

Energy Storage Redefined!

MPB SERIES HYBRID SUPERCAPACITOR HIGH VOLTAGE MODULES



High-Voltage HSC Modules

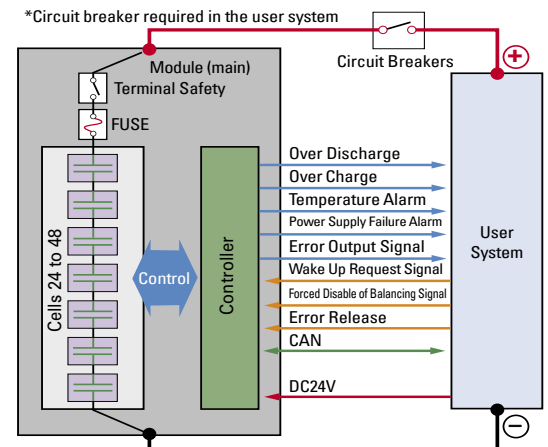
Musashi's MPB Series HSC High-Voltage Modules incorporate our Hybrid SuperCapacitor Prismatic Cells in convenient module configurations to deliver unparalleled high-power density energy storage to meet the diverse needs of an electrified world.

Key Benefits

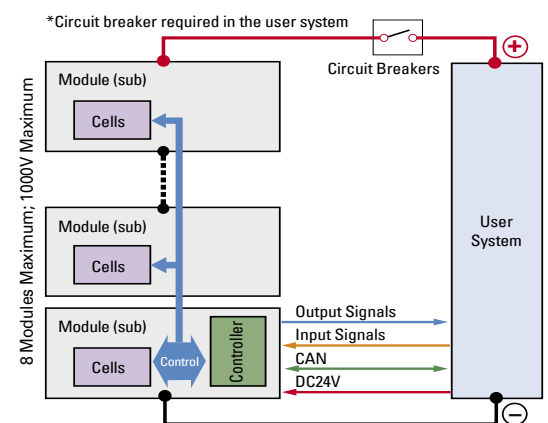
- High capacity/high power cells connected up to 48 cells in series
- Maximum 1,000V available by series connection of 8 modules
- High current available using parallel module strings
- Automatic cell voltage-balancing function for cells in series-connected modules
- Large current rapid charge/discharge available; maximum instantaneous charge/discharge current >500A
- Protection for abnormal charge/discharge by FUSE in main module
- Choice of convection cooling or air-cooling with external fans
- Detailed information including cell voltages and temperatures available by CAN communication
- High reliability, high durability, high safety

Connection Examples

Single-Module Use



Series Connection Use



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MPB SERIES

HYBRID SUPERCAPACITOR HIGH VOLTAGE MODULES

Specification Overview

Highlights

- Wide operating temperature range without performance degradation (-30°C to 70°C)
- High safety (no thermal runaway concerns); protects from electrical shock during installation
- Minimal self-discharge (voltage drop at 10,000 hours less than 5%)
- Attractive Total Cost of Ownership with a 15-year lifespan



		CPQ3300SD- 3300F			CPP4100SA- 4100F			Rated voltage range		Dimensions in / mm		
No. of cells	Voltage	Capacitance F	Internal Resistance mΩ	Weight lbs / kg	Capacitance F	Internal Resistance mΩ	Weight lbs / kg	DCV	Width	Height	Depth	
24	91	125	20	14	158	29	13	52.8~91.2	7.28 / 185	5.63 / 143	20.28 / 515	
32	121	93	26	17	118	38	17	70.4~121.6			25.47 / 647	
34	129	88	28	18	111	40	18	74.8~129.2			26.8 / 680	
36	136	83	30	19	105	42	19	79.2~136.8			28.07 / 713	
40	152	75	33	21	95	47	21	88.0~152.0			30.67 / 779	
42	159	71	34	22	90	49	21	92.4~159.6			31.97 / 812	
44	167	68	36	23	86	51	22	96.8~167.2			33.27 / 845	
48	182	62	39	25	79	56	24	105.6~182.4			35.87 / 911	

Specifications

Charge/discharge current - continuous	55A	Ambient temperature at 25°C; 3300F convection cooled
Max charge/discharge current (< ca 5 sec)	500A<	Depends on use conditions. Please consult us.
Maximum module series counts	Up to 8 modules (maximum 1000V)	1 main module and 7 sub modules
Environmental conditions	Operating temp range	30°C ~ 70°C Cell)
	Storage temp range	40°C ~ 80°C (0°C-35°C recommended)
	Relative humidity range	20% ~ 90% (non-condensing)
Insulation voltage	AC2500V 50Hz 1 minute	
Balancing scheme	Resistive discharge	
External power supply for controller	DC24V	
Safety feature	Terminal safety mechanism, FUSE	FUSE in main module only

Function

Cell monitoring	Each cell voltage	
Automatic voltage balancing	Cell temperature (1point in a module)	
Information communication	All cell voltage balancing in series connected modules	
Detection of abnormality	CAN communication	
	Cell voltages, temperatures, alarm statuses etc. can be obtained	
	Output signals with LED display	Over charge alarm
		Over discharge alarm
Temperature alarm		
Control inputs	Error output	
	WakeUp request, Disable balancing, Reset Error	