

APS5000 Series

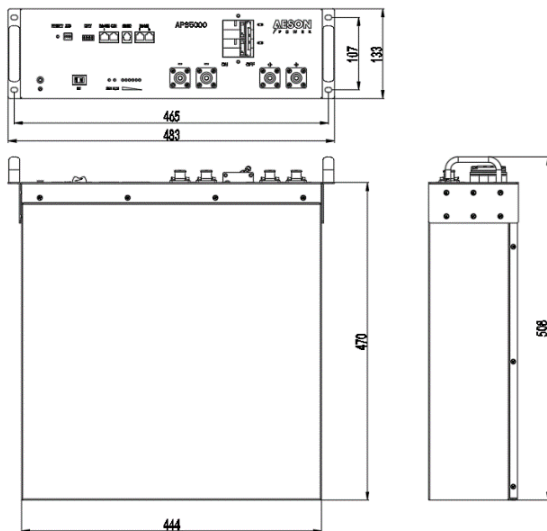
User Discription



51.2V LITHIUM-ION BATTERY ELECTRICAL INSTRUCTION

Introduction:

Aeson Power APS series is a non-managed 51.2V LiFePO4 (Lithium-Iron Phosphate) battery module. With advanced LiFePO4 cell technology and smart BMS, the product has the benefits of long cycle life, small size, lightweight, high safety, and environmental protection. The battery has a Wi-Fi function, which supports remote fault diagnosis and the OTA upgrade function. It is well suited for solar battery systems, power backup systems, and energy storage applications.

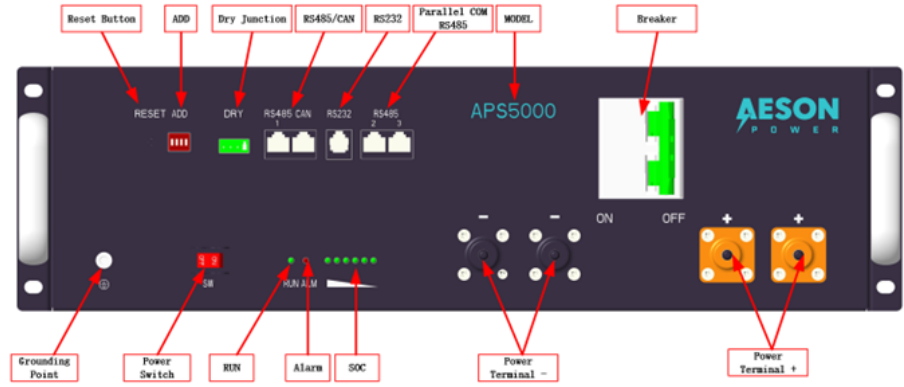


Features and Benefits:

- Proven LiFePO4 chemistry, fire safety, and maximum cycle life for deep cycle and hybrid applications
- With Wi-Fi function, which supports remote fault diagnosis and the OTA upgrade function
- Integrated Smart Battery Manage System (BMS) with high energy density
- BMS ensures battery safety and reliability to avoid being overcharged and over-discharged, high current.
- Equalization and balancing of each cell prolong the battery life
- Intelligent monitoring, telemetry, remote communication, and control via RS485
- The capability of parallel connection of modules allows to increasing capacity
- LED indication for module status and alarms, fast charge capability and maintenance free
- 10 Years Warranty

APS5000 Interface Presentation:

APS5000 Front Panel:



Breaker ON/OFF and Power switch instructions:

Breaker ON/OFF:

The ON state is the breaker state, which is the connected state.

Power Switch:

- ON: working condition.
- OFF: power off - for storage or shipping.

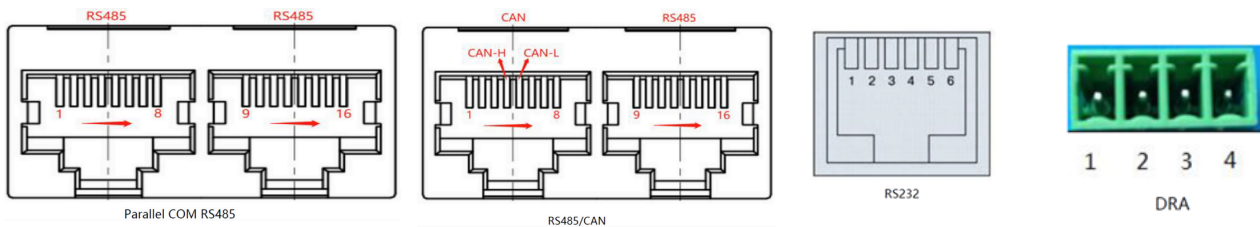
LED Instruction:

Status	Normal, Alarm, or Protection	RUN	ALM	Battery Level Indicator LED						Explain	
				L6	L5	L4	L3	L2	L1		
		●	●	●	●	●	●	●	●		
Power Off	Dormancy	Light Off	Light Off	Light Off	Light Off	Light Off	Light Off	Light Off	Light Off	All light off	
Idle Mode	Normal	Flash 1	Light Off	According to battery indicator						Standby mode	
	Alarm	Flash 1	Flash 3	According to battery indicator						Low voltage mode	
Charge	Normal	Light On	Light Off	According to battery indicator (The highest battery indicator LED flashed 2)						The highest battery LED flashes (flashing2), and the ALM does not flash when there is an overcharge alarm	
	Alarm	Light On	Flash 3	According to battery indicator							
	Overcharge Protection	Light On	Light Off	Light On	Light On	Light On	Light On	Light On	Light On	Light On	Standby mode
	Temperature, Overcurrent, Failure protection	Light Off	Light On	Light Off	Light Off	Light Off	Light Off	Light Off	Light Off	Light Off	Stop Charging
Discharge	Normal	Flash 3	Light Off	According to battery indicator						/	
	Alarm	Flash 3	Flash 3	According to battery indicator							
	Undervoltage Protection	Light Off	Light Off	Light Off	Light Off	Light Off	Light Off	Light Off	Light Off	Light Off	Stop Discharging
	Temperature, Overcurrent, Failure protection	Light Off	Light On	Light Off	Light Off	Light Off	Light Off	Light Off	Light Off	Light Off	Stop Discharging
Fault		Light Off	Light On	Light Off	Light Off	Light Off	Light Off	Light Off	Light Off	Light Off	Stop Charging and Discharging

LED battery level indicator instructions:

Status		Charging						Discharging					
Power Indication		L6	L5	L4	L3	L2	L1	L6	L5	L4	L3	L2	L1
		●	●	●	●	●	●	●	●	●	●	●	●
Battery SOC (%)	0~17%	Light Off	Light Off	Light Off	Light Off	Light Off	Flash 2	Light Off	Light Off	Light Off	Light Off	Light Off	Light On
	18~33%	Light Off	Light Off	Light Off	Light Off	Flash 2	Light On	Light Off	Light Off	Light Off	Light Off	Light On	Light On
	34~50%	Light Off	Light Off	Light Off	Flash 2	Light On	Light On	Light Off	Light Off	Light Off	Light On	Light On	Light On
	51~66%	Light Off	Light Off	Flash 2	Light On	Light On	Light On	Light On	Light Off	Light Off	Light On	Light On	Light On
	67~83%	Light Off	Flash 2	Light On	Light On	Light On	Light On	Light On	Light On	Light On	Light On	Light On	Light On
	84~100%	Flash 2	Light On	Light On	Light On	Light On	Light On	Light On	Light On	Light On	Light On	Light On	Light On
Running Indicator Light		Light On						Flash 3					
●													

Interface Definition Description:



RS485/CAN Interface Definition:

CAN-8PC RJ45 SOCKET		RS485-8PC CERTICAL SOCKET	
RJ45 PIN	DEFINED DECLARATION	RJ45 PIN	DEFINED DECLARATION
1、3、6、7、8	NC	9、16	RS485-B1
4	CAN-H	10、15	RS485-A1
5	CAN-L	11、14	GND
2	GND	12、13	NC

RS485/CAN is the interface for communication with external energy storage inverters.

CAN communication interface, with a default baud rate of 500K, used for communication with inverters. When this battery is the host, it can summarize slave data and communicate with inverters.

RS485 interface, with a default baud rate of 9600bps, is used for communication with inverters. When this battery is the host, it can summarize slave data and communicate with inverters.

Parallel communication RS485:

CAN-8PC RJ45 SOCKET		RS485-8PC CERTICAL SOCKET	
RJ45 PIN	DEFINED DECLARATION	RJ45 PIN	DEFINED DECLARATION
1 、 8	RS485-B	9 、 16	RS485-B
2 、 7	RS485-A	10 、 15	RS485-A
3 、 6	GND	11 、 14	GND
4 、 5	NC	12 、 13	NC

Dual RS485 interface, can view PACK information, default baud rate is 9600bps. To communicate with the monitoring device through RS485, the monitoring device serves as the host and sets the address range from 2 to 15 based on address polling data.

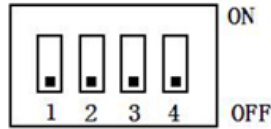
When PACK is used in parallel, different PACKs can be distinguished by setting the address through the DIP switch on the BMS, to avoid setting the address to be the same, The definition of BMS DIP switch refers to the table below. In parallel mode, the default DIP address is 1 for the host.

RS232 Communication Interface Definition:

RS232-6P6C vertical RJ11 socket	
RJ11 PIN	Defined Declaration
1 、 2 、 6	NC
3	TX
4	RX
5	GND

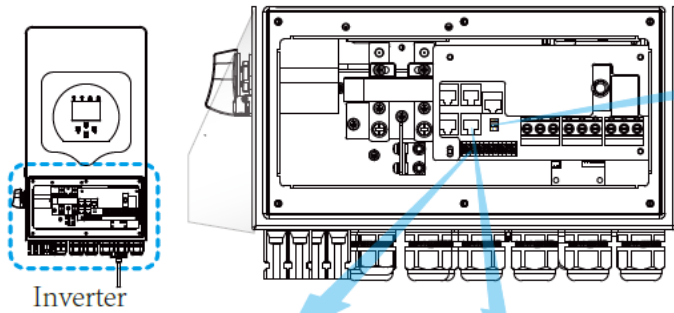
BMS can communicate with the upper computer through the RS232 interface, allowing for monitoring of various battery information, including battery voltage, current, temperature, status, and production information. The default baud rate is 9600bps.

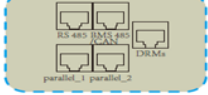
Address	DIP switch position			
	#1	#2	#3	#4
0	OFF	OFF	OFF	OFF
1	ON	OFF	OFF	OFF
2	OFF	ON	OFF	OFF
3	ON	ON	OFF	OFF
4	OFF	OFF	ON	OFF
5	ON	OFF	ON	OFF
6	OFF	ON	ON	OFF
7	ON	ON	ON	OFF
8	OFF	OFF	OFF	ON
9	ON	OFF	OFF	ON
10	OFF	ON	OFF	ON
11	ON	ON	OFF	ON
12	OFF	OFF	ON	ON
13	ON	OFF	ON	ON
14	OFF	ON	ON	ON
15	ON	ON	ON	ON



Communication connection instructions between APS5000 and DEYE inverter:

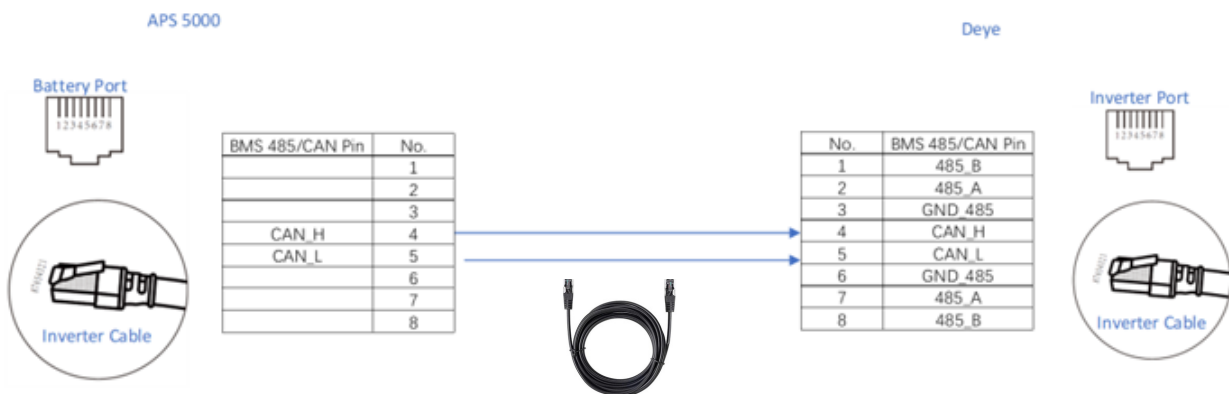
Deye inverter Port display:





RS485: RS485 port for energy meter communication.
BMS 485/CAN: 485/CAN port for battery communication.
DRM port: Logic interface for AS/NZS 4777.2:2020
Parallel 1: Parallel communication port 1 (CAN interface).
Parallel 2: Parallel communication port 2 (CAN interface).

CAN communication diagram between APS5000 and DEYE inverter:



CONTACT US