			Title		
			System Interface Specification (P5700-907)		
	RESPONSIBLE	DATE	SIZE	DOCUMENT NO.	REV
AUTHORS			A4	P400-5060	00
USER					
RELEASE			MANUAL CHANGE PROHIBITED		SHEET 1 OF 4

System Interface Specification


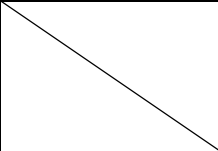
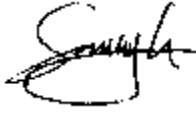
PS700-907, 700.0kWh ESS

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1. Battery System Parameters

Specific parameters for the battery system blocks are detailed in the chart below

Parameter	Units	Specification	Note
Cell	Ah	25	SPB58253172V3
Series	n/a	216	Nine racks
Parallel	n/a	36	Nine racks
Cell Voltage			
Max	V	4.2	At 100% SOC
Nom	V	3.7	At 50% SOC
Min	V	2.7	At 0% SOC
Cell Capacity			
Rated	Ah	25	From cell specification
Battery Configuration			
Cell Modules	Modules	162	Each cell module contains 24 cells (12s2p)
Battery Capacity (BOL)			
Theoretical	Ah	900	Calculated based on cell capacity
Rated	Ah	-	Estimated when 1C rate is used to determine capacity; current taper applied at end of charge
Battery Capacity (EOL)			
Theoretical	Ah	630	Estimated at 70%
Battery Voltage			
Max	V	907.2	Determined at maximum cell voltage
Nom	V	799.2	Determined at nominal cell voltage
Min	V	583.2	Determined at minimum cell voltage
Battery Energy			
Theoretical	kWh	719.1	Calculated value based on theoretical system capacity
Rated	kWh	-	Calculated value based on rated system capacity
Usable (typical)	kWh	-	Estimated energy between 20% and 80% SOC, de-rated specific to system application
Usable (max)	kWh	-	Estimated energy between 8% and 90% SOC, de-rated specific to system application
Battery Discharge Power			
Continuous	kW	215.7	At nominal system voltage (270A*799.2V)
Max	kW	719.2	At nominal system voltage (900A*799.2V)
Peak	kW	-	At nominal system voltage (system/cell peak, duration less than 1.0s) :
Battery Charge Power			

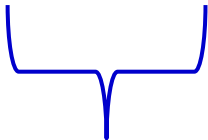
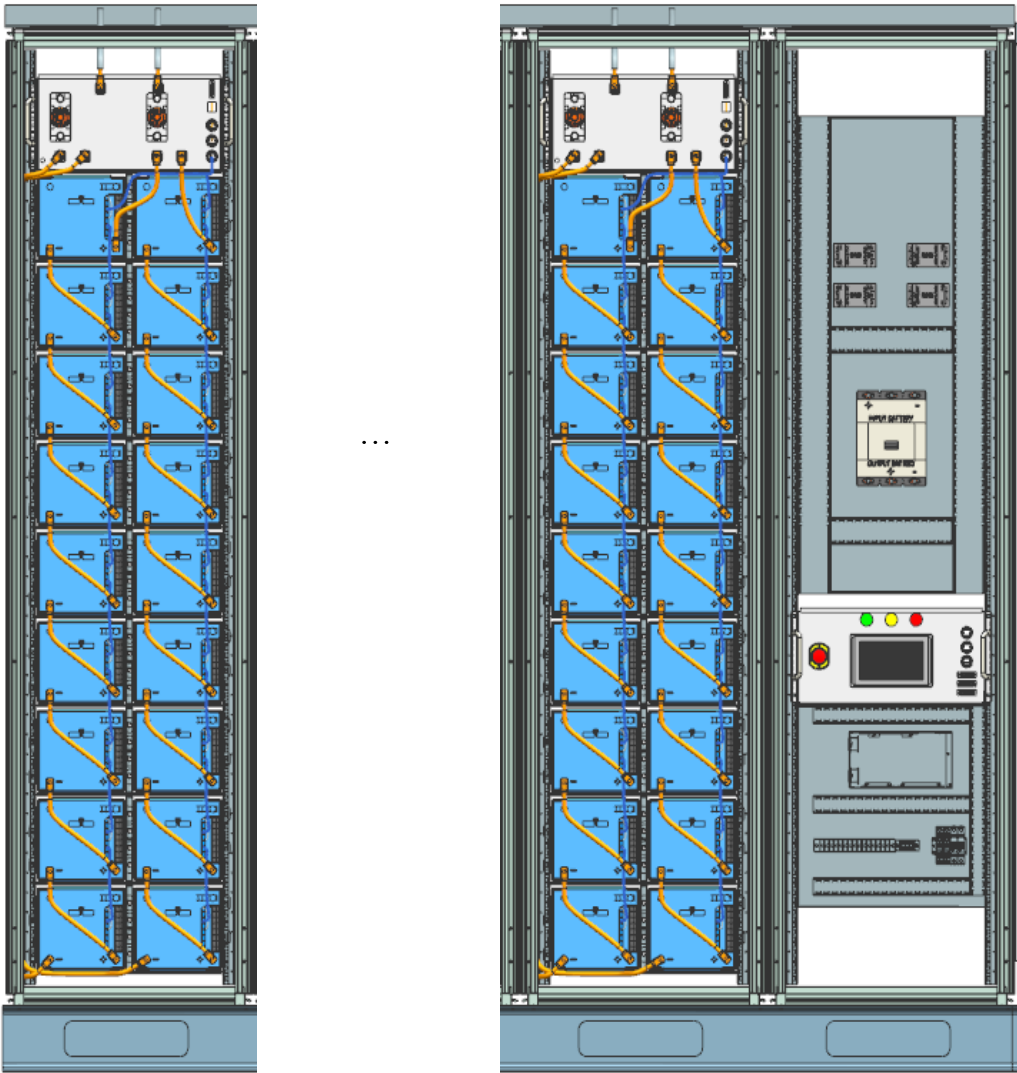
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Parameter	Units	Specification	Note
Continuous	kW	215.7	At nominal system voltage (270A*799.2V)
Max	kW	719.2	At nominal system voltage (900A*799.2V)
Peak	kW		At nominal system voltage (system/cell peak, duration less than 1.0s) :
Battery Discharge Current			
Continuous	A	270	Continuous between 20% and 100% SOC, specific to system application
Max	A	900	Continuous between 20% and 100% SOC (system maximum continuous)
Peak	A	-	Between 20% and 100% SOC (system/cell maximum surge, duration less than 10.0s)
Battery Charge Current			
Continuous	A	270	Continuous between 0% and 80% SOC, specific to system application
Max	A	900	Continuous between 0% and 80% SOC (system maximum continuous)
Peak	A	-	Between 0% and 80% SOC (system/cell maximum surge, duration less than 1.0s)
System Mass	kg	7020	Approximate calculated value (Nine battery racks=6930kg and One BCP rack=90kg)
Battery Shelf Life	years	5	Continuous between 20% and 80% SOC
Cell Balancing	Type	Dissipative	MLEC Temperature Diagnostics
Thermal Management	Type	Limit Controlled	MLEC Current Limited above normal cell operating temperature
Operating Temperature/Humidity			
Max	% RH	85	Range (cell min/max)
Min	% RH	45	Range (cell min/max)
Max	Degrees °C	55	Zero Current Limited Above Max Operating Temp
Min(Discharge)	Degrees °C	(-)20	Zero Current Limited Below Min Operating Temp
Storage Temperature	Degrees °C	(-)20 to 25 <1year	Range (cell min/max)
Pre-Charge	Type	Internal	HV Load Capacitance protection
GFD	n/a	Enabled	MLEC Isolated Diagnostics
EPO	n/a	Enabled	Emergency Power OFF (interlock)

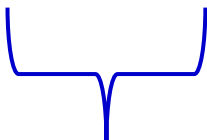
Table 1 Product Technical Specifications

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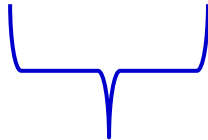
2. Mechanical Drawings



Battery
Rack#1



Battery
Rack#9



BCP Rack

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Item	Width(mm)	Depth(m m)	Height(mm)	Weight(kg)
Battery Rack 1	600	600	2200	770
Battery Rack 2	600	600	2200	770
Battery Rack 3	600	600	2200	770
Battery Rack 4	600	600	2200	770
Battery Rack 5	600	600	2200	770
Battery Rack 6	600	600	2200	770
Battery Rack 7	600	600	2200	770
Battery Rack 8	600	600	2200	770
Battery Rack 9	600	600	2200	770
BCP Rack	600	600	2200	90

Figure 1 Pack Outline Drawing