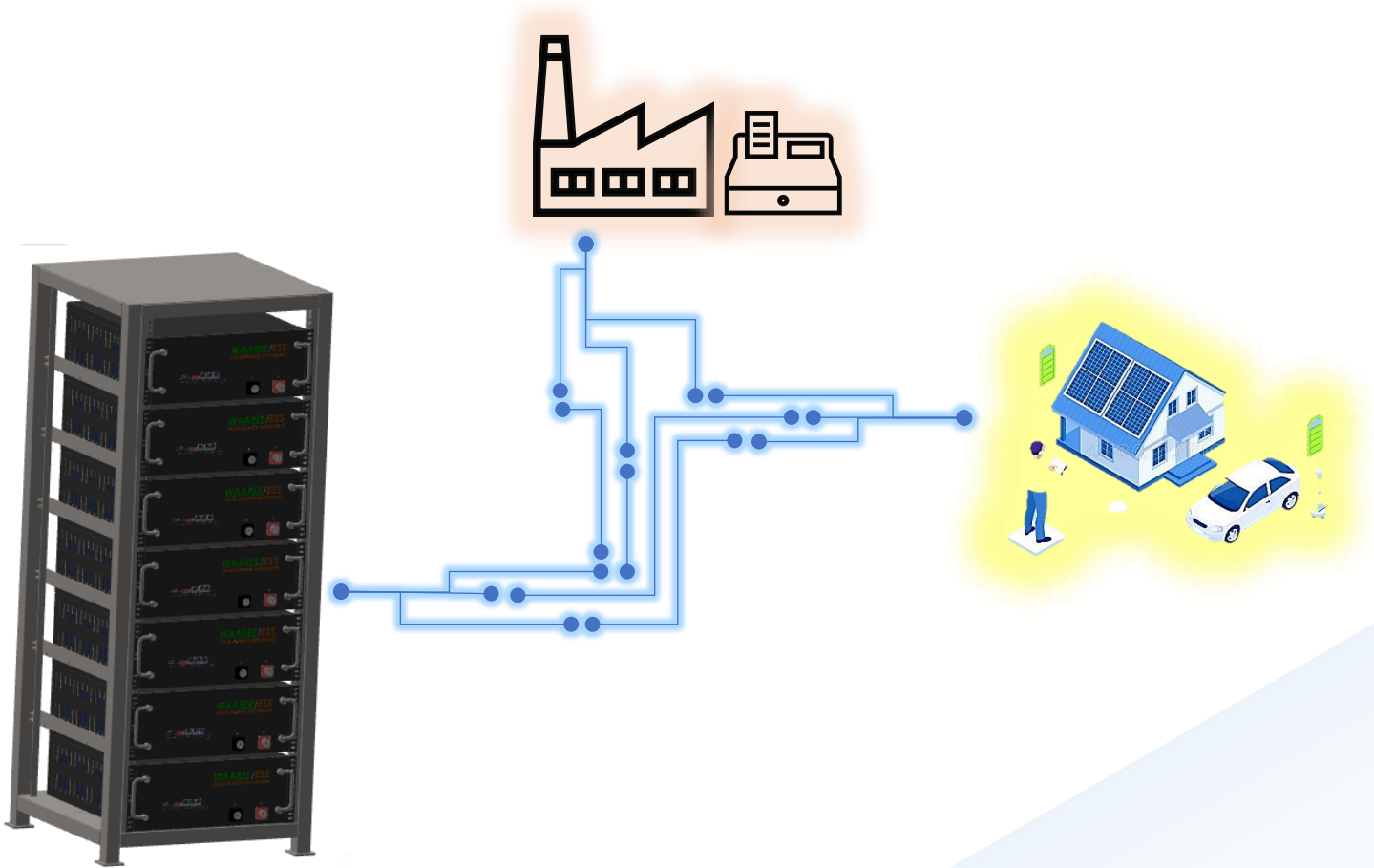


LITHIUM-ION
BATTERY

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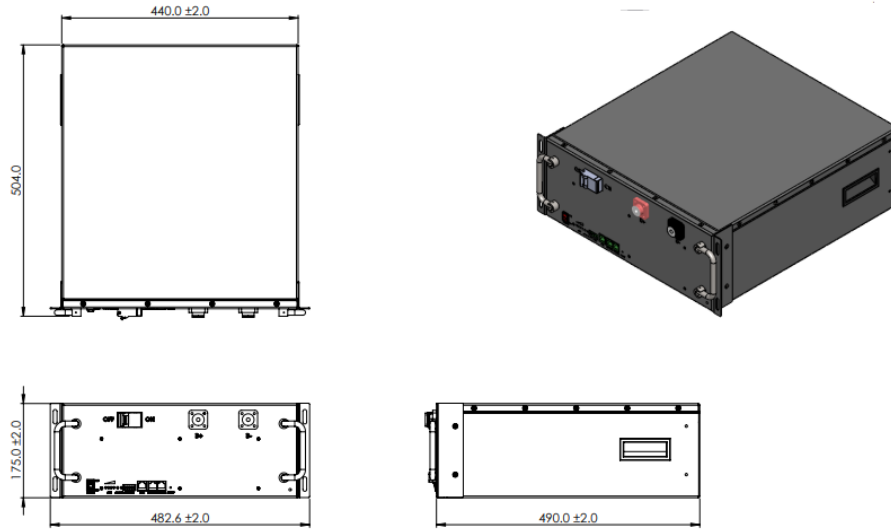
51.2 V 100 Ah

TECHNICAL DATASHEET

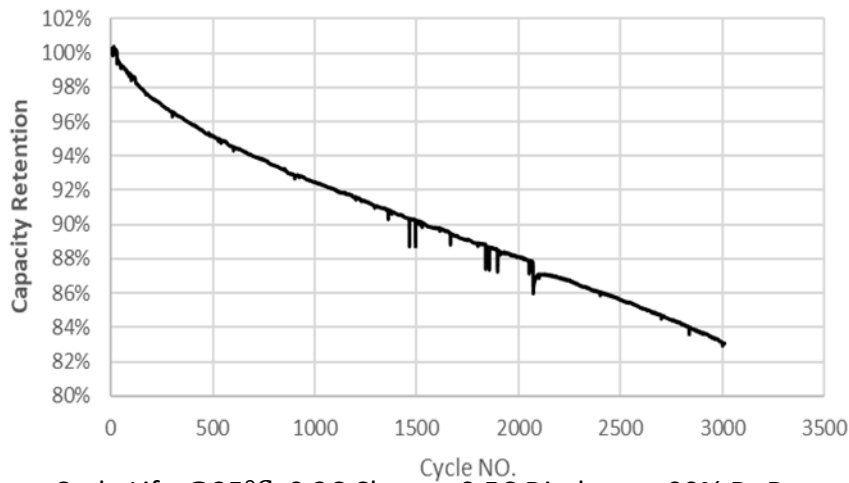
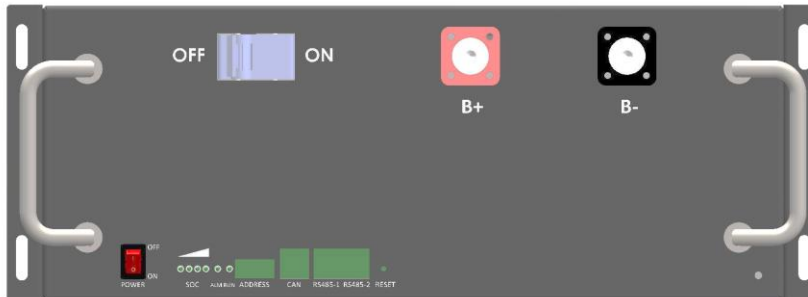
Technical Data

Sr No	Characteristics	Value
General Specifications		
1	Battery Chemistry	LFP
2	Cell model	3.2V 100Ah
3	Battery Rated Voltage (V)	51.2 V
4	Battery Rated capacity (Ah)	100 Ah
5	Battery Rated Energy (KWh)	5.12 KWh
Performance Characteristics		
6	Charging Voltage (V)	57 V \pm 1V
7	Discharging Voltage (V) @90%	44 V \pm 1V
8	Nominal Charge Current (A)	30 A
9	Nominal Discharge Current (A)	50 A
10	Maximum Charge Current (A)	50 A
11	Maximum Discharge Current (A)	100 A
12	Operating Voltage Range (V) @90%	57 V to 44 V \pm 1V
13	Operating Temperature (°C)	Discharge 0 to 55 °C Charge 0 to 45 °C
14	Storage time	1 month @ 0-40°C, 1-3 month @ 18-35°C, Charge once a month
15	Cycle Life of Battery @80% EoL capacity	>3000 Cycle @25°C, 0.3C Charge, 0.5C Discharge. 90% DoD.
Protection Features		
16	Over Temperature Protection	Available
17	Under Temperature Protection	Available
18	Over discharge Current Protection	Available
19	Short circuit Current Protection	Available
20	Cell Balancing	Available
Mechanical Characteristics		
21	Dimension (WXHxD), \pm 5 MM including handle.	(482 x 175 x 504), 19inch 4U
22	Weight (Kg)	53 \pm 2Kg
23	Casing	MS Metal Cabinet with Powder Coating – IP20 indoor use.
24	Power Connector & Wire length (MM)	M8 wire lug terminal.

General Design View



Pin Layout of Battery Module (indicative image actual battery may slightly different)



Cycle Life @25°C, 0.3C Charge, 0.5C Discharge. 90% DoD.

Other Functions

Sr. No.	Functions	Description
1	Cell Voltage detection (Real Time)	0 ~ 45° C Accuracy- ± 10 mV -20 ~ 0° C & 45 ~ 70° C Accuracy ± 30 mV
2	Cell Temperature detection (Real Time)	Accuracy - $\pm 2^\circ$ C (Ambient/PCB, Charging-Discharging, NTC sensor Value 10K Ω)
3	Charge & Discharge Current detection (Real Time)	Accuracy - ± 1 % When temperature rise < 40° C
4	Short Circuit Protection	YES
5	SOC Calculating & Life Cycle Counting (Real Time)	Accuracy - ± 5 % with DOD - 90 %
6	LED Indicator	Total – 6 Nos. 4 Green LEDs – SOC Status 1 Red LED – Warning/Fault/Protection 1 Green LED – Standby, Charging, Discharging Status.
7	Auto Sleeping Function (optional programmable)	Auto Sleep – After 48 hrs. of didn't Charge/discharge Discharge Protection Status – Communicate 1 Min then Sleep
8	Power ON/OFF from Master	Parallel Connection - BMS needs to setup address via DIP switch. If the DIP address is correctly set, power on/off the master pack, all the slave packs can be powered on/off together.
9	Communication Ports	CAN – For Communication between Battery & Inverter. RS-485 – For Data monitoring, Operation Controlling & Parameter setting.
10	Communication Between Paralleled Packs	Connect the battery packs through RS485. And setup address with 8 DIP switches.
11	Overcharge & Discharge Protection	YES
12	Pre-Charge Function	Activate before Discharge MOSFET getting Close. Time Range – 1-5000 mS
13	Charge Current Limitation	Active – Charge Current > 10A, Activated Passive – Charge Current > OCC Limit, Decrease to 10 A.
14	Under Voltage Protection (Charge-Discharge)	YES
15	Over Current Protection (Charge-Discharge)	YES

Different System Configurations

No of Parallel Module	Rated Power (KW)	Rated Energy (KWh)
Single Module	4 KW	5.12KWh
2 Battery Module in Parallel	6 KW	10.2KWh
3 Battery Module in Parallel	8 KW	15.3KWh
4 Battery Module in Parallel	10 KW	20.48KWh
5 Battery Module in Parallel	12 KW	25.6KWh
6 Battery Module in Parallel	14 KW	30.7KWh
7 Battery Module in Parallel	16 KW	35.8KWh
8 Battery Module in Parallel	18 KW	40.9KWh
9 Battery Module in Parallel	20 KW	46.0KWh
10 Battery Module in Parallel	22 KW	51.2KWh

➤ For overall system configuration Different types of Rack Structure Available as below



Open Rack

3 to 10 Battery Modules



Stack without Rack

1 to 4 battery



Glass door Server rack

3 to 10 Battery module*

Note: Above drawings & pictures are only for representation.

Battery Handling Guide

- Please use within the environment temperature from 0°C to 55°C.
- We commend to fully charge the battery pack according to the product specification before use for the first time.
- Do not short circuit battery wire and do not reverse the battery polarity.
- Do not put the battery into the water and corrosive liquid or metal foreign body, may cause battery leakage, heat, smoke, and explosion.
- Keep the battery away from heat, open flames, flammable and explosive gas and liquid, may cause battery leakage, heat, smoke, and explosion.
- Use only chargers designed for the Lithium-ion battery Pack. Do not use chargers for the lead-acid battery packs.
- If the battery gives off odour, gets heat, deformation, discoloration or appears any abnormal phenomenon, stop using it.
- If there are above phenomenon, please contact the manufacturer, do not disassemble by yourself.

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Plot no. 334, RAJKAMAL CHOWKADI, ROAD NO-3,
SACHIN GIDC, SURAT-394230,
GUJARAT.

Email Id.- crm@wess.co.in

Website- www.waareeess.com