Low Voltage Energy Storage System

Technical Specification

No.	Item	Technical Requirement	Unit	Remarks
AC Output (Device to Grid)				
1	**Rated AC Output Power**	16	kW	
2	**Maximum AC Output Power**	32	kVA	2x power for 5s
3	**Rated AC Output Voltage**	120/208	Vac	Single-phase/Three-phase, L-N/L-L
4	**Rated AC Output Current**	66.6/44.5	A	Single-phase/Three-phase, L-N/L-L
5	**Rated Output Frequency**	50/60	Hz	Default 60Hz
AC Input (Grid to Device)				
1	**Rated AC Input Voltage**	120/208	Vac	Three-phase, L-N/L-L
2	**Rated AC Input Voltage Range**	90~140	Vac	Grid/Generator, L-N
		156V~243V	Vac	Grid, L-L
3	**Maximum Rated AC Input Current**	200	A	Bypass mode, grid side to UPS load side
Battery Side Parameters				
1	**Battery Type**	LFP	/	
2	**Rated Capacity**	100	Ah	
3	**System Capacity**	80/75/70/65/60/55/50/45/40/35/30/25/20	kWh	
4	**Rated DC Voltage**	51.2	Vdc	Battery side
5	**DC Voltage Range**	49.6~56.0	Vdc	DC side, 1P16S, 90% DOD
6	**Rated DC Current**	19.5/20.8/22.3/24/26/28.4/31.2/34.7/44.6/50/50/50/50	A	Current per PACK (Max 50A)
7	**Cluster Maximum Charging Current**	330	A	When grid and generator charge the battery simultaneously
8	**PACK Maximum Charging Current**	50	A	
9	**PACK Maximum Discharging Current**	50	A	
10	**Cell Cycle Life**	≥6000	times	Room temperature 25℃, 90% DOD, 0.5C charge/discharge, remaining capacity(EOL) ≥70%
11	**Balancing Strategy**	Passive Balancing	/	<100mA

No.	Item	Technical Requirement	Unit	Remarks
PV Side Parameters				
1	**Number of MPPTs**	3	/	
2	**Number of Input Strings per MPPT**	2	/	
3	**MPPT Voltage Range**	120~500	Vdc	
4	**Maximum Open Circuit Voltage**	600	Vdc	
5	**Maximum PV Power**	25.6	kW	3 MPPTs, each MPPT 8.53kW
6	**Maximum Input Current**	40	A	Per MPPT
Other Device Parameters				
1	**Device Maximum Efficiency**	97.5%	/	DC to AC inverter efficiency
2	**CEC Maximum Efficiency**	97%	/	This efficiency is the primary reference
				Charging Temperature: 10℃~40℃
3	**Operating Ambient Temperature**	0℃~40℃	/	Discharging Temperature: 0℃~40℃
				Recommended Temperature: 10℃~35℃
4	**Cooling Method**	Natural Cooling	/	
5	**Fire Protection Method**	None	/	
6	**Three-Rack Weight**	260/480	kg	Inverter Rack / 8PACK Battery Rack
7	**Single-Rack Weight**	645/465	kg	8PACK / 4PACK
8	**Battery Rack Dimensions (WDH)**	650*530*1500	mm	Three-Rack
9	**Power Distribution Rack Dimensions (WDH)**	885*744*1500	mm	Three-Rack
10	**Single-Rack Dimensions (WDH)**	885*744*2380	mm	Single-Rack
11	**Protection Level**	Whole unit IP20	/	PCS Protection Level - IP65, EBOX Protection Level - IP20
12	**Anti-corrosion Level**	C3-M	/	Stainless steel plate + weather-resistant topcoat
13	**Communication Method**	485/WIFI/CAN	/	485 and WIFI use Modbus protocol
14	**Communication Protocol**	MODBUS	/	

No.	Item	Technical Requirement	Unit	Remarks
AC Output (Device to Grid)				
1	**Rated AC Output Power**	12	kW	
2	**Maximum AC Output Power**	18	kVA	1.5x power for 10s
3	**Rated AC Output Voltage**	120/240	Vac	Single-phase/Split-phase, L-N/L-L
4	**Rated AC Output Current**	62.5/50	A	Single-phase/Split-phase, L-N/L-L
5	**Rated Output Frequency**	50/60	Hz	Default 60Hz
AC Input (Grid to Device)				
1	**Rated AC Input Voltage**	120/240	Vac	Single-phase/Split-phase, L-N/L-L
2	**Rated AC Input Voltage Range**	90~140	Vac	Grid/Generator, L-N
3	**Maximum Rated AC Input Current**	200	A	Bypass mode, grid side to UPS load side
Battery Side Parameters				
1	**Battery Type**	LFP	/	
2	**Rated Capacity**	100	Ah	
3	**System Capacity**	80/75/70/65/60/55/50/45/40/35/30/25/20	kWh	
4	**Rated DC Voltage**	51.2	Vdc	Battery side
5	**DC Voltage Range**	49.6~56.0	Vdc	DC side, 1P16S, 90% DOD
6	**Rated DC Current**	14.6/15.6/16.7/18/19.5/21.3/23.4/26/29.3/33.5/39/46.9/50	A	Current per PACK (Max 50A)
7	**Cluster Maximum Charging Current**	240	A	When grid and generator charge the battery simultaneously
8	**PACK Maximum Charging Current**	50	A	
9	**PACK Maximum Discharging Current**	50	A	
10	**Cell Cycle Life**	≥6000	times	Room temperature 25℃, 90% DOD, 0.5C charge/discharge, remaining capacity(EOL) ≥70%
11	**Balancing Strategy**	Passive Balancing	/	<100mA
PV Side Parameters				
1	**Number of MPPTs**	2	/	
2	**Number of Input Strings per MPPT**	2	/	
3	**MPPT Voltage Range**	125~450	Vdc	
4	**Maximum Open Circuit Voltage**	550	Vdc	
5	**Maximum PV Power**	18	kW	2 MPPTs, each MPPT 9kW
6	**Maximum Input Current**	32	A	Per MPPT
Other Device Parameters				
1	**Device Maximum Efficiency**	97.5%	/	DC to AC inverter efficiency
2	**CEC Maximum Efficiency**	96.5%	/	This efficiency is the primary reference
3	**Operating Ambient Temperature**	0℃~40℃	/	Charging Temperature: 10℃~40℃
				Discharging Temperature: 0℃~40℃
				Recommended Temperature: 10℃~35℃
4	**Cooling Method**	Natural Cooling	/	
5	**Fire Protection Method**	None	/	
6	**Three-Rack Weight**	245/480	kg	Inverter Rack / 12PACK Battery Rack
7	**Single-Rack Weight**	630/450	kg	8PACK / 4PACK
8	**Battery Rack Dimensions (WDH)**	650*530*1500	mm	Three-Rack
9	**Power Distribution Rack Dimensions (WDH)**	885*715.5*1500	mm	Three-Rack
10	**Single-Rack Dimensions (WDH)**	885*715.5*2380	mm	Single-Rack
11	**Protection Level**	Whole unit IP20	/	PCS Protection Level - IP65, EBOX Protection Level - IP20
12	**Anti-corrosion Level**	C3-M	/	Stainless steel plate + weather-resistant topcoat
13	**Communication Method**	485/WIFI/CAN	/	485 and WIFI use Modbus protocol
14	**Communication Protocol**	MODBUS	/	