Electra 51.2 V 280Ah

Energy Storage System Specification

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Electra 51.2 V 280Ah **1**
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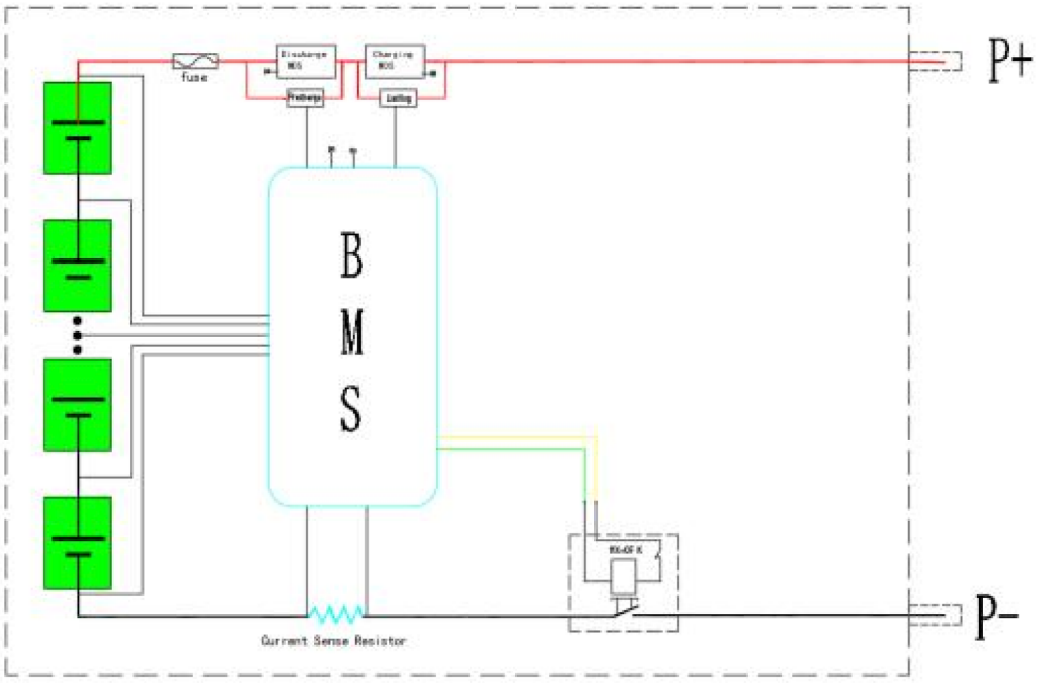
1. Introduction

This energy storage system can be used in residential and commercial environments. It is a battery pack composed of a 16S1P configuration of brand new and Grade A 280Ah lithium iron phosphate cells (LiFePO4) manufactured by EVE. Up to 16 packs can be wired in parallel to increase the capacity.

- Do not attempt to open or dismantle the battery's chassis. Unauthorized access could lead to damage or hazardous conditions.
- Always position the battery either upright or lying flat on its back. Improper orientation may lead to malfunction or damage.
- Keep children and pets away from the battery and its associated wiring to prevent accidents or exposure to electrical hazards.
- Avoid exposing the battery to extreme temperatures, moisture, or direct sunlight to maintain optimal performance and safety.
- Do not handle the battery with wet hands or in a damp environment to prevent the risk of electric shock.
- Ensure that the battery is used and stored in well-ventilated areas to prevent overheating and potential fire hazards.
- Regularly inspect the battery and its connections for signs of wear, damage, or corrosion, and seek professional assistance if any issues are detected.
- Operate the battery **strictly** within the conditions specified in its technical specifications. This includes adhering to the recommended temperature range, voltage limits, and amperage ratings to ensure safe and efficient functioning of the battery.
- The energy storage system is equipped with a Battery Management System (BMS) designed to prevent the battery from charging or discharging when operating conditions exceed the specified limits in terms of temperature, voltage, or amperage. It is crucial not to attempt bypassing or overriding this protective mechanism, as doing so can lead to severe safety risks and potential damage to the battery.
- Any breach of these safety instructions will result in the voiding of the battery's warranty. Moreover, disregarding these guidelines poses serious harm to the user and potentially causes damage to the battery and any related electrical components. Always adhere to the provided instructions to ensure safe usage.
- It is imperative to follow all guidelines to maintain the battery's integrity and longevity.

2. Specifications

2.1 Electrical diagram



2.2 Parameters

Parameter	Specification
Nominal capacity	280 Ah
Real capacity	300 Ah
Rated energy	14.336 kWh
Real energy	15.4 kWh
Nominal Voltage	51.2 V
Working Voltage	42V~58.4V
Maximum charge/discharge Current	100A/100A @25±2°C
Dimension	(817)×(412)×(267)mm
Weight	120 +- (3Kg)
Cell brand	EVE LF280K
Cell quality	Grade A Brand New
Original QR code	Yes
Cycle life	6000 cycles @25°C 50A Charging/discharging Current 80% DOD
Communication mode	CAN&RS485
Compatible inverters	All inverters with BMS communication or without
Shipping	Included
Labour	Included
Warranty	5 years

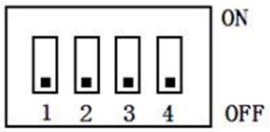
3. Inverter Communication

Brand	Protocol	Communication
Pylontech	CAN-Bus-Protocol-PYLON	CAN
Goodwe	Goodwe Communication Protocol	CAN
Lolis	CAN Communication Protocol	CAN
Sofar	BMS CAN BUS Protocol	CAN
SMA	FSS-ConnectingBat-TI-EN-20W	CAN
Victron	Can-Bus_Bms_Protocol	CAN
LUXPOWER	Luxpowertek Battery CAN Protocol	CAN
Studer	Technical Specification Studer BMS Protocol	CAN
TBB	TBB BMS CAN Communication V1.02	CAN
Deye	CAN-Bus-Protocol-PYLON-V1.3	CAN
Sorocec	2_CAN Protocol 1.0	CAN
MEGAREVO	Hybrid Inverter_5K_BMS Protocol V1.01	CAN
Amensolar	CAN-Bus-Protocol-PYLON	CAN
MUST	PV1800F-CAN Communication Protocol	CAN

AFORE	Luxpowertek Battery CAN Protocol	CAN
Pylontech	RS485-Protocol-Pylon-Low-Voltage	485
Voltronic Power	Voltronic Inverter	485
SRNE	PACE BMS Modbus Protocol	485
Deye	RS485-Protocol-Pylon-Low-Voltage	485

4. Parallel Configuration

When connecting multiple energy storage systems in parallel, the DIP switch on each pack should be set to indicate the specific position of each pack within the parallel configuration.



Binary address	DIP Switch configuration	Battery rank
0000 (0)	OFF OFF OFF OFF	Master
0001 (1)	OFF OFF OFF ON	SLAVE 1
0010 (2)	OFF OFF ON OFF	SLAVE 2
0011 (3)	OFF OFF ON ON	SLAVE 3
0100 (4)	OFF ON OFF OFF	SLAVE 4
0101 (5)	OFF ON OFF ON	SLAVE 5
0110 (6)	OFF ON ON OFF	SLAVE 6
0111 (7)	OFF ON ON ON	SLAVE 7
1000 (8)	ON OFF OFF OFF	SLAVE 8
1001 (9)	ON OFF OFF ON	SLAVE 9
1010 (10)	ON OFF ON OFF	SLAVE 10
1011 (11)	ON OFF ON ON	SLAVE 11
1100 (12)	ON ON OFF OFF	SLAVE 12
1101 (13)	ON ON OFF ON	SLAVE 13
1110 (14)	ON ON ON OFF	SLAVE 14
1111 (15)	ON ON ON ON	SLAVE 15