Product specification

Product introduction

B04DMA0TB300A03 Is an all-in-one BMS. The main functions include single voltage detection, temperature detection, high voltage detection, battery equalization, CAN / 485 / TTL communication, Bluetooth (mobile phone APP), sleep wake up, delay power off, residual power assessment, MOS control, etc.

Technical parameters

order number	name	content	remarks
1	power supply mode	Battery pack is self-powered with 8-20VDC input	Automatic entry into the low-power mode
2	The number of strings can be detected	3-4 Strings	
3	Work power consumption	<10mA(60V)	
4	Sleep power consumption	<5mA(60V)	Can automatically wake up
5	Sleep power consumption	<20uA(60V)	Manual arousal is required
6	working temperature	-40~85 ℃	
7	storage temperature	-40~95 ℃	
8	Working humidity	5%~95%	Three prevention paint protection
9	Single voltage detection	0-5V, 15mV error typical value 5 mV	The resolution was 1mV
10	Single-body voltage drop-line detection	support	
11	Balanced function	Maximum of 100 mA in passive equilibrium	
12	Temperature detection	-30~125 ℃,	2, maximum support 3
13	Total pressure detection	1 Road. The detection range is 0-100V. <0.5% FSR (FSR = full range).	
14	Current detection	Triunt, - 150 A - 300 A, with error <0.5% FSR	1 Road
15	The SOC estimation accuracy	<8% (working condition)	
16	CAN joggle	1-way, supporting bootloader	
17	485 Interface	1-way, supporting bootloader	either-or
18	T π L joggle	1-way, supporting bootloader	either-or
19	MOS tube current	Rated 100A, peak 300A (30s) The overcurrent capacity varies according to the different heat dissipation conditions	Co-mouth design (Current size is available)
20	short-circuit protection	Default 300A	Can set
21	overvoltage crowbar	Free to set	Recovery time adjustable
22	Overweight protection	Free to set	Recovery time adjustable
23	overcurrent protection	Free to set	Recovery time adjustable

1. Functions

1.1.1 CAN communication

JN 1939 Protocol, CAN 2 . 0 A / B communication, used for the vehicle controller / motor controller / meter / charger, etc External devices for communication.

1.1.2 RS485 communication

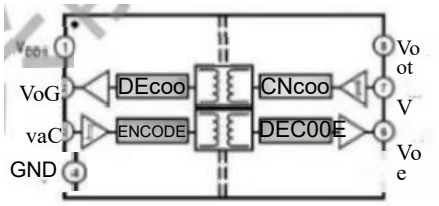
Supports RS485 communication, 2500V isolation. Porter rate standard 1 9 2 0 0, protocol support for customer customization.

485 / TTL is only one alternative.

1.1.3 TTL communication

Support TTL communication, 2 5 0 0V isolation. Porter rate standard 1 9 2 0 0, protocol support for customer customization.

Requires external power supply and provides isolated power supply.
485 / TTL is only one alternative.



Left side of the VDD 1 GND1

Power supply by the BMS **GND2**

Right side of the VDD 2

Powered bye xternal power

1 .3 4 The monomer voltage acquisition

It can conduct real-time voltage sampling of 4 series of single cells.

1.3.5 Temperature acquisition

Sample the cell surface temperature, ambient temperature, MOS tube temperature, and equilibrium circuit temperature.

1.3.6 SOC calculation

Calculate the remaining capacity of the battery, and get the working state of the battery pack more intuitively.

1.3.7MOS driver

Drive through the MOS tube, direct / close the power loop.

13.8, total pressure test

It can detect whether the precharging is completed and detect the total pressure of the battery.

1.3.9 Current detection

Through current detection, real-time current detection, short circuit protection, sleep wake up and other functions.

1.3.10 Battery equalization

Through the passive resistance energy consumption balance, effective maintenance of the battery, improve the consistency.

Passive equilibrium current can be set, maximum of 100 mA / channel.

2. Instructions

2. 1 Charge and discharge negative?

Your wiring number is C., Black line. Common port Mos design, the total negative charge and discharge into one port.

2.2 Total negative battery:

Wiring reference number is B-, blue line. The harness needs to be connected to the total negative.

When wiring, be sure to connect B-to the total negative battery, and then plug the sampling line terminal.

2 .3 Voltage sampling

4 Single-unit voltage sampling wiring harness and BMS power supply wiring harness. There are 6 single sampling wire harness and BMS power supply harness.

order number	wire marking	meaning	order number	wire marking	meaning
1	J3-1	Battery negative electrode	4	J3-4	Section 3: Battery Sampling Line
2	J3-2	Section 1: Battery Sampling Line	5	J3-5	Section 4: Battery Sampling Line
3	J3-3	Section 2: Battery Sampling Line	6	B+	The battery is always positive to power the BMS

2 .4 Temperature sampling

order number	wire marking	meaning	order number	wire marking	meaning
1	J1-1		5	J2-1	GND
2	J1-2		6	J2-2	T1
3	J1-3	GND	7	J2-3	GND
4	J1-4	T3	8	J2-4	T2

2 .5 Communication interface

CAN/485/TTL/DI

order number	wire marking	meaning	order number	wire marking	meaning
1	J4-1	B+	5	J4-5	485A(TTL RX)
2	J4-2	SW	6	J4-6	485B(TTL_TX)
3	J4-3	ACC+	7	J4-7	CANH
4	J4-4	ACC -	8	J4-8	CANL

Note: CAN and 485 share the common isolated power supply.

485 interface and TTL, the interface is an alternative,

The TTL interface itself is isolated from the BMS

and requires an external input voltage of 3-5V.

The TTL interface requires the ACC +,

ACC-, TTL_TX,TTL_RX with four lines

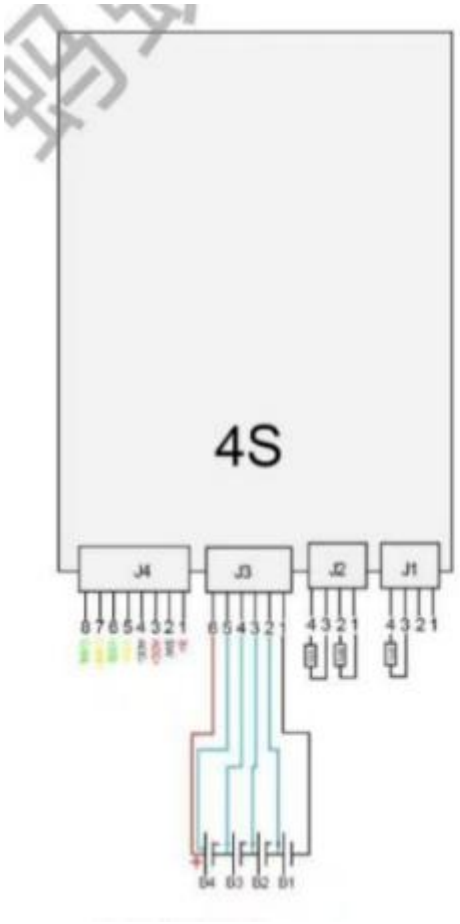
The SW is short-connected with the B +, which

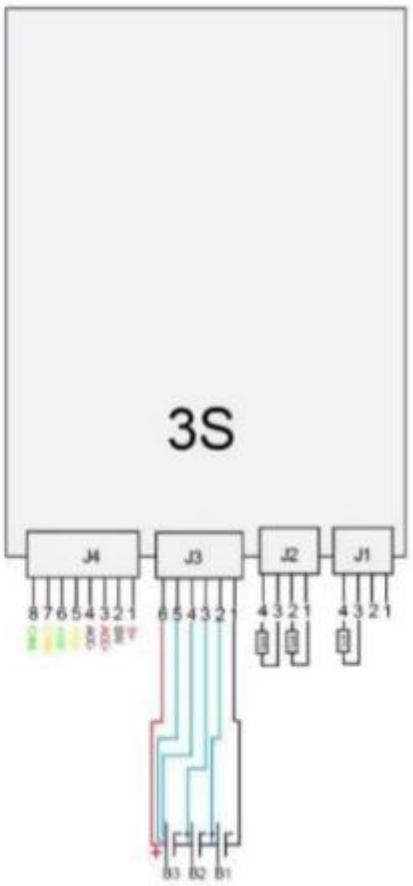
can directly activate the BMS

DI1 is the external input signal detection port,

and the principle is as follows

2.6 Wiring mode


4S
J4
J3
J2
J1
8 7 6 5 4 3 2 1
6 5 4 3 2 1
4 3 2 1
4 3 2 1
B4 B3 B2 B1


3S
J4
J3
J2
J1
8 7 6 5 4 3 2 1
6 5 4 3 2 1
4 3 2 1
4 3 2 1
B3 B2 B1

FCC WARNING

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-- Consult the dealer or an experienced radio/TV technician for help.

To maintain compliance with FCC’s RF Exposure guidelines, This equipment should be installed and operated with minimum 20cm distance between the radiator and your body: Use only the supplied antenna.