2021.10.18

Specification

of TOWER

1. Product Specification

1.1 Battery Module

Table 1-1 Parameter of HV9637

Module Name	HV9637
Cell Technology	Li-ion(LFP)
Battery Module Capacity (kWh)	3.55
Battery Module Voltage (Vdc)	96
Battery Module Capacity (Ah)	37
Battery Module Cell Quantity (pcs)	30
Battery Cell Capacity (Wh)	118.4
Battery Cell Voltage (Vdc)	3.2
Battery Cell Capacity (AH)	37
Battery Module Cell Quantity in Series (pcs)	30S1P
Battery Module Charge Voltage (Vdc)	108
Battery Module Charge Current (Normal)	75
Battery Module Discharge lower-Voltage (Vdc)	84
Battery Module Discharge Current (Normal)	18.5
Dimension(W*D*H, mm)	504*380*240
Communication	CAN
Pollution Degree (PD)	II
IP Grade	IP54
Weight(kg)	41

1.2 System Performance Parameter

Table 1-2 Parameter of tower system

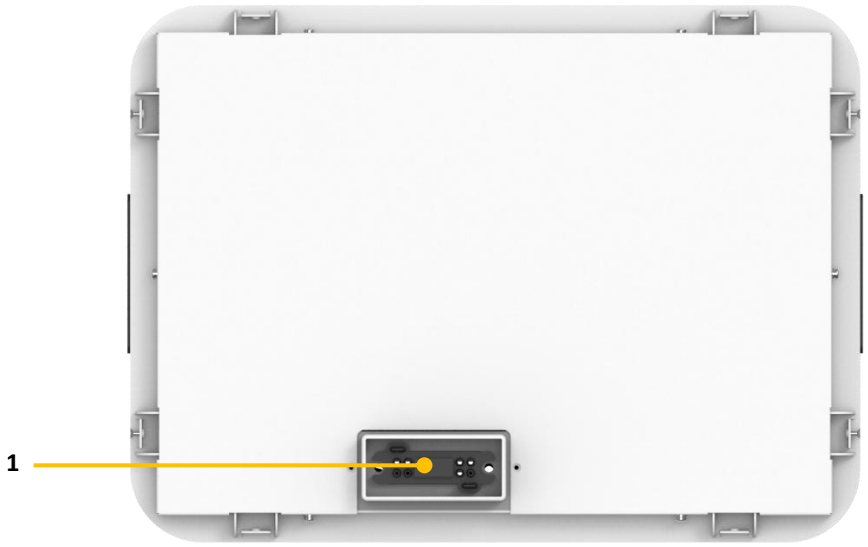
System List	T21	T17	T14	T10	T7
Module Type	LFP	LFP	LFP	LFP	LFP
Total Storing Energy [kWh]	21.31	17.76	14.21	10.66	7.10
Usable Capacity [kWh]	21.31	17.76	14.21	10.66	7.10
Recommend Depth of Discharge	80%	80%	80%	80%	80%
Max Depth of Discharge	100%	100%	100%	100%	100%
Module configuration	6 Series	5 Series	4 Series	3 Series	2 Series
Voltage Range[Vdc]	504~657	420~547	336~438	252~328	168~219
Battery System Voltage (Vdc)	576	480	384	288	192

Battery System Capacity (Ah)	37	37	37	37	37
Battery System Charge Voltage (Vdc)	657	547.5	438	328.5	219
Battery System Charge Current [A] (Standard)	7.4	7.4	7.4	7.4	7.4
Battery System Charge Current [A] (Normal)	18.5	18.5	18.5	18.5	18.5
Battery System Charge Current [A] (Max)	37	37	37	37	37
Battery System Discharge lower-Voltage (Vdc)	504	420	336	252	168
Battery System Discharge Current [A] (Standard)	7.4	7.4	7.4	7.4	7.4
Battery System Discharge Current [A] (Normal)	18.5	18.5	18.5	18.5	18.5
Battery System Discharge Current [A] (Max)	37	37	37	37	37
Battery System Max. Charge& Discharge Current [A] (when used in communication with the inverter)	22.5	22.5	22.5	22.5	22.5
Discharge condition	-10℃~50℃	-10℃~50℃	-10℃~50℃	-10℃~50℃	-10℃~50℃
Charge condition	0℃~50℃	0℃~50℃	0℃~50℃	0℃~50℃	0℃~50℃
Max. Discharge Power [kW]	21.31	17.76	14.21	10.66	7.1
Max.Charge& Discharge Power [kW] (when used in communication with the inverter)	12.78	10.65	8.52	6.39	4.2
Short Circuit Current [kA]	1.5	1.5	1.5	1.5	1.5
Enclosure Protection (IP)	IP54	IP54	IP54	IP54	IP54
Size [mm]	1500 *504*380	1300 *504*380	1100 *504*380	900 *504*380	700 *504*380
Weight [kg]	269	228	187	146	105
Battery Module Name	HV9637	HV9637	HV9637	HV9637	HV9637
Battery Module Quantity(pcs)	6	5	4	3	2

2. Interface Definition

2.1 Front Panel of battery module

HV9637 top interface



HV9637 bottom interface

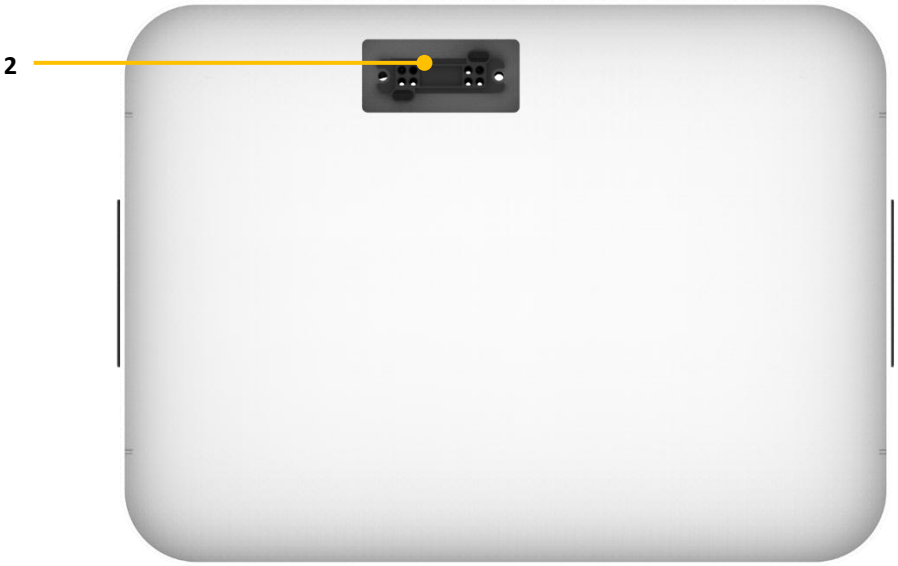
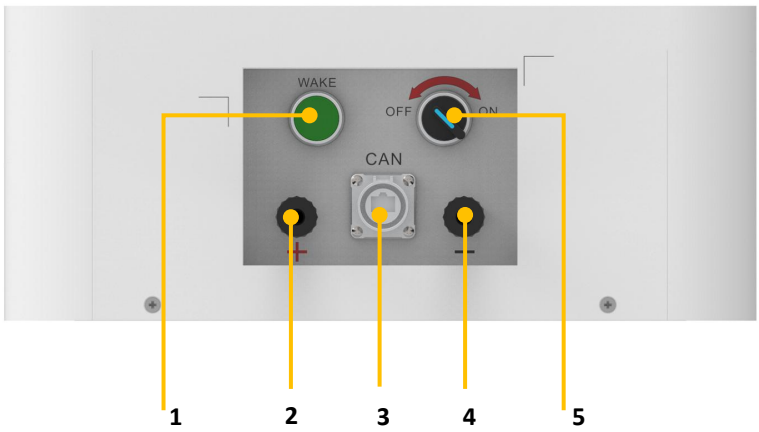


Table 2-1 Interface Definition

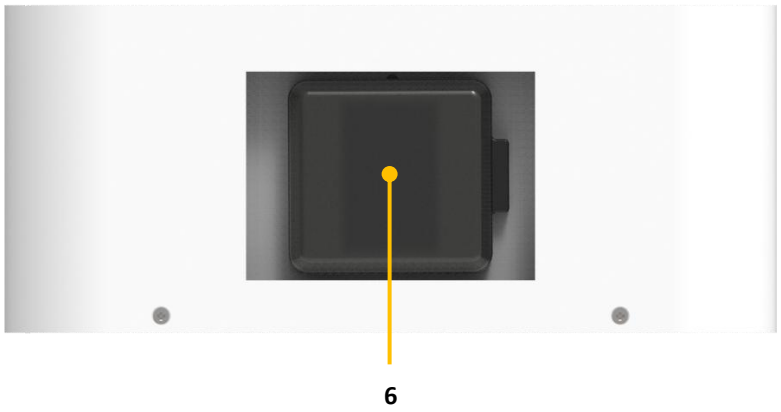
Item	Name	Definition
1	Composite connector-Plug	Battery module output and communication interface
2	Composite connector-Socket	Battery module output and communication interface

2.2 Front Panel of BDU module

BDU right interface



BDU left interface



BDU bottom interface

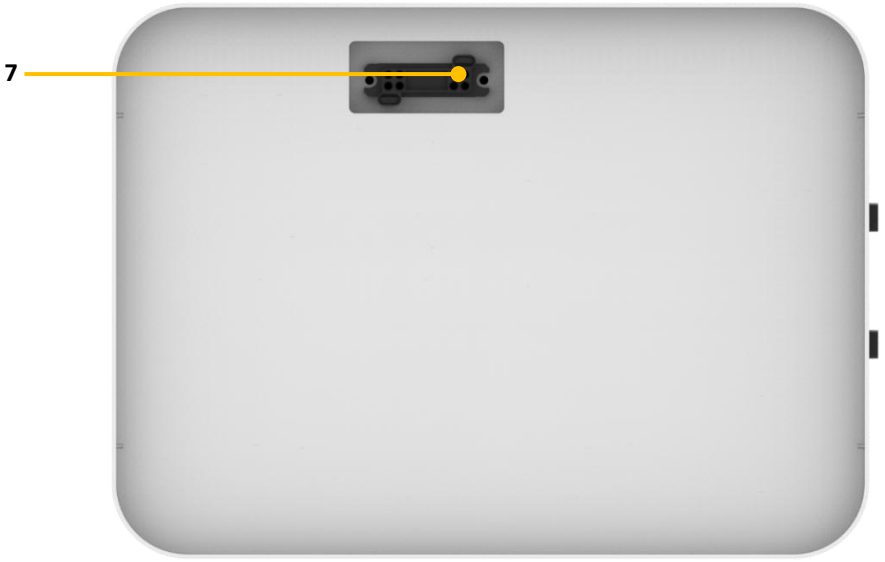


Table 2-2 Interface Definition

Item	Name	Definition
1	Power Wake Button	Long press this button 5S to start the battery system
2	External Positive socket	Connect battery system with Inverter positive terminal
3	EXT-CAN Communication Port	RJ45 communication port between the battery system and inverter
4	External Negative socket	Connect battery system with Inverter negative terminal
5	Power On switch	Turn on the switch to power the BMS system
6	DC Breaker	The master switch of the battery system,you must switch on it before switching on power on&power wake switch; Short circuit protection.
7	Composite connector-Socket	Battery module output and communication interface

3. Alarms and protection

Note: "N" in the table is HV9637 Battery Module Quantity

No.	Item		Default value	Remark
1	High charging voltage protection and recovery	Alarm value	105V*N	
		Alarm recovery value	102V*N	
		Protection value	109.5V*N	
		Protection recovery value	104V*N	
2	Low discharging voltage protection	Alarm value	87V*N	
		Alarm recovery value	93V*N	
		Protection value	76.5V*N	
		Protection recovery value	84V*N	
3	Low cell voltage protection and recovery	Alarm value	2.9V	
		Alarm recovery value	3.1V	
		Protection value	2.55V	
		Protection recovery value	2.8V	
4	High cell voltage protection and recovery	Alarm value	3.55V	
		Alarm recovery value	3.5V	
		Protection value	3.6V	
		Protection recovery value	3.45V	
5	Charging over	Alarm value	40A	

No.	Item		Default value	Remark
	current protection	Alarm recovery	After the alarm, restored when the current release or if there is a discharging current recovery.	
		Protection value	50A	
		Protection recovery	After protection, restored in 1s delay or immediately when there is discharging current.	
6	Discharging over current protection	Alarm value	40A	
		Alarm recovery	After the alarm, restored when the current release or if there is a charging current recovery.	
		Protection value	50A	
		Protection recovery	After protection, restored in 1s delay or immediately when there is charging current.	
7	Cell over temperature protection and recovery	Charging alarm value	55℃	
		Charging alarm recovery value	54℃	
		Charging protection value	60℃	
		Charging protection	59℃	
		Recovery value		
		Discharging alarm value	55℃	
		Discharging alarm recovery value	54℃	
		Discharging protection value	60℃	
		Discharging protection recovery value	59℃	
8	Cell low temperature protection and recovery	Discharging alarm value	0℃	
		Discharging alarm recovery value	1℃	
		Discharging protection value	-10℃	
		Discharging protection	-9℃	

No.	Item		Default value	Remark
		recovery value		
		Charging alarm value	0℃	Charging current limit below 0℃ will drop to 0A
		Charging alarm recovery value	1℃	
		Charging protection value	0℃	
		Charging protection recovery value	2℃	

4. Communication port

Figure 4-1 CAN interface definition

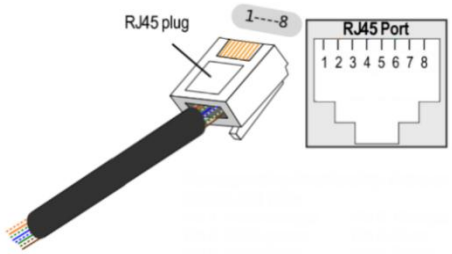
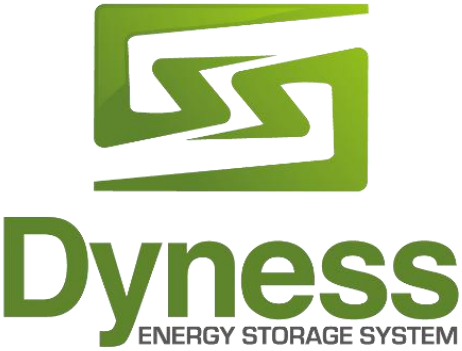


Table 4-1 BDU CAN Pin Definition

Foot position	Color	Definition
PIN1	Orange/white	Reserve
PIN2	Orange	XGND
PIN3	Green/white	Reserve
PIN4	Blue	CANH
PIN5	Blue/white	CANL
PIN6	Green	Reserve
PIN7	Brown/white	Reserve
PIN8	Brown	Reserve



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