# 48230KITS Assembly Instructions

## **Packing list**

A (Pre-installed) Shell\*1



F (Pre-installed) LCD Display\*1



B (Pre-installed) Cover plate\*1



C (Pre-installed) Balance bars\*2



D (Pre-installed) Front plate\*1



E (Pre-installed) Handle\*2





G (Pre-installed) 16S 200A BMS\*1



H (Pre-installed) Temperature NTC leads\*1



I (Pre-installed) 16S voltage acquisition cable\*1



J USB-RS485 communication cabl\*1



Κ Fiberglass Insulation plate\*20



L Screws\*16



Μ Flexible busbar\*16







#### WARNING:

If any parts are missing, damaged or worn, stop using this KITS. Repair the KITS with manufacturer supplied parts.



#### **IMPORTANT:**

Read these instructions carefully before beginning assembly. Failure to follow these instructions may result in serious injury. Carefully unpack all parts and identify them with the parts list before attempting to assemble the KITS. Remove all cardboard and plastic covering from DIY KITS parts. Please examine all packing material before discarding it.

1. Romove the BMS front plate(D), the cover plate(B), and the balance bars(C) as shown in figure 1.



2. Put the fiberglass insulation plate (K) as shown in figure 2.



3.Put the cells into the case, connect the cells with the flexible busbars (M), the temperature NTC leads (H) and the balance bars(C) as shown in figure 3, and the cells should be divided by fiberglass insulation plate (K), as shown in figure 3.



4. Put the BMS front plate(D) on, plug the voltage acquisition lead P+ lead to the main positive, and B- lead to the main negative, then put the B+ lead on, and stick the temperature NTC leads(H) on the cells by heat proof tape as shown in figure 4.



Voltage acquisition port



5. Check every connection, the voltage between the main positive and the negative is >52V, then turn the button on, the LCD and the indicator work out, then the assembly operation is completed, as shown in figure 5.

Unbox and install video: https://www.youtube.com/watch?v=6FZf448Nujk&t=22s



#### 6. Operation of Upper System and Bluetooth

Firstly, connect the USB to RS485 Cable from Battery to the PC/Laptop, dip switch 1 on the front plate, download the PC software and open it.

Secondly, modify the language, and follow the path:

CONFIG—Type the password "888888"—auto goes the interface—SN code—Read—Rename the Bluetooth(Format"TP-XXXX")—Write.

Notice: Please do not modify any other parameter setting without permission.





24组显示 多组显示 显示记录 并机分组显示 并机分组数据存储          各称       数值       单位       S称       数值       单位         S称       数值       单位       S称       数值       单位         S标       数值       单位       S标       放电数5导道       放电数5导道       开电状态       Sht0:0.0%         AtaxaCode:       加热状态       风梯状态       人材数       人本状态       人格状态       Social AtaxaCode:         加热状态       风梯状态       风梯状态       人格状态       人格状态       SN:               SN:       SN:                SN:       SN:                 SN:       SN:                 SN:       SN:       SN:       SN:              SN:       SN:           SN:        SN:                    SN: </th <th>监控</th> <th>参数</th> <th>配置</th> <th>存储</th> <th></th> <th></th> <th></th>	监控	参数	配置	存储			
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Family_	BMS-V1.1.	030-10												-	U	
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7. Download the APP(Android only, the IOS are developing), click the Bluetooth name to check the status.

1:45 PM   21.9KB/s & 영	34 24 Q (B)	1:45 PM   1.2KB/s &	5	ala to B	1:45 PM   76.4KB/s &	10	311 31 😤 📧	1:46 PM   0.9KB/s &	10	311 31 S (B)
Device	BMS	Device	BMS		Device	BMS		Device	BMS	Password
SN: TP-00001	Owner:	Cell_Volt	Value	Uint	Cell_Volt	Value	Uint	Gyro information and	configuration	>>
Location:		V_Max:	3.286	v	V_Max:	3.287	v	Parameter Name	Value	Operatie
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SUC	49%	Volt_Diff:	0.003	v	Volt_Diff:	0.004	v	A-axis Recovery	-180	Stt
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CHG_MOS: ON	DISCHG_MOS: ON	Volt02	3.286	v	Temp	Value	Uint	Install Mode	Vertical	Set
Anti, Theft: Disable		Volt03	3.284	v	Amb_Temp	28.0	°C			
		Volt04	3.284	v	MOS_Temp	27.0	°C	Battery information a	nd configurati	on >>
Voltage: 52.55V	Current: 0.0A	Volt05	3.284	v	Temp_Max	28.0	°C	SN:		Set
Cel_V_Max: 3.287V	Cell_V_Min: 3.283V	Volt06	3.286	v	Temp_Min	27.0	°C			
Temp_AVG: 22.0°C	Nominal Cap: 230Ah	Volt07	3.285	V	Temp_Diff	1.0	°C	Location:		Set
SW Version: 0.1.08	HW Version: TP-LT55	Volt08	3.285	v	Temp01	28.0	°C	Owner:		Set
Comment states		Volt09	3.286	v	Temp02	28.0	°C	Constant Section		
current state.		Volt10	3.283	v		20.0		Server configuration	~	
		Volt11	3.284	v	Temp03	27.0	"C	Domai	n	
		Volt12	3.285	v	Temp04	28.0	°C	name:		
		Volt13	3.284	v				port:		
		Volt14	3.284	v					Set	
		номе	RUNTIME	CONFIG	номе	RUNTIME	CONFIG	HOME	RUNTIME	CONFIG

8. How to switch the communication protocol.

Open the PC software and follow the path:

INFO—Parallel Group Display—CAN Type/RS485 Type—Read—Choose the protocol—Set

FO PARA	CONFIG	STORA	GE			
inglePack Mu	ltiPacks Re	cord Par	allel group disp	lay Parall	el packet da	ita storage
0 1 2						Address 0 ~ CAN type Fylon ~ Read Set
	-					Now address: 1 485 type Pylon ~ Read Set
ntervals 4000	÷ P	oll time 10	00 🗘 Read	Count: 13		Real-time data read successfully
Pack Volt 53	2.97 ¥ Pac	ck Curr	0.00 A SOC	100 %	SOH 100 %	CHG MOS On 🛑 DISG MOS On 🌑 Charge 🜑 Disch
Remain_Ca 28	0.00 Ah Fi	ull_Cap	280.00 Ah	Cycles	0 Times	Battery system
Caption	Value	Unit				Volt 52.97 V Total_Cap 840 Ah SOC 99 %
Max Vol	3, 337	10		10		
Min Vol	3, 292	11			100 %	Curr U A Remain_Cap 839 Ah
Vol Diff	0.045	V	-			
			-	-		Max Cell V 3353 nV Max Batt T 18.0 'C Max Amb T 19.0
Vol 01	3, 301	V	[a:			
Vol 02	3, 334	V	Caption	Value	Unit	W- 0.31 V 3291 - V W- PL P 15.0 17 W- L1 P 19.0
Vol 03	3, 298	V	Amb_Temp	19.0	C	Min_Cell_v Ocor mv Min_Satt_1 10.0 C Min_Amb_1 10.0
Vol 04	3.334	v	MOS_Temp	15.0	C	
7ol 05	3, 335	V				Charge 🛑 Discharge 🛑 Volt high alarn 🛑 Volt low alarn
Vol 06	3, 300	V	Max_Temp	16.0	01	
Vol 07	3, 336	V	Min_Temp	15.0	03	Alarn
Vol 08	3, 298	V	Temp_Diff	1.0	C	
Vol 09	3, 294	V				
Vol 10	3, 337	v	Tenp 01	16.0	C	
Vol 11	3, 292	V	Temp 02	16.0	C	
Vol 12	3, 336	v	Temp 03	15.0	C	rrotect
Vol 13	3, 294	V	Temp 04	16.0	C	
	3, 293	V				
Vol 14	3, 296	v				
Vol 14 Vol 15	0.000					Fault
Vol 14 Vol 15 Vol 16	3.295	¥ V				
Vol 14 Vol 15 Vol 16	3.295	v				
Vol 14 Vol 15 Vol 16	3.295	v				

### Communication compatible list:

Inverter Brand		Communication method	Protocol Name	Protocol Remarks	Communication Potter rate	Interface Definition	Ì
古瑞瓦特-SPF Growatt-SPF	Growatt	485	Growatt BMS-RS485-protocal-1xSxxP_ESSL_V2.01 Growatt BMS- <mark>RS485-protocal-V2.0</mark>	MODBUS Standard protocols	9600	1B、2A	
古瑞瓦特-SPF Growatt-SPF	SPF Growatt CAN Growatt BMS CAN		Growatt BMS CAN-Bus-protocol-low-voltage-V1.05	Active Upload	500K	4H、5L	I
古瑞瓦特-SPH Growatt- SPF		CAN	Growatt BMS communication protocol of growatt low voltage- V1.01	Active Upload	500K	4H <mark>、</mark> 5L	I
尚科-Scolar SACOLAR C		CAN	Growatt BMS CAN-Bus-protocol-low-voltage-V1.05	Active Upload	500K	4H、5L	
固德威-Goodwe GOODWE		CAN	Goodwe-CAN-V1.7-220228-SolarinverterFamily-EN	Active Upload	500K	4H、5L	
日月元-Voltronic Power 185		485	Voltronic Power-185-V1.03-200325	MODBUS protocols	9600	3B, 5A	I
首航-SOFAR	前-SOFAR SOFAR CAN SOFAR-CAN-VIC		SOFAR-CAN-V1.00-211117-Rev6	Active Upload	500K	1H、2L	Ī
表瑞德-SOROTEC SOPOCEC CAN		CAN	CAN Protocol 1.0(SOROTEC Protocol)	MODBUS Standard protocols	500K		Ī
索瑞德 SOROTEC	SOROTEC SOROTEC 485 Protocal		Protocal between Sorotec Inverter and Lithium Battery (RS485)	Active Upload	500K		I
德业 Deye	Deye 德業	CAN	Deye LV-CAN communication protocol	Active Upload	500K	4H、5L	
德业 Deye	Deye 德業	485	485 Modbus Protocol(4)-deye	MODBUS protocols	9600	1B、2A	Ī
锦浪-Solis	solis	CAN	Solis-CAN-V1.0-191228-lowVoltage	Active Upload	500K	4H、5L	
鹏城-Luxpower		CAN	Luxpowertek Battery CAN Protocol -2021	Active Upload	500K	4H、3L	I
派能-Pylontech	PYLONTECH	485	Pylon-485-V3.5-161216-low voltage protocol	1363	115200	N	
派能-Pylontech	PYLONTECH	485	Pylon-485-V3.5-161216-low voltage protocol	1363	9600	-	Ī
派能-Pylontech	PYLONTECH	CAN	Pylon-CAN-V1 2- 180408 -lowVoltage	Active Upload	500K	SEN	
SOL-ARK	Sol-Ark	CAN	Sol-Ark CAN Bus Protocol V1.2 pdf4-25-22	Active Upload	500K		I
硕日-Sme		485	shuori BMS Modbus Protocol for RS485 V1 3(2020-11-24)		9600	7A、8B	
美世乐 Must	MUST美世乐	CAN	PV1800F-CAN communication Protocol1.04.04	Active Upload	100K	6H、5L	Ī
艾思玛 SMA	SMA	CAN	SMA-CAN-V1.0.0-210630-FSS -ConnectingBat-TI-en-20W	Active Upload	500K	4H、5L	I
迈格瑞能 MEGAREVO	MEGAREVO	CAN	Shenzhen MEGAREVO Hybrid Inverter-5K BMS Protocol V1 01	Active Upload	500K	BHS	
MPP Solar	Augen Scier Obudi de Par env	485	BMS 485 communication protocol 20200325(2)	MODBUS	9600		
拓宝-TBB		CAN	CAN BUS Protocol of TBB Lithium Battery BMS Platform V 1.1	Active Upload	500K	1.1.1.1.1.1	ĺ
盛能杰-Senergy		CAN	SenergyINV&BMS_CAN_Protocols	Active Upload	- aF	EN	Ī
维克托-Victron	victron energy	CAN	Victron-CAN-V1.00- 211135	Active Upload	500K	7H、8L	J