

# ENERGY STORAGE SYSTEMS

## RACK ULTRA-5 51,2V 100Ah 100A

INDEKS: 6AES51R010

EAN: 5904100452620

**Energy storage systems RACK ULTRA-5 51,2V 100Ah 100A** are designed to store energy produced via photovoltaic system.

They can be used in single-family houses and public space e.g. restaurants, hotels, supermarkets, factories.

### The general features are:

- The use of lithium iron phosphate (LiFePO4) cells ensures long life of the device and its safety.
- **Long cycle life times with 6000 cycles. This enables to charge and discharge the device while maintaining 60% of its capacity.**
- **BMS (Battery Management System)** that monitors various parameters such as **voltage, current, temperature and state of charge**. It also protects the device against excessive discharge, overcharge and extreme temperatures.
- The modular design allows to connect the energy storage systems in parallel, so you can increase the capacity in case of growth energy demand.
- Modern design and small size enables the installation of device in almost every interior.

### Main technical data:

MODEL	51.2V100-WM4
Nominal voltage	51,2V
Recommend charge voltage	56V
Nominal capacity	100Ah
Max charge voltage	58,4V
Energy density	5120Wh
Recommend charge current	20A
Max continuous current	100A
Terminal type	Plug-in
Terminal torque	8,5 Nm
Material	SPCC
Cycle Life (0.2C, 25°C 80% DOD)	6000 cycles
Efficiency	>98%



### Certificates



### Usage

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### Main technical data:

MODEL	51.2V100-WM4
Discharge temperature	(-20 do 55)°C
Charge temperature	(0 do 55)°C
Storage temperature	(-20 do 45)°C
Self Discharge per Month	<3%
Max in parallel	16 pcs
Max in series	Not allowed
Netto dimensions	442x480x155mm
Netto weight	42,5kg
Gross dimensions	500x555x220mm
Gross weight	44,1kg
Multipack dimensions	1120x1120x1105mm
Multipack weight	770,6kg



### Certificates

Primary Charging Protection	Current :105A	Delay Time: 2s
Second Charging Protection	Current :110A	Delay Time: 1s
Primary Discharging Protection	Current :105A	Delay Time: 2s
Second Discharging Protection	Current :110A	Delay Time:100ms
Over charge Voltage Protection	Voltage :58.4V	Delay Time: 1~2s
Over Discharge Voltage Protection	Voltage :43.2V	Delay Time: 1~2s
Temperature Protection	Temperature PCB $\geq$ 95°C	Recover $\leq$ 85°C
Communication Port	Major RS485, optional for CAN	



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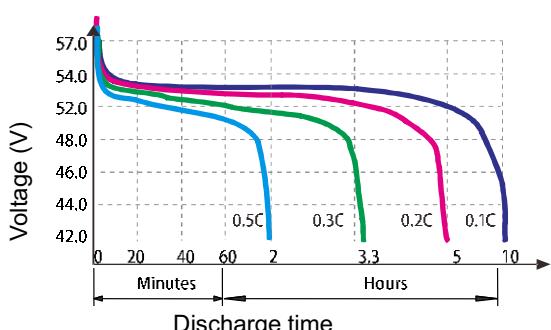
### Constant Current Discharge Data (Amperes 25°):

Discharge Time	Cut off voltage (43.2V)
1h	100A
2h	50A
3h	34A
4h	25A
5h	20A
10h	10A
20h	5A

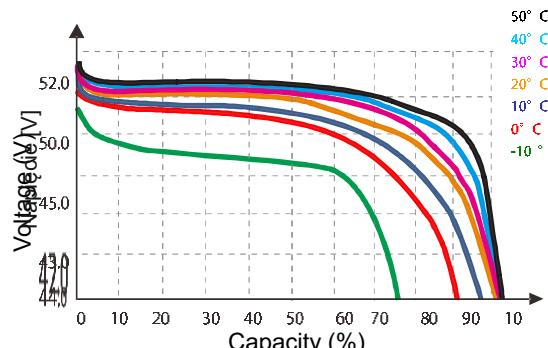


### Constant Power Discharge Data (Watts 25°C):

Discharge Time	Cut off voltage (43.2V)
1h	5120W
2h	2560W
3h	1706,7W
4h	1280W
5h	1024W
10h	512W
20h	256W



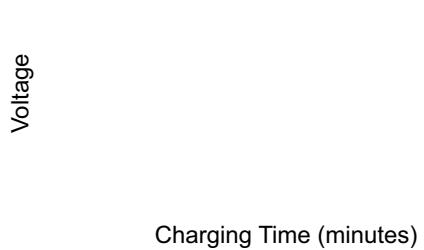
Discharge characteristics (25°C)



Different Temperature Discharge Curve (0.5C)



Different DOD Discharge cycle life Curve 0.2C 25°C



State of Charge Curve (0.5C, 25°C)