

Battery Storage System

FSP Configurable Standard Battery Pack



FSP Configurable Battery (CB) series adopt highly reliable Large Format Lithium Iron-Phosphate (2,000 life cycles) battery cells or Industrial Standard Lithium-Ion battery cells (700 life cycles). FSP CB Series are installed Battery Management System (BMS) of self-developed and can meet different needs for energy capacity, cost, and life cycle in domestic and industrial applications.





Active Cell Balance & Active Block Balance



RS485 communication bus

FSP Configurable Batteries

CB Series use FSP advanced BMS to enhance system performance, prolong life, and warrant safety. FSP BMS also constructed in modular form for flexible and easy configuration of larger battery systems. Three types of modules exist as below.

BM, Battery Module: consists of battery cells and control portion of BMS.

IM, Integrated Module: consists of battery cells and both control and power portions of BMS.

PM, Power Module: consists of no battery cells but the control and power portions of BMS for high power battery systems.

To facilitate uses with different battery cells or battery packs in different form factors preferred by customers the BMS for the IM, BM and PM are also available to the customers without the cases and battery cells.

Features

- Easy Configurations Of Battery Systems Of 12v Or 24v Voltage Multiples.
- Parallel Battery Branches For Higher System Currents.
- Minimal Lead Time For Establishing A New Battery System.
- Capable Of Configuring High Voltage (Up To 400v+) And/or High Current (Up To 264a+) Battery Systems.
- Built-in Thermal Management.
- Real Time Monitoring Of Cell Voltages, Branch Currents, And Cell Temperatures Via Rs485 Bus.
- Extended Availability Thru Parallel Battery Branches With Independent Branch Controls.
- Stable & Reliable Name-brand Battery Cells From Fully Automatic Production Lines.

Applications

- Domestic Or Industrial Backup Power Systems
- UPS
- Transportations (Railways, Boats, Fork Lift, Etc.)
- Grid Storage
- Telecom, Led Lighting, Etc.

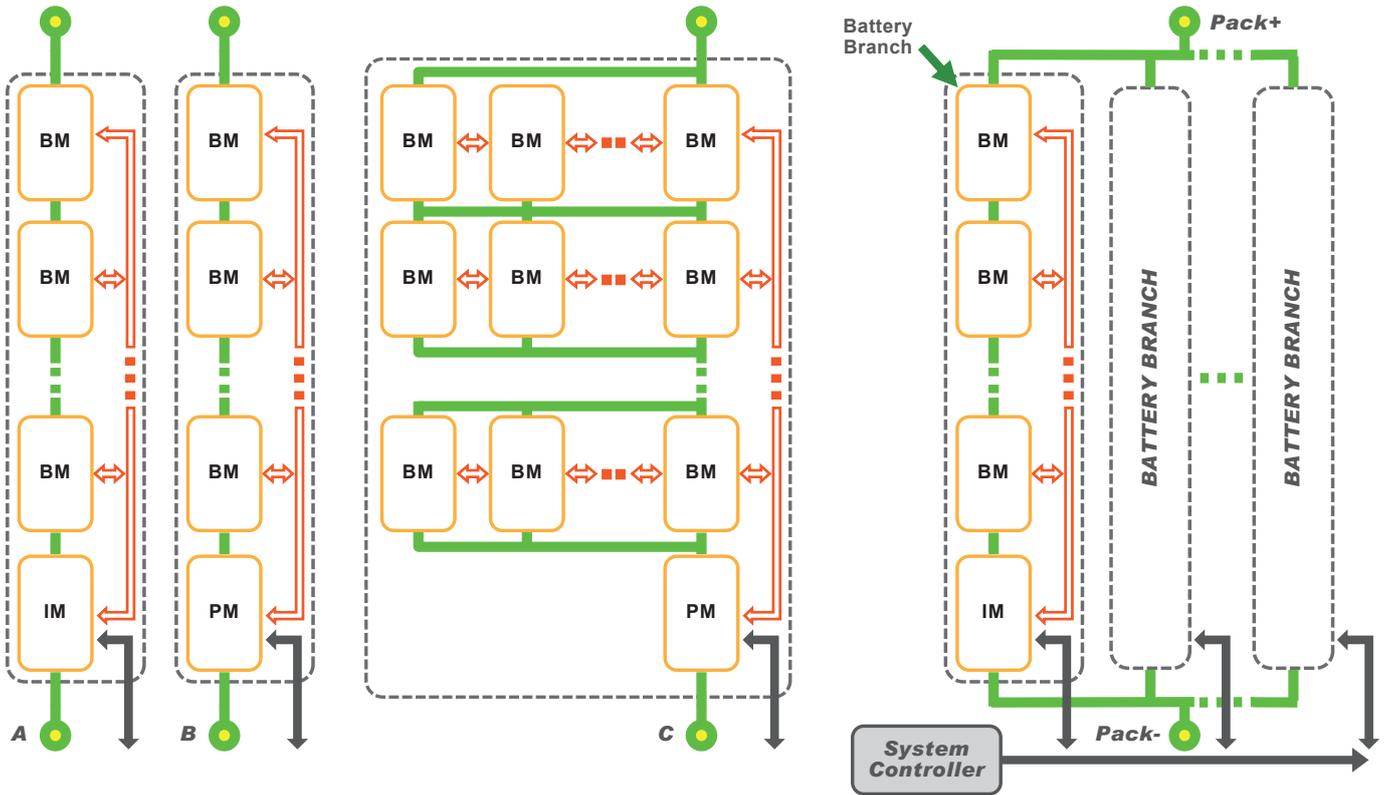
Specifications

Module Type	IM	BM	PM
Model Name	CB1266Flx*/ CB2450Nlx*	CB1266FB#**/ CB2450NB#**	CP45P0
Cell Type	LiFePO4/Li-ion		
Nominal Voltage (V)	12.8/25.3		
Maximum Charge Cut Off Voltage or Maximum Voltage for PM (V)	14.6/29.4		450
Minimum Discharge Cut Off Voltage (V)	10/19.6		
Rated Capacity (Wh)	845/1308		
Nominal Charging Current (A)	33/26		
Maximum Charging Current (A)	66/52		
Rated Discharging Current or Rated Current for PM (A)	70		250
Charging Voltage (V)	14.6/29.4		
Operating Temperature- Charge* (°C)	0-50		0-60
Operating Temperature- Discharge* (°C)	-20-60		0-60
Cell Balancing Between Cells	0.2A Passive		
Cell Balancing Between Modules	2.5A Active/1.25A Active		
Battery Protections	Over-Charge, Over-Discharge, Over-Temperature, Under-Temperature, Over-Current, Short-Circuit		
Communication Bus	RS485, other (RS232, CAN-bus, Ethernet, USB) Optical		
Parameters for Monitoring	Voltages, Temperature, Currents, Capacity		
Dimension (LxDxH)	285 x 168 x 175 mm		
Weight (kg)	10*		2.6
Environment	IPx3, RoHS		
Regulatory	S-Mark for LiFePO4 IEC 62133/CE for Li-ion		

* x=A for system voltage up to 72V, x=B for system voltage greater than 72V and up to 144V. For latter external heatsink is needed which adds about 0.8kg in weight.

** #=1 for use in system with voltage up to 144V; #=2 for use in systems with voltage up to 450V.

BATTERY SYSTEM CONFIGURATION



System Branch Ratings & Configurations*

VDESIGNATED	24V	48V	72V	96V	120V	144V	192V	288V	360V	384V	192V	360V
V _{NOM} (V)	25.6	51.2	76.8	102.4	128	153.6	204.8	307.2	384	409.6	204.8	384
V _{MAX} (V)	29.2	58.4	87.6	116.8	146	175.2	233.6	350.4	438	467.2	233.6	438
V _{MIN} (V)	20	40	60	80	100	120	160	240	300	320	160	300
I _{RATED} (A)	70	70	70	70	70	70	70	70	70	70	280	280
Config. Type	A	A	A	A	A	A	B	B	B	B	C	C
# of BM	1	3	5	7	9	11	16	24	30	32	16 x 4	30 x 4
# of IML	1	1	1	0	0	0	0	0	0	0	0	0
# of IMH	0	0	0	1	1	1	0	0	0	0	0	0
# of PM	0	0	0	0	0	0	1	1	1	1	1	1
ENERGIES (kWh)	1.8	3.6	5.4	7.2	9.0	10.8	14.3	21.5	26.9	28.7	57.3	107.5

Remark: *Please consult factory for different voltage/current/energy ratings.

*Configuration table illustrated with LiFePo4 Batteries.

51.2V 66Ah LiFePo4 Batteries



FSP TECHNOLOGY INC.

No.22, Jianguo East Road, Taoyuan City, Taiwan 330, R.O.C
 TEL:886-3-357-8998 FAX:886-3-375-6966 / sales@fsp-group.com.tw
Tucheng Office
 12F-5, No. 2, Sec. 4, Zhongyang Rd., Tucheng Dist., New Taipei City, Taiwan 236, R.O.C
 TEL:886-2-2268-4998 / ericchao@fsp-group.com.tw

 www.FSPLifeStyle.com
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