



Y Series BMS instruction manual

I.Product introduction

With the rapid development of Internet of Things technology and the widespread application of smart devices, an increasing number of devices require more efficient and convenient communication and control methods. At the same time, the new national standards have set higher requirements for the intelligence and compatibility of power equipment. Against this backdrop, the solution of using a Bluetooth main control to achieve both serial communication and one-line connection functions has gradually become a popular choice in the industry.

Products		
Product model	YH	YK
Product size (Data tolerance range ±0.5mm)	101*65.5*14.2mm	130*65.5*14.2mm
Number of strings range	4~8S 8~17S 8~24S	
Continuous current	30A/40A/60A	80A/100A/120A

II. Instructions for Use

1. Welding the BMS

- (1)Welding the Sampling Cable:
Start by connecting the thin black wire to the battery's B- (total negative electrode). Then, connect the second wire to the positive electrode of the first battery cell. Subsequently, connect each wire to the positive electrode of each subsequent battery cell in sequence. Finally, weld the B+ wire to the last battery cell (total positive electrode)
(Please refer to the wiring diagram of the instruction manual).
- *Note: Do not plug in the bms when welding the sampling wires. Weld according to the actual number of battery cells. Do not weld the extra sampling wires (insulate the extra sampling wires properly).

- (2)Voltage Detection:
Use a multimeter or a wire-sequence detection device to measure whether the voltage of each battery cell at the pinholes of the cable is within the normal range. If it is abnormal, check for incorrect connections, loose welds, false welds, or missed welds.

- (3)Welding the Output Wires:
Lock the B- connection wire (thick blue wire) and the P- connection wire (thick black wire) to the corresponding B- and P- nuts on the bms with screws. It is recommended that the torque be 10 N·m (Newton - meter). Then, weld the B- wire to the total negative electrode of the battery.
- *Note: Insulate the P- wire when welding the B- wire and remove the insulation when connecting the output terminal.

- (4)Connecting the bms Accessories:
Connect accessories such as temperature sensors, battery capacity meters, GPS devices, and display screens. Then, insert the sampling wires into the bms to activate it automatically.

2. Downloading and Connecting the Bluetooth APP

- (1)APP Download
①Download and install the mobile APP by scanning the QR code on the bms.
②Searching for "Smart BMS" in the app store.
③Logging in to the Daly official website (<https://www.dalybms.com/>).
④Btaining it from customer service.
- (2)APP Connection
Turn on Bluetooth and the phone's location information, then enter the APP. The APP will automatically search for the Bluetooth serial number. After verifying that the serial number on the bms is correct, click on the serial number to enter the battery management interface.

3. Parameter Setting

- When using the bms for the first time, you need to set the battery type and capacity in the APP or on the PC Master (the default factory parameters are for lithium-iron phosphate batteries). Set the battery pack capacity according to the actual capacity of the battery pack.
- Charge the battery to 100% for calibration during the first use. Other protection parameters can be set according to your own needs. The default password for modifying parameters in the APP is 123456, and the password for modifying parameters on the PC host computer is 20211115.

*Note: In the absence of charging or discharging, the bms will enter sleep mode after 3600 seconds by default and will wake up automatically when charging or discharging is detected. You can also modify the sleep time through the APP or the PC host computer. Setting it to 65535 means no sleep.

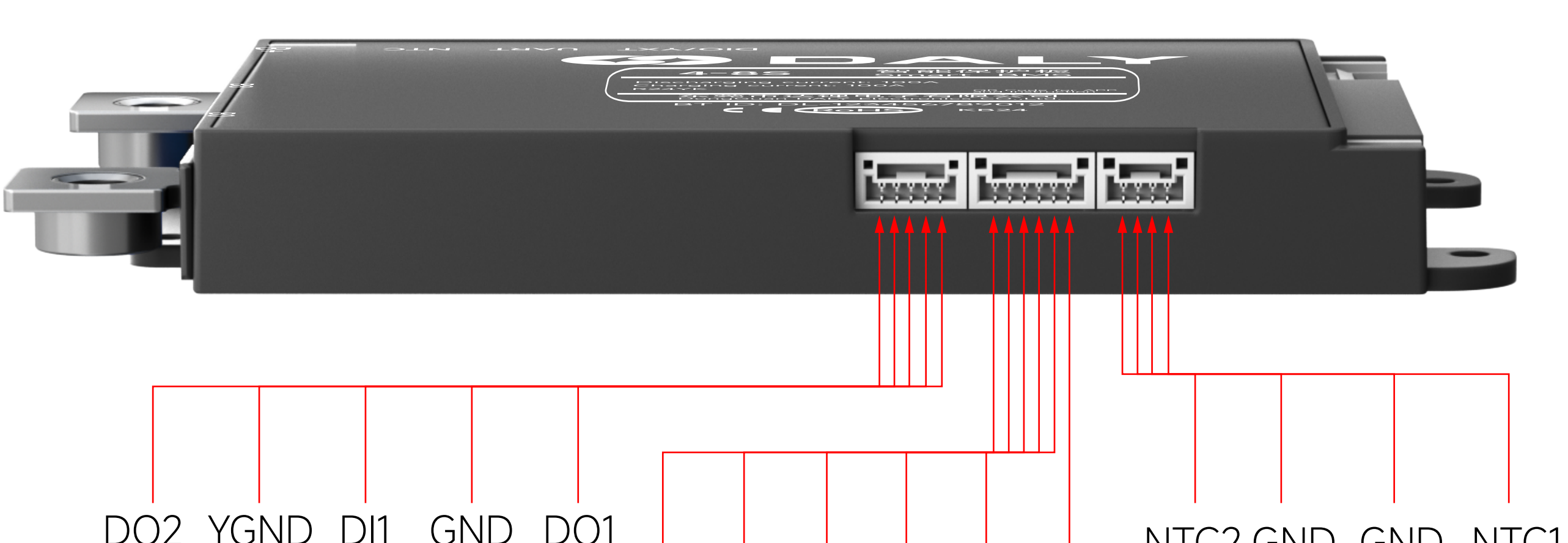
4. Instructions for Using the One-Line Communication

- Select the corresponding protocol in the APP or on the PC Master to use the one-line communication function.

5. Special Instructions

- (1)The cables from different manufacturers are not interchangeable. Please ensure that you use the cables provided by our company.
- (2)Take antistatic measures when testing, installing, touching, and using the BMS.
- (3)Do not let the heat-dissipation surface of the BMS directly contact the battery cells, as the heat may be transferred to the cells, affecting battery safety.
- (4)Do not disassemble or modify the components of the BMS by yourself.
- (5)The shell of our company's BMS is still conductive. Avoid contact with the battery cells and nickel strips during the assembly process. Due to the electrostatic protection design, the shell is grounded with the main board, and it is normal to detect voltage during measurement.
- (6)Our products undergo strict factory inspection and testing. However, due to different usage environments (especially high-temperature, ultra-low-temperature, sunlight-exposed, and humid environments), BMS failures may occur. Therefore, customers should use the BMS in a friendly environment and choose BMS with a certain redundancy as backups.

III.Interface definition description



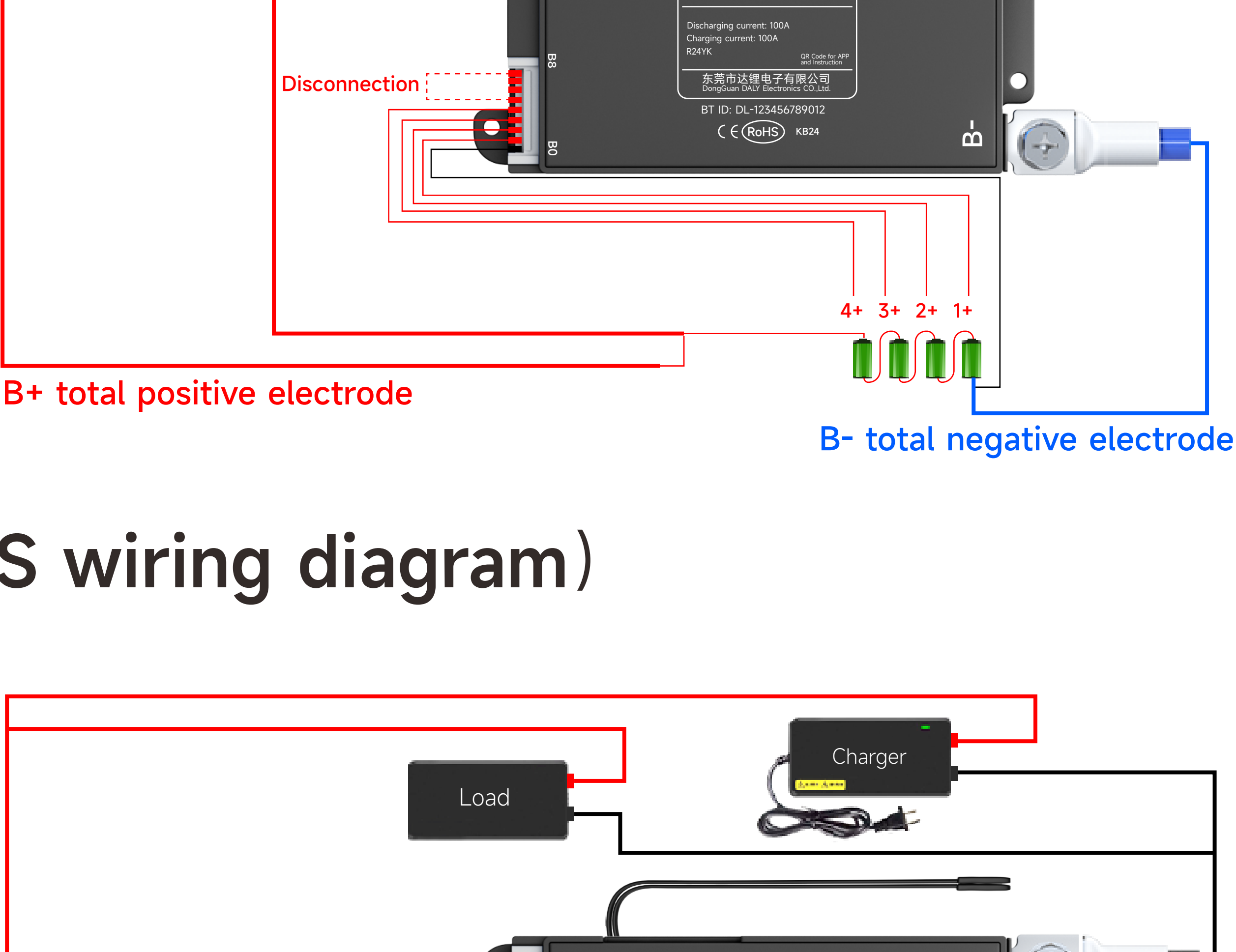
Interface Name	Pin	Label	Definition
NTC	1	NTC1	1# Temperature Control Wire
	2	GND	Ground GND
	3	GND	Ground GND
	4	NTC2	2# Temperature Control Wire
UART	1	GND	Ground GND
	2	3.3V	Power Supply 3.3V
	3	12V	Power Supply 12V
	4	S1	Activation Switch
	5	TX	Communication Transmitter
	6	RX	Communication Receiver
One-Line Communication /DO	1	DO1	Enable Signal
	2	GND	Ground GND
	3	DI1	One-Line Communication Interface
	4	YGND	
	5	DO2	

VI. Specification Parameters

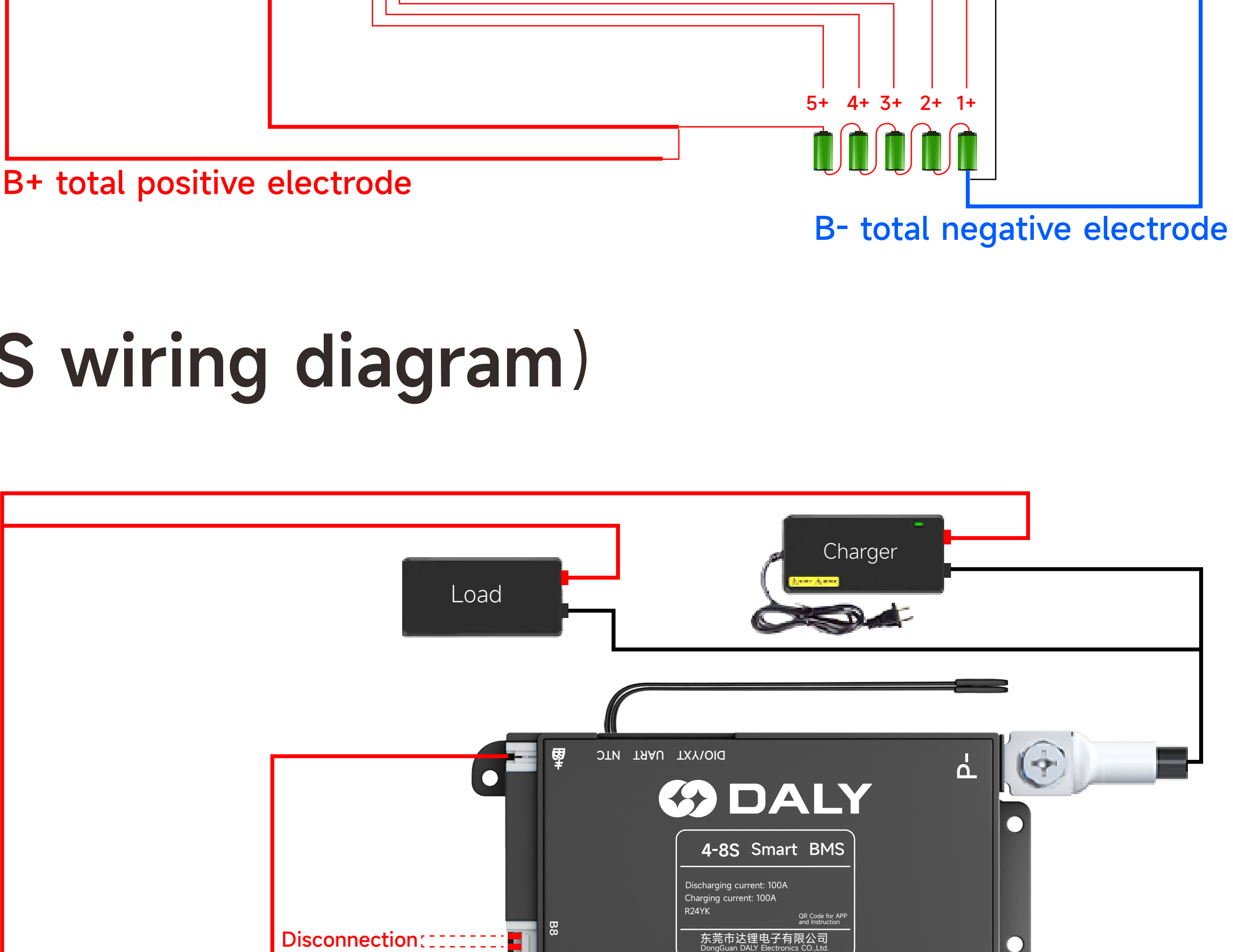
Basic Specifications	Parameters
Battery Pack Type	Li-ion/LiFePO4/LTO
Number of Battery Strings	Li-ion:4~8/8~17/8~20S LiFePO4:4~8/8~17/8~24S LTO:6~8/8~17/8~24S
Monomer Sampling Voltage Range	1.5V-4.9V
Operating Power Consumption	10mA
Sleep Power Consumption	600uA
Operating Temperature	-40℃ ~ 85℃

V. Wiring Diagrams for Common Numbers of Battery Strings

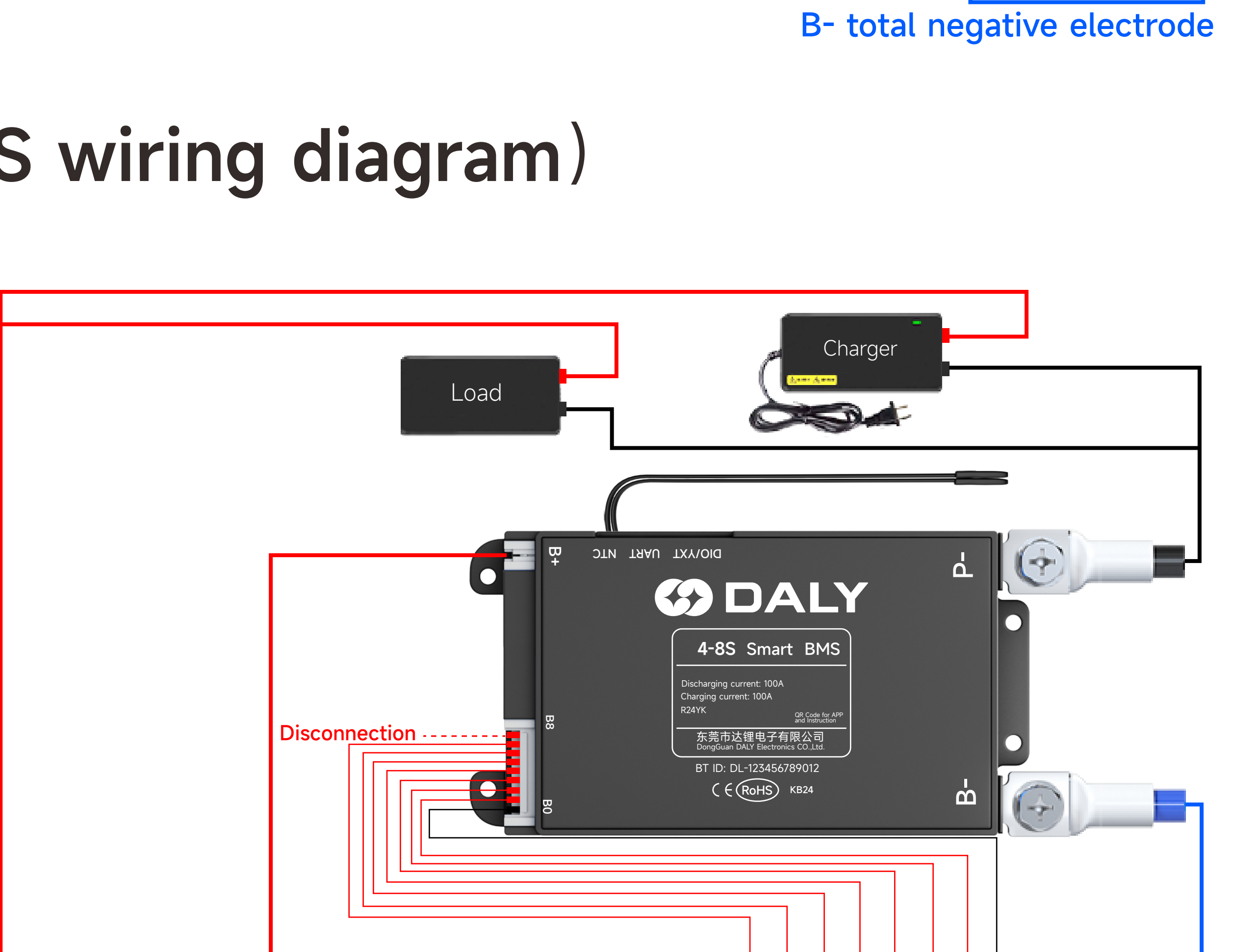
(4S wiring diagram)



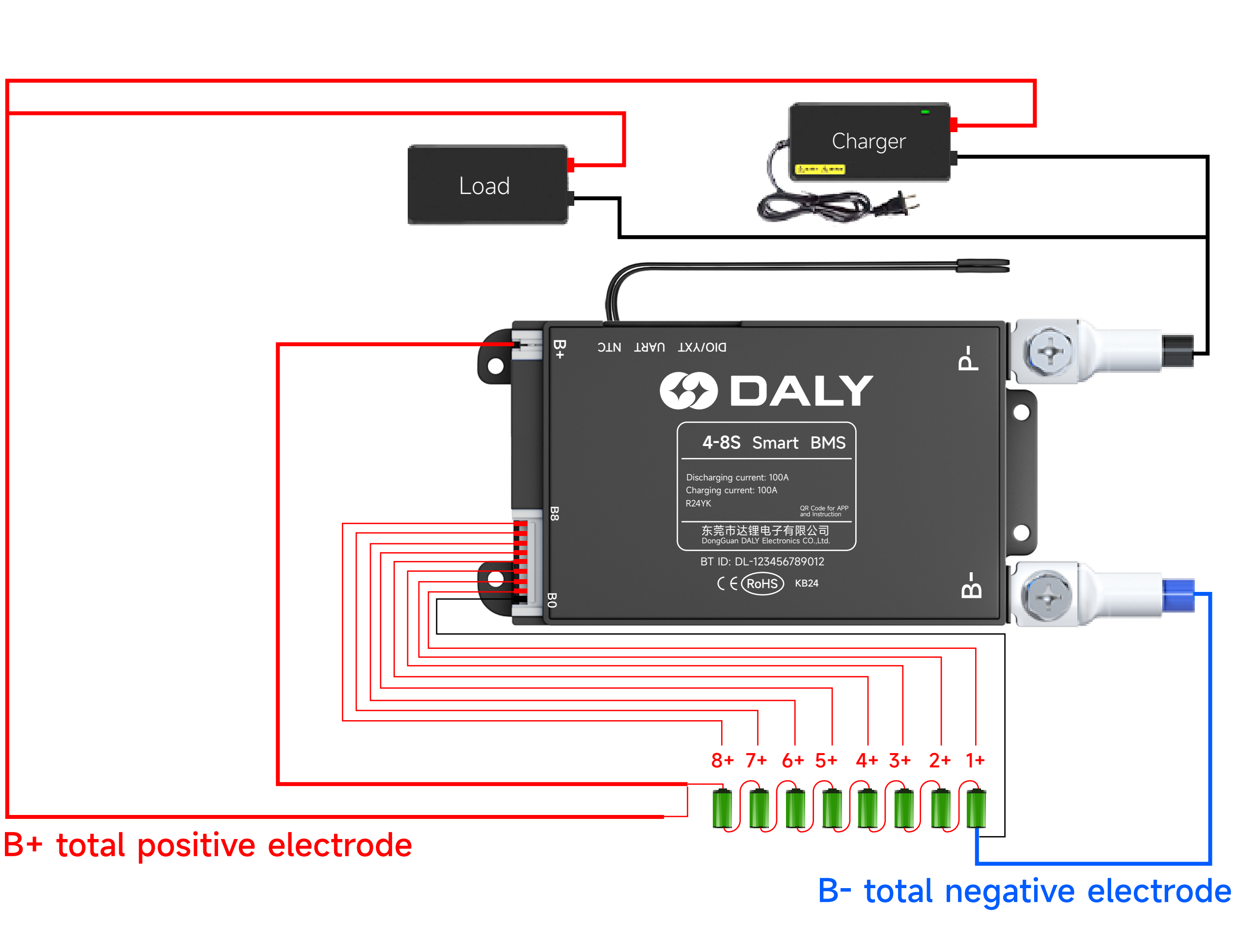
(5S wiring diagram)



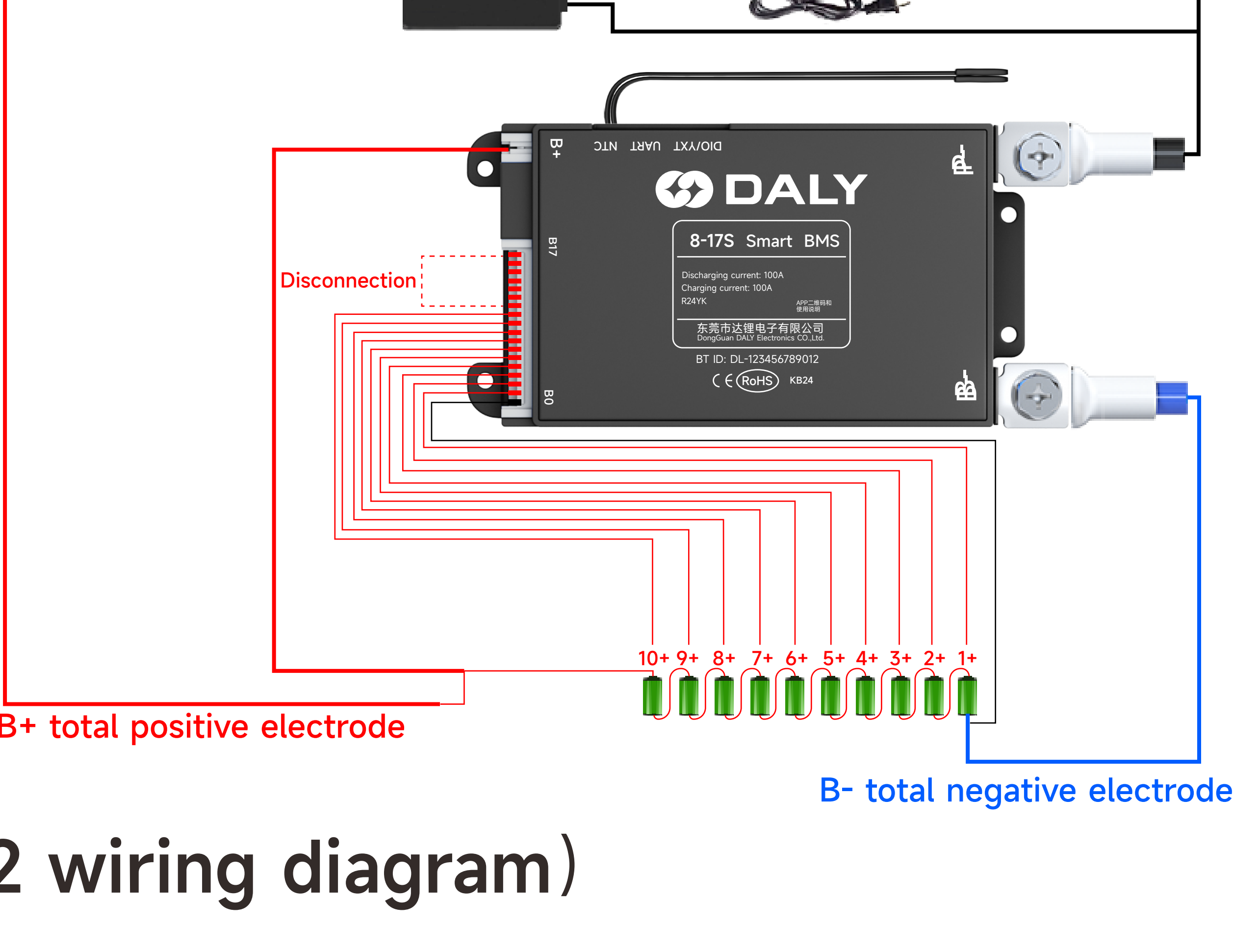
(6S wiring diagram)



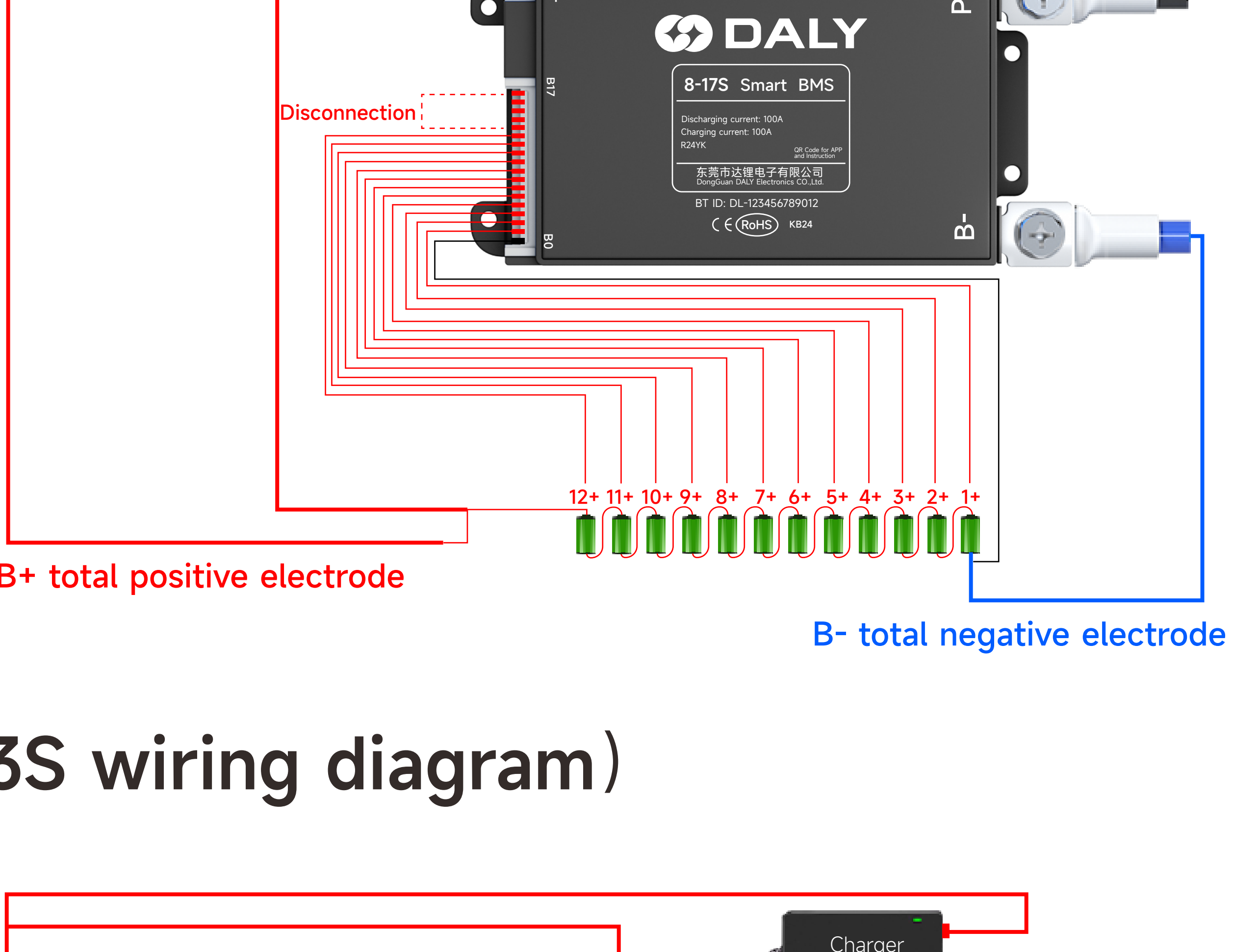
(7S wiring diagram)



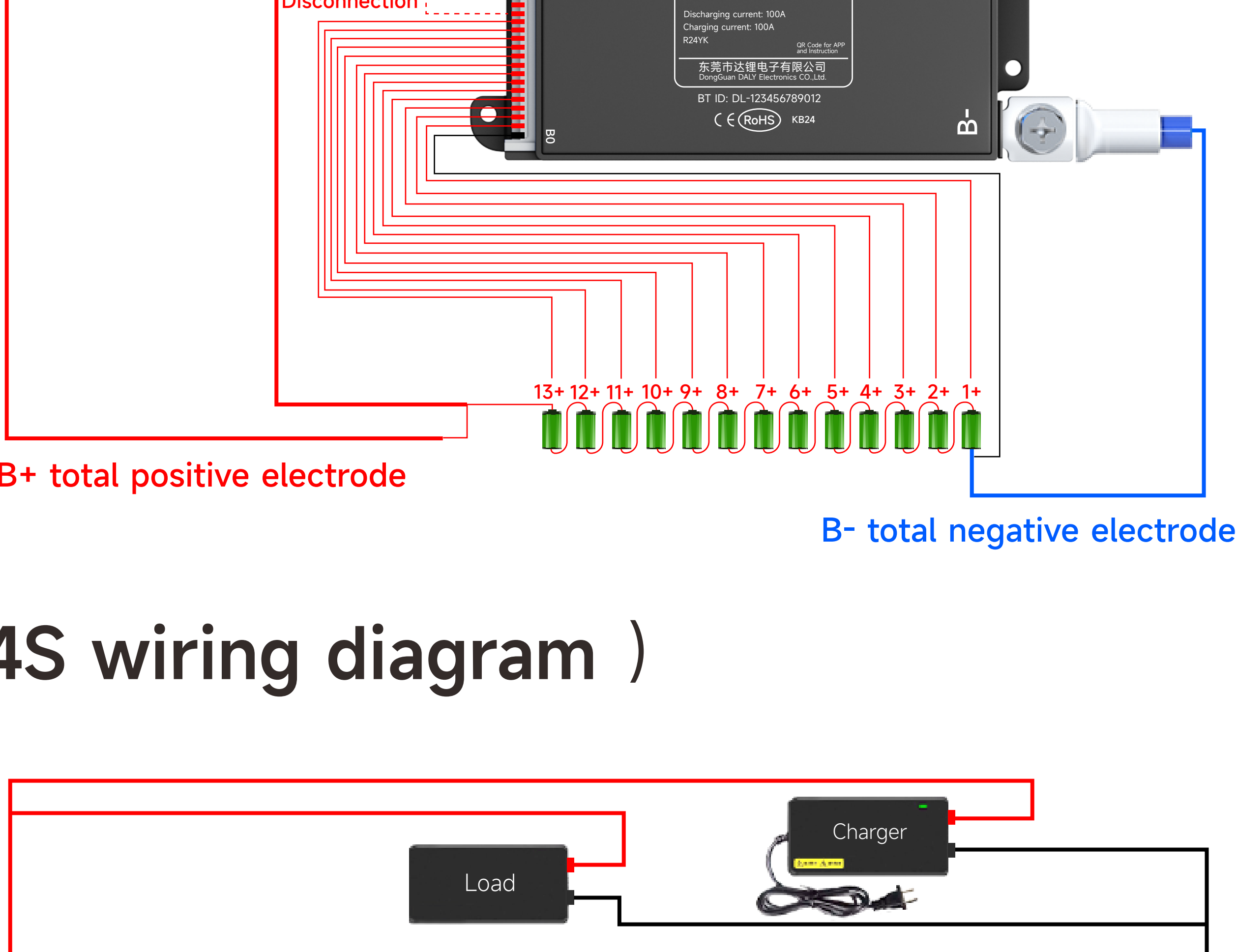
(8S wiring diagram)



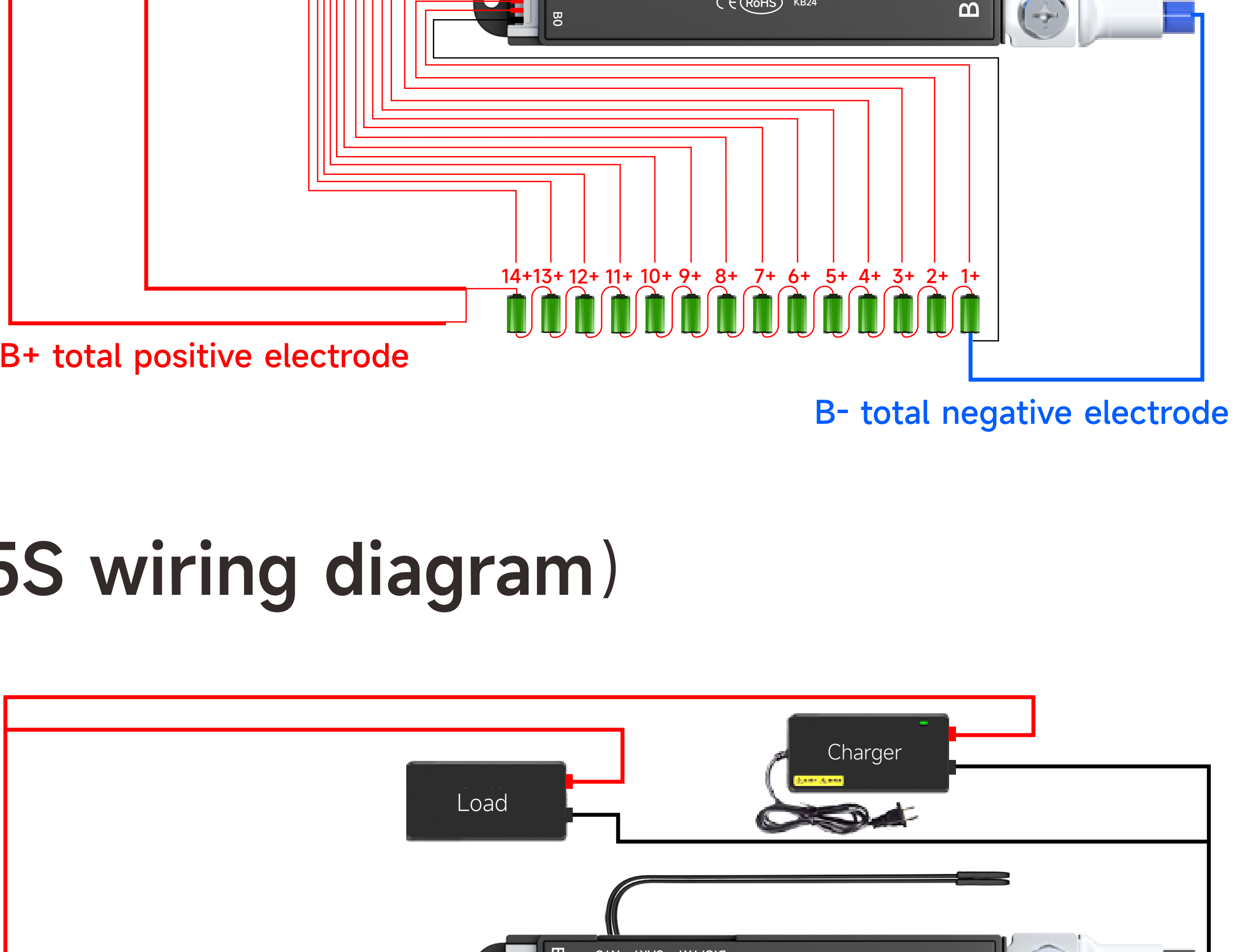
(10S wiring diagram)



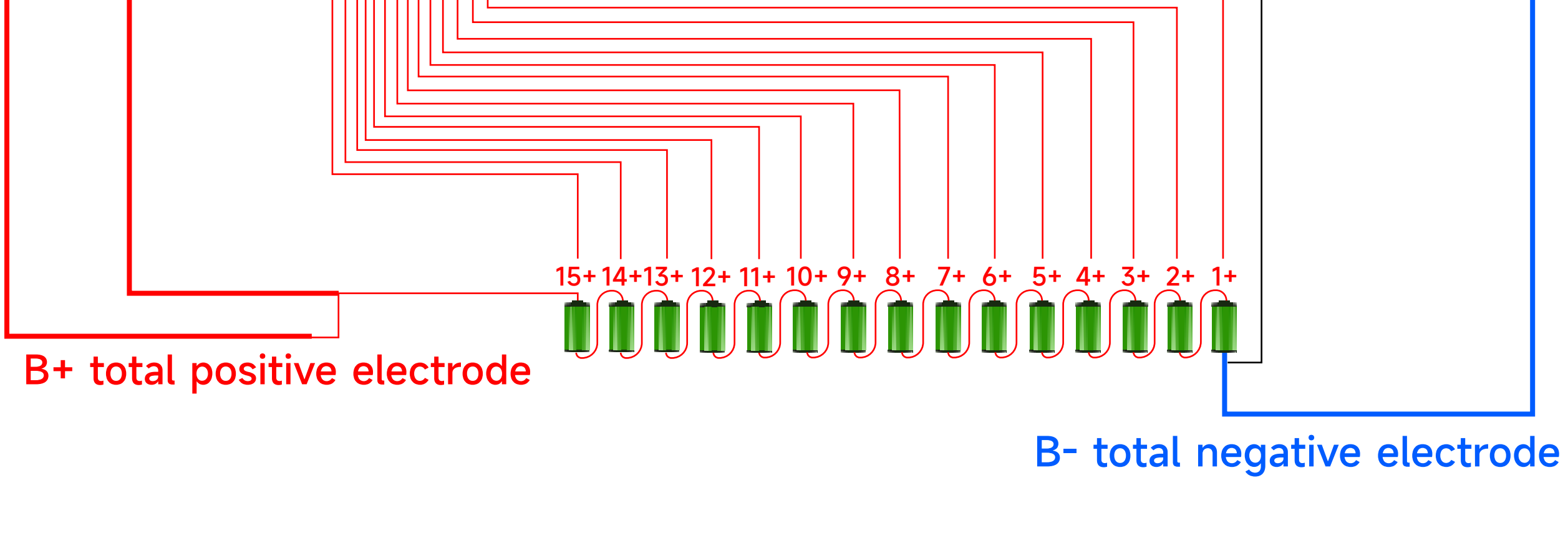
(12 wiring diagram)



(13S wiring diagram)

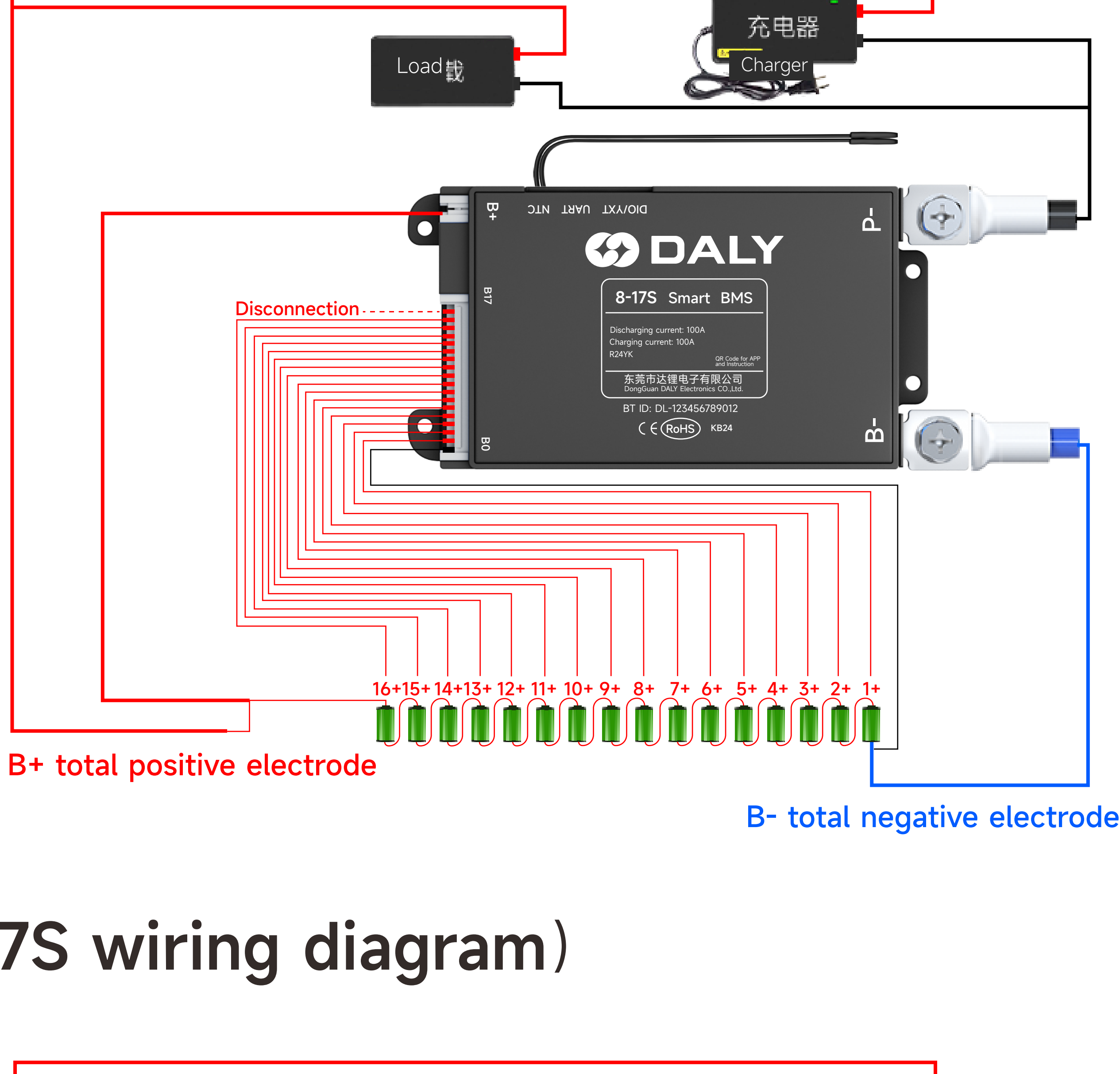


(14S wiring diagram)

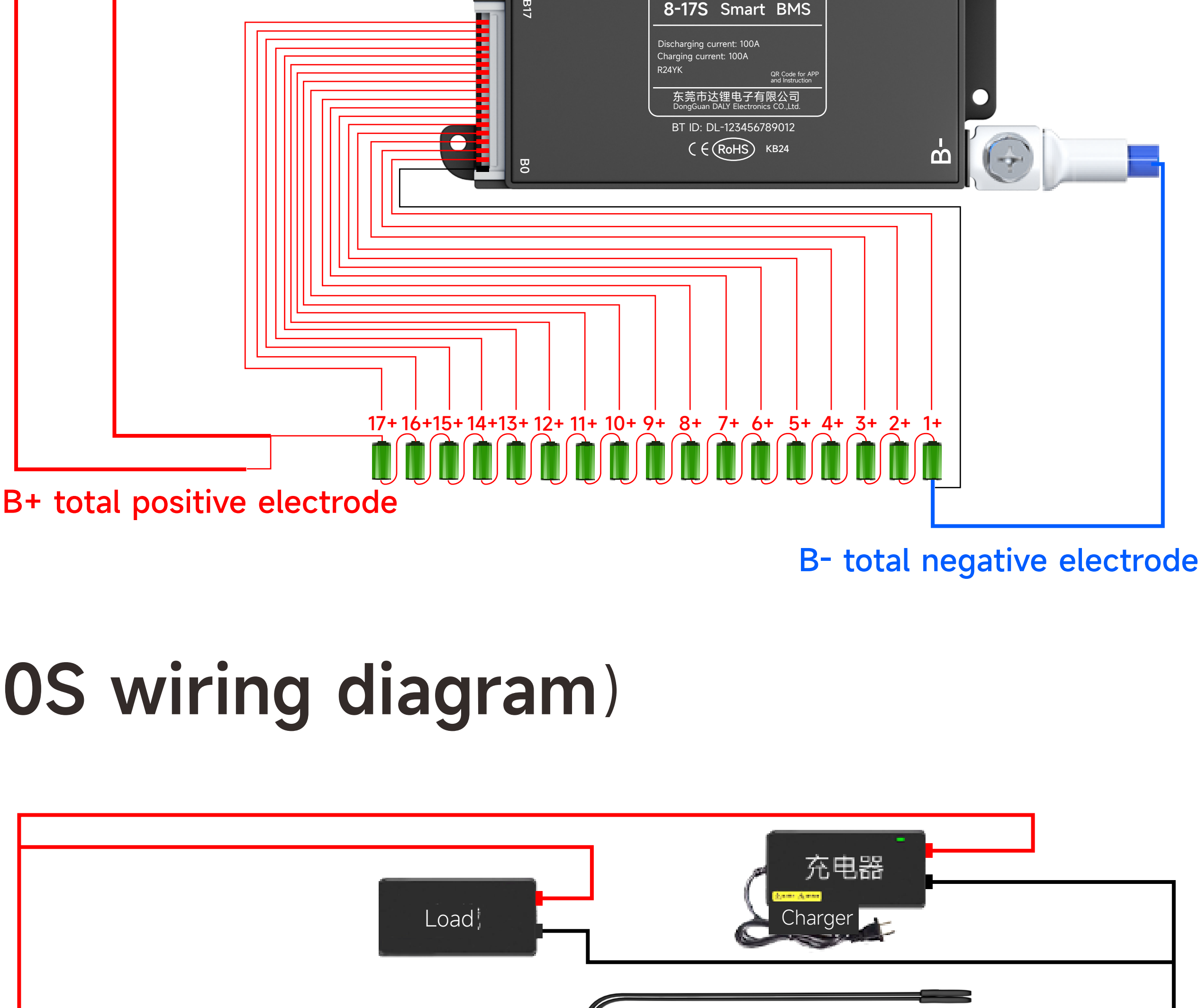


(15S wiring diagram)

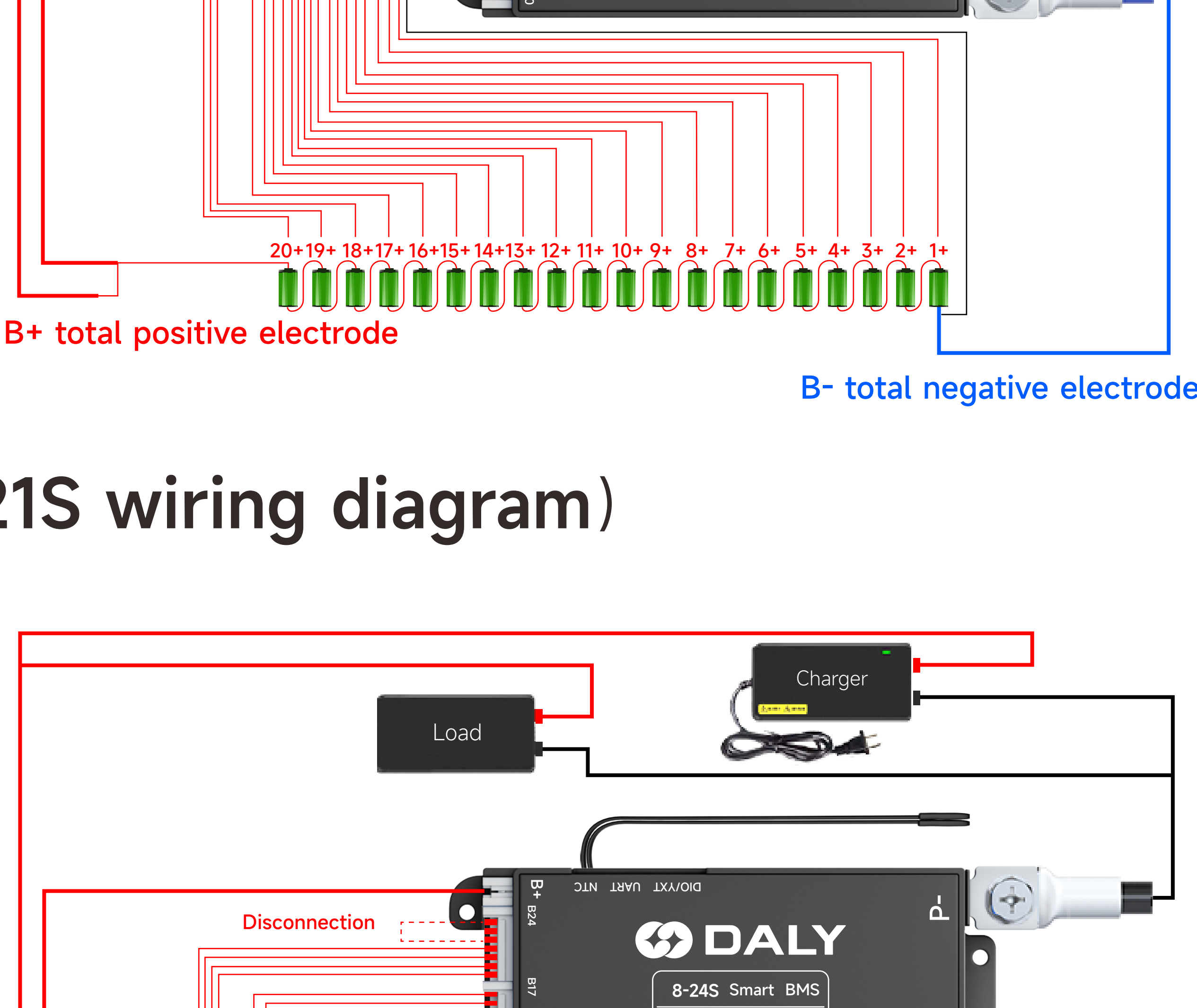
(16S wiring diagram)



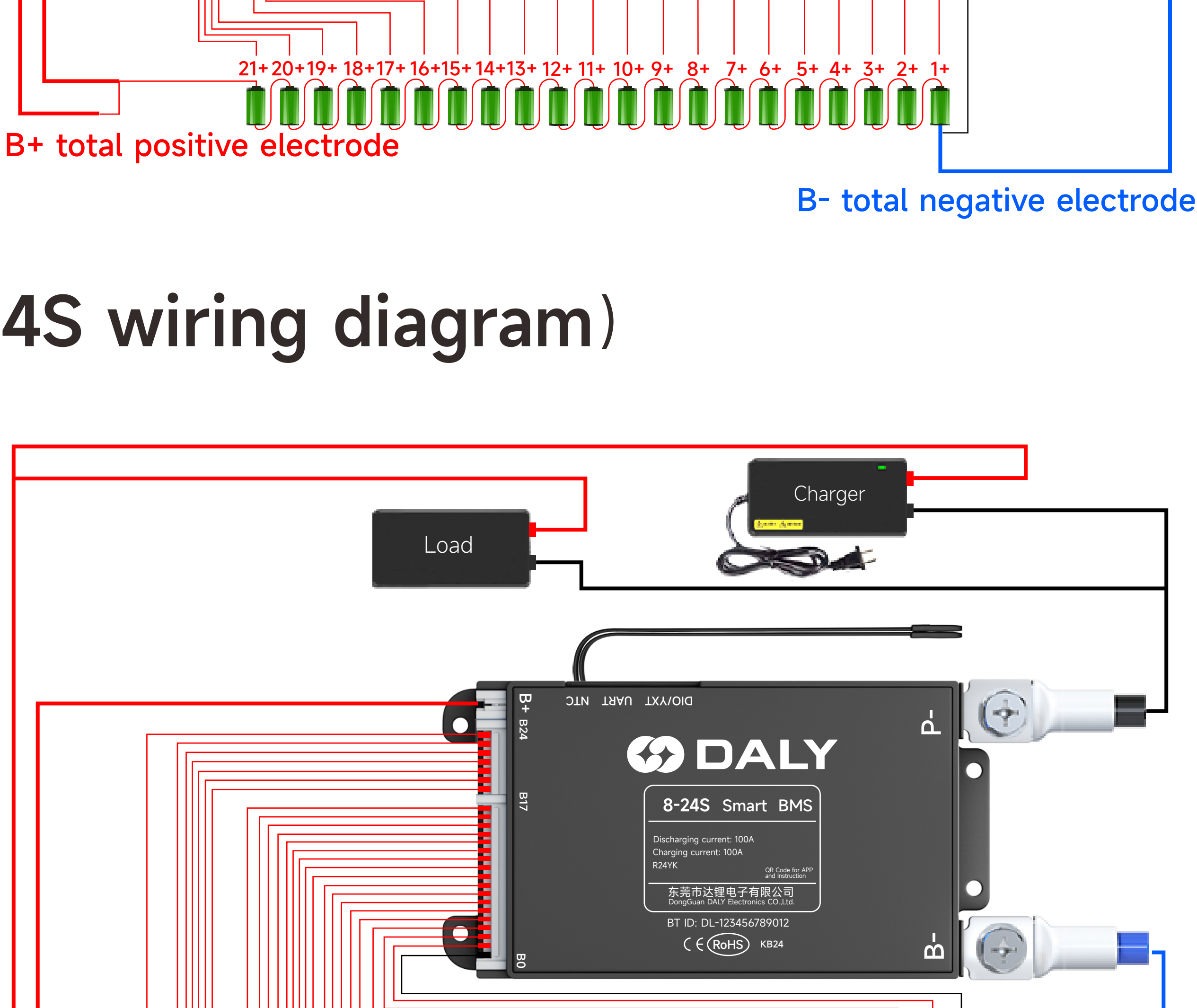
(17S wiring diagram)



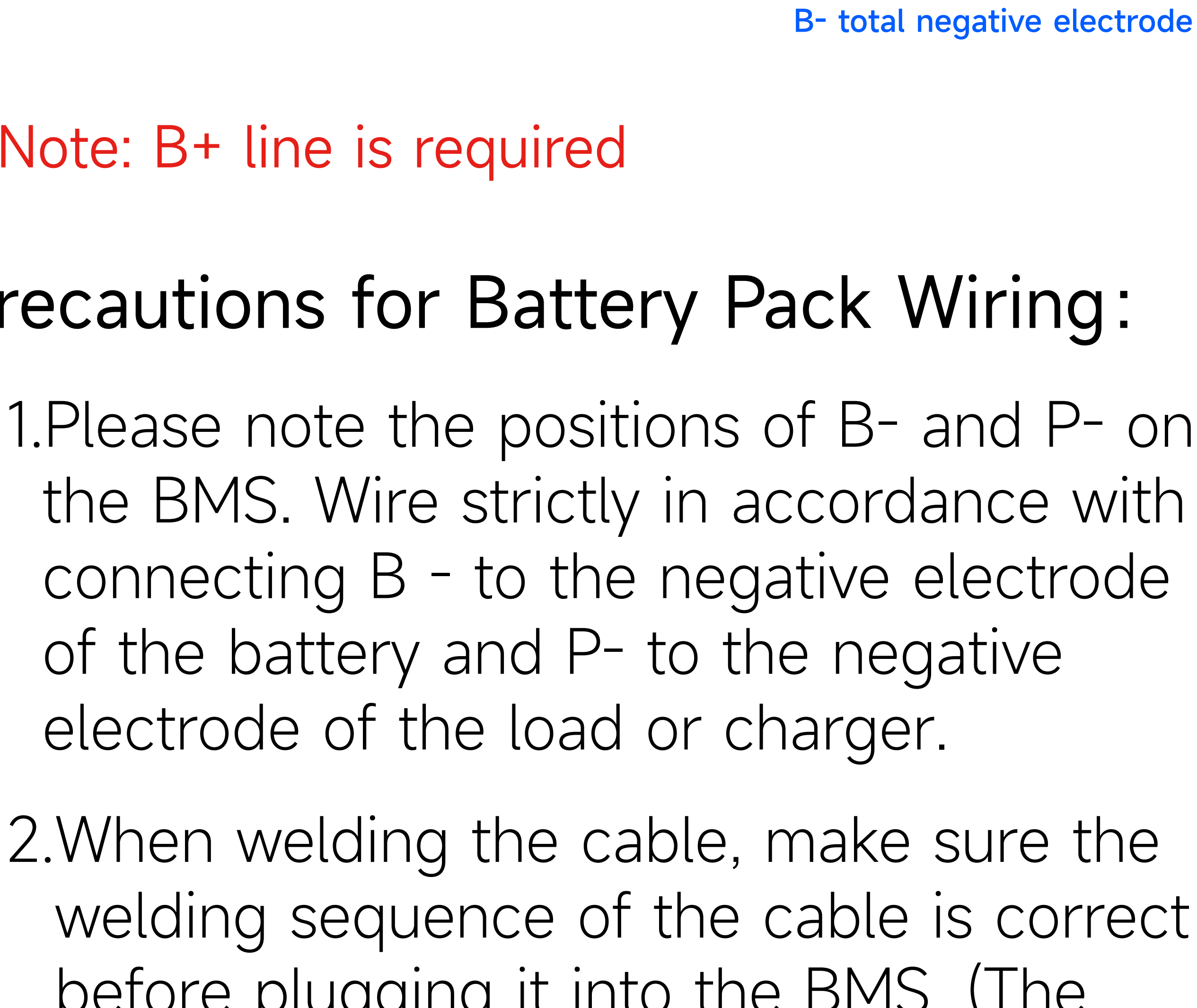
(20S wiring diagram)



(21S wiring diagram)



(24S wiring diagram)



Note: B+ line is required

Precautions for Battery Pack Wiring:

1. Please note the positions of B- and P- on the BMS. Wire strictly in accordance with connecting B - to the negative electrode of the battery and P- to the negative electrode of the load or charger.
2. When welding the cable, make sure the welding sequence of the cable is correct before plugging it into the BMS. (The wrong-wire protection is only valid when the wrong-wire interval is within 6 strings. Exceeding 6 strings will cause damage to the BMS.)
3. Power-on sequence:
 - ① Install B-
 - ② Plug in the acquisition cable
 - ③ Connect the B+ cable
 - ④ Install P-.
4. Power-off sequence:
 - ① Remove the B + cable
 - ② Remove the acquisition cable
 - ③ Remove P-
 - ④ Remove B-.
5. Insert the NTC wire into the NTC-1 or NTC-A port preferentially.
6. Weld the corresponding sampling wires to the battery pack according to the number of battery strings. Seal the other extra sampling wires separately with insulating tape. For example, if you buy an 8-17S BMS for a 10S battery pack, you can seal the remaining 7 sampling wires with insulating tape. Please operate strictly in accordance with the wiring sequence. If the wiring sequence is reversed, it will cause damage to the BMS.

Precautions for Parallel Connection of Battery Packs:

1. When connecting lithium-ion battery packs in parallel, ensure that the voltages of the battery packs are the same. The total voltage difference between each battery pack should be less than 1V. This prevents the high-voltage battery pack from charging the low-voltage battery pack with a large current when they are connected in parallel, which could trigger the short-circuit protection function of the BMS.
2. When connecting lithium-ion battery packs in parallel, manually turn off the discharge MOS in the control center interface of the Bluetooth APP before parallel connection to prevent sparking during the parallel connection of the battery packs.

Application Environment of BMS:

1. Ensure the accuracy of wiring.
2. The BMS acquisition harness, B+ harness, and B- and P- harnesses must be fixed firmly to prevent environmental factors such as vibration from affecting the connection reliability.
3. The operating temperature of the BMS: -40°C ~ 85°C.
4. Pay attention to waterproofing, moisture-proofing, and insulation.

6.Contact us



Official Website



FaceBook