# 1: Overview

This specification is only applicable to the 10 -series 36 V series lithium-ion battery protection circuit .

# 2: Application

(1) Lithium-ion battery pack

(2) Lithium-ion polymer battery pack

# **3: Electrical Characteristics**

project	Details	standard
Overcharge protection	Single cell overcharge detection voltage	4.25V±0.05V
	Single cell overcharge release voltage	4.10V±0.05V
	Rated charging current ≤1 0 A	≤1 0 A
Charging protection	Charging protection current	-
Over discharge protection	Single over-discharge detection voltage	2. 5 0V ± 0.0 8 V
	Single over-discharge release voltage	3.0 0 V±0.1 V
	Rated discharge current	≤ 20 A
	Discharge protection current	60 ± 8 A
Short circuit protection	Is there short circuit protection?	have
	Short circuit protection recovery conditions	Disconnect the load
Internal resistance	B-, P-on resistance	≤15mΩ
Current consumption	Self- consumption	≤ 10 µA
(L*W*H) size	size	7 3 * 35 * 10 mm
Collection line (cable)	Pitch 2.0/Line length 400mm	Delivery cable

Natico	It is forbidden to use the protection board	
Notice	in series or parallel	-

# 4. Product wiring diagram

Kind tips

Start by connecting the black wire of the cable to the negative terminal of the battery pack, and then solder the remaining cables to the positive terminal of the battery pack in ascending order of voltage (do not misalign).

Connect all the cables and terminal wires, make sure they are correct, then insert the cable

pairs into the protection board sockets and secure them securely!

harge and discharge positive electrode	
ge and discharge negative electrode	B+
OP- Wiring Diagram	equential order
€8-	B-

#### 5. Wiring steps and methods

# **1. Solder the cable first**

Start by connecting the black wire of the cable to the negative pole of the battery pack, and then solder the remaining cables to the positive pole of the battery pack in ascending order of voltage (do not misalign). Connect the cable to each section of the battery to ensure effective connection.

Make sure that the single potential sequence on the cable plug end is in ascending order. The potential sequence is consistent with the potential sequence of the socket on the protection board end.

#### 2. Welding the negative charging and discharging wire

Connect a thick wire from the B- pad of the protection board to the total negative electrode of the battery pack, and the total positive electrode of the battery pack is B+, which is used for charging and discharging. Connect a thick wire from C- to the outside, which is used as the negative electrode for charging and discharging. (Connect a thick wire to the P- of the split-port protection board as the negative electrode for discharge, and do not connect P- to the same port)

# 3. Plug the cable plug into the socket on the protection board

Connect the cable plug to the socket on the protection board. First make sure that all the connections are correct, then plug the cable into the socket on the protection board (if the cable is misaligned, it may cause permanent damage to the protection board)

Make sure the cable plug is properly connected to the socket of the protection board, no charged objects or wire ends touch the protection board, and take insulation and fixing measures.

4. Check the total voltage of the battery pack and the total output voltage after entering the protection board

The battery pack voltage tested by the discharge interface and the charging interface is consistent with the battery pack voltage, which is considered normal and you can proceed to the next step.

There may be inconsistencies when you connect the cables for the first time. You can try

charging (activating) first.

### 6. Notes :

When wiring, take measures to prevent static electricity, water and dust; during use, avoid the protection board from being hit or squeezed.