



SPECIFICATION FOR APPROVAL

Customer Name	
Model	TORO – 16 TWEPP-200A-FePO4
Specification	L140*W70*T24mm MAX
Main configuration	IC: DW01A
PCB	Double layer, Blue oil, Solder coating, ROHS
Document NO.	190701
Rev	00

Department	(R&D) Registered	(R&D) Checked	(Quality) Deliberation	(R&D) Approved
Sign				
DATE				

Customer Approve			
Department	R&D	Quality	Approved
Sign			
DATE			
Approved date	Period of validity 1 year		

If both sides have no dissidence in one month before the maturity of the Approved. It will be considered valid automatically for a one year period.

Company Name	WERER GROUP LTD. ŞTİ.	TEL	
Address	Yıldırım Kule Cevzlidere Mah. Mevlana Blv. No: 221-105 Ofis No:33 Çankaya/Ankara/TÜRKİYE		

1. Product Modified Record List

Product Modified Record List			
Date	Problem and Solution	Principal	
2023.07.20	1.		

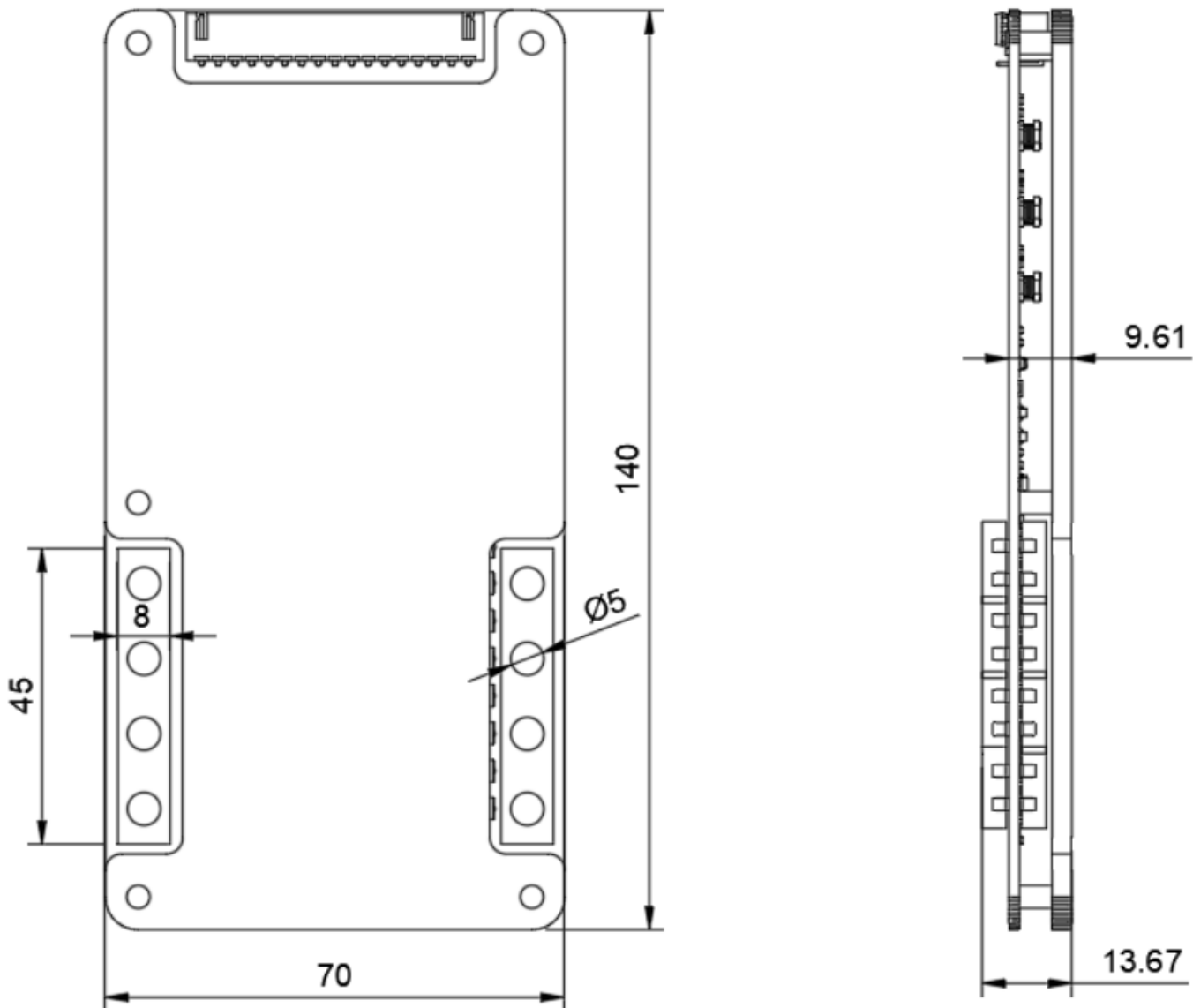
2. Produce Specification

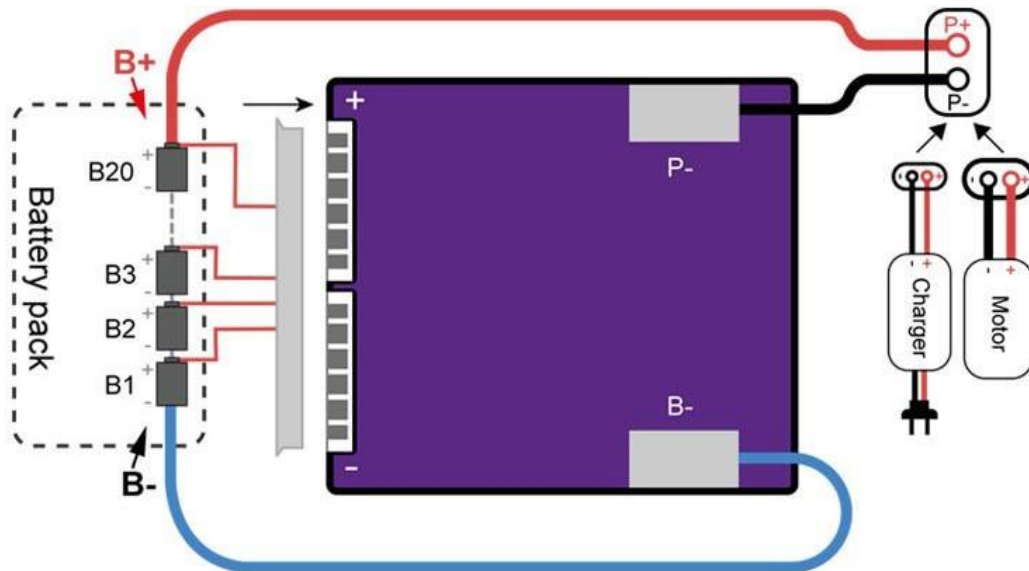
		TECHNICAL SPECIFICATION FOR APPROVAL	
		Rev	0.1
		Date	
		Page	1
No	Item	Condition	Specification
1	Input Voltage	Input Voltage B+ to B-	-0.3~+n*3.65V(16S Li-FePO4)
2		Detection voltage/1CELL	3.65±0.05V(1-16S)
3	Overcharge	Release voltage/1CELL	3.85±0.05V
4		Detection delay time	0.08~2S
5		Detection voltage/1CELL	2.30±0.1V(1-4S)
6	Over discharge	Release voltage/1CELL	2.50±0.5V
7		Detection delay time	40~100ms
8		Over current	@200A/3s
9	Over discharge current	delay time	10~20ms
10		Short detection delay time	100~600us
11	Short detection	Release Conditions	Cut off load
12	Charge temperature protection	Charge temperature protection	85±10℃ 65±10℃
13	Discharge temperature protection	Discharge temperature protection	85±10℃ 65±10℃
14	Normal current consumption	Normal current consumption of PCM	Max 120.00uA
15	0V charger	Allowed 0V change	YES
16		max continuous charge/discharge current	80A/200A
17	Suggest working conditions	suggest working temperature	-20℃~+55℃
		Balance current	Up to 1200mA
	IR resistance	IR of PCM	≤10.00 mΩ
18	NTC	NTC (20~40)℃	yes
19	PCM	The length of final PCM	140±0.15mm
20			

21	The size of final PCM	The width of final PCM	70±0.1mm
22		The thickness of final PCM	MAX:24mm
21	Appearance	1) Nothing part deflection 2) The status of solder is all right 3) PCM will not crook	
22	Reliability test	1) ESD 4KV	8KV / ESD test : contact 4KV Air 8KV

n*: NUMBER OF SERIAL CONNECTED BATTERY

3. Wiring instructions





Signal lines:

B1 connect battery cell's B1+/B2- 3.2V

B2 connect battery cell's B2+/B3- 6.4V

B3 connect battery cell's B3+ 9.6V B4

connect battery cell's B4+ 12.8V

.....

.....

B16 connect battery cell's B16+ 51.2V

Power lines:

B- connect battery's B-, wire current > 80A 4 lines

P- connect charger-/load-, wire current > 80A 4 lines

P+ connect battery's B16+, wire current > 80A 4 lines