
Max working altitude	3,000m/9,842ft
Communication interfaces	RS485, Ethernet, GPRS
Certifications	UL1973, UL9540, IEC62619,CE,UN38.3