

Configuration Manual

TBB Storage Inverter

CK-II 2.0M/3.0M/2.0S/3.0S

CK4.0M/5.0M/4.0S – 8.0S

Version: 1.0

1. General Compatible Content

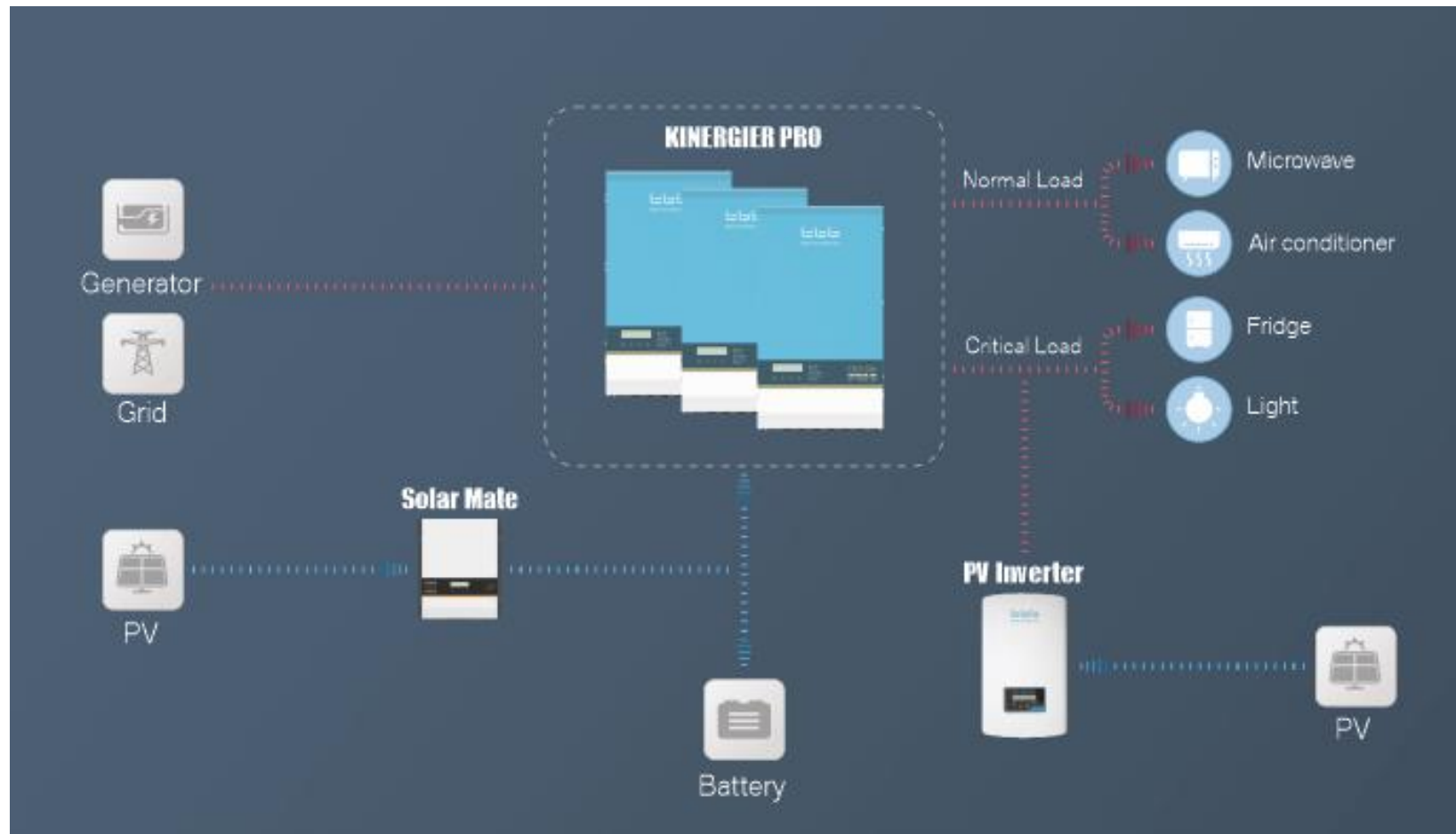
48V Series					
Battery Module	Battery Firmware	Inverter Model	Comm. Type	PINOUT	Firmware Ver.
US2000/US3000/ US2000C/US300 0C/Force-L	US series: V2.4 Force-L: V1.3	CK8.0S	CANBUS	4H,5L	DSP: V1.23A LCD: V1.21A
		CK6.0S	CANBUS	4H,5L	DSP: V1.23A LCD: V1.21A
		CK5.0S	CANBUS	4H,5L	DSP: V1.23A LCD: V1.21A
		CK4.0S	CANBUS	4H,5L	DSP: V1.23A LCD: V1.21A
		CK-II 3.0S	CANBUS	4H,5L	DSP: V1.03C LCD: V1.01B
		CK-II 2.0S	CANBUS	4H,5L	DSP: V1.03C LCD: V1.01B
For US2000C/US3000C please use WI0SCAN30RJ1 comm. Cable or BW0US3000BAL0007 cable kits.					

24V Series					
Battery Module	Battery Firmware	Inverter Model	Comm. Type	PINOUT	Firmware Ver.
UP2500	V1.0B	CK5.0M	CANBUS	4H,5L	DSP: V1.23A LCD: V1.21A
		CK4.0M	CANBUS	4H,5L	DSP: V1.23A LCD: V1.21A
		CK-II 3.0M	CANBUS	4H,5L	DSP: V1.03C LCD: V1.01B
		CK-II 2.0M	CANBUS	4H,5L	DSP: V1.03C LCD: V1.01B

- Check battery type and corresponding inverter type before making the configuration.
- Check battery firmware and corresponding inverter firmware whether align with above table or newer, otherwise communication cannot establish.
- If need any technical support on the battery firmware, please contact service@pylontech.com.cn.

*Any defective to battery module, include deep discharge case, due to a wrong/missing follow of the indications within this configuration manual, will be disclaim from battery warranty scope.

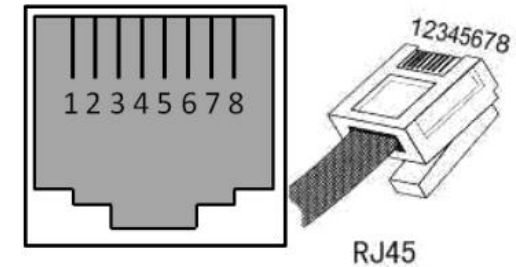
2. Application Scenario



3 . Communication Cable PINOUT

Battery CAN Pin	No.
--	1
--	2
--	3
CANH	4
CANL	5
--	6
--	7
--	8

No.	Inverter CAN Pin
1	--
2	--
3	--
4	CANH
5	CANL
6	--
7	--
8	--



- Make sure it's using a direct PIN communication cable follow above table, to connect between battery and inverter.
- For US2000C/US3000C please use WI0SCAN30RJ1 comm. Cable or BW0US3000BAL0007 cable kits.

4. Connection setup

- Read through the Product Manual of the battery and inverter to process the installation.
- Double check the power cable wiring connection and firmware version of battery and inverter.
- Double check the pinout of the communication cable on both battery and inverter side.
- Connect from battery CAN port to inverter BMS communication port (**ComSynIn**) .
- Make sure choosing '**6-TBB SUPER-L**' (**Para Battery, Basic Set**), on inverter LCD.
- After setup the battery type, properly set up '**SOC_Low_Warning / SOC_Low_Protect / SOC_CHG_Enough**' in **Advanced Set**, follow the LCD indication.

*If you are lacking of Product Manual of battery, please check on: <http://www.pylontech.com.cn/service/download> or your technical supporter domestically.

5. Parameter setting

Please follow below parameters to setup the inverter on the LCD panel.

a. Enter → Parameter Set → Password (1000) → Para_Battery: in Basic Set select **'6-TBB SUPER-L'**;

Then in Advanced Set set up:

b. SOC_Low_Warning = On-grid \geq 15%; Off-grid \geq 20%;

c. SOC_Low_Protect = On-grid \geq 10%; Off-grid \geq 15%;

d. SOC_CHG_Enough \geq 30%

Kinergier Pro offers unlimited possibility for users to program the inverter and system for different configurations, systems and applications. The configuration can be done by combination of four switches on front panel or through TBB Link software supplied by TBB Power.

Following chapters explain how to configure the parameters through combination of switches.

➤ Scrolling to the "Parameter Set" screen and press "Enter" to confirm.

- This menu was protected by password. The default pass word is “1000” and it can be changed by client.
- Choose the screen of parameter you want to set.
- Combined four buttons, you can achieve all configurations of this chapter. Please find following the function of each button during configuration.
 1. Press <UP> and <DOWN> button to choose specific number you want to program.
 2. Press <Enter> button to activate the entering.
 3. Press <UP> and <Down> button to choose digit you want to put.
 4. Press <Enter> button to confirm this digit.
 5. After entering into all four digit, please press <Back> button and <Enter> button to confirm.

5.5.2.3 Para_Battery

With this menu, you can configure comprehensive parameters related with battery and battery charging. There are three sub menu which is **Basic Set**, **Advanced Set** and **EQ Control and Setting** which are only applicable for flooded and traction battery.

Basic Set

	Item	Setting range	Description
Basic Setting	Battery_Type	Five different type of lead acid battery and one lithium battery, as well as a customerized battery type.	Set the following Battery Type chart. Default: 0-GEL/ OPzV
	Battery_AH	50~5000AH	Set the battery capacity (not applicable with TBB SUPER-L lithium battery) Default: 200AH

Battery type Description

No	Battery Type	Absorption Charging Voltage	Float Charging Voltage	Charge rate	Max allowed Charge rate	EQ charging voltage
		Default	Default	Default		
0	GEL/OpzV	14.1V	13.7V	0.15C	0.25C	N/A
1	AGM	14.4V	13.5V	0.15C	0.25C	N/A
2	Lead-Carbon	14.1V	13.5V	0.2C	0.5C	N/A
3	Flooded	14.7V	13.5V	0.15C	0.25C	Enable (15.5V)
4	Traction	15.2V	13.5V	0.15C	0.25C	Enable (16.2V)
5	Customerize	14.2V (12/24V Sys)	13.5V (12/24V Sys)	0.2C	0.5C	N/A
		13.5V (48V Sys)	13.3V (48V Sys)			
6	TBB SUPER-L	BMS taking control of charging parameter (CAN)				
	Only applicable for 48Vdc					

Reference of Advanced Set

Advanced Set

The following parameter is being referred to 12Vdc battery. In case you are using 2Vdc battery to compose the battery bank, please multiply your intended voltage by 6 to enter into each value.

	Item	Setting range	Description
Advanced set	SYS_CHG_MaxCur	5~900A	Battery bank allowed maximum charging current. Note: there is default current according to the battery type and size you chose, and it can be adjusted as well.
	U_Absorp_CHG	This value is affected when changing the battery type.	The absorption charging voltage (voltage mentioned here is refer to 12Vdc battery) Note: This value is affected when changing the battery type.
	U_Float_CHG	This value is affected when changing the battery type.	The float charging voltage (voltage mentioned here is refer to 12Vdc battery) Note: This value is affected when changing the battery type.
	LV_PRO_Recover	11.0~14.0V	Undervoltage protection recovery value. (voltage mentioned here is refer to 12Vdc battery) Default: 13.0V
	BAT_LV_WARN	10.0~13.0V	Undervoltage warning for single battery. (voltage mentioned here is refer to 12Vdc battery) Default: 11V
	BAT_LV_Protect	9.5~12.0V	Undervoltage protection for single battery. (voltage mentioned here is refer to 12Vdc battery) Default: 10.5V

U_DisCHG_End	9V~11V max	<p>Ultimate undervoltage protection for single-cell battery. (voltage mentioned here is refer to 12Vdc battery)</p> <p>Note: the status consumption power will be 0mA once trigger on this protection. With Solar Mate MPPT, inverter can be trigger on automatically upon sun resume next day.</p> <p>Default: 9.9V</p>
Min_Bulk_Time	10~600min	<p>Minimum Bulk time.</p> <p>Default: 30min</p>
Max_Absorp_Time	1~120h	<p>Maximum absorption time.</p> <p>Note: the allowed max time varies</p>

		according to battery type selected. Default: 8h
Auto_CHG_Cycle	8~960h	Absorption cycle time. Default: 240h
CHG_T_Compensate	0-Disable 1-Enable	Enable the charging temperature compensation. Default: 1-Enable
CHG_TEMP_Coef	0~-30mV/°C	Charging temperature compensation coefficient. (voltage mentioned here is refer to 12Vdc battery) Default: -18mV/°C
BAT_OT_WARN_Gate	25~65°C	Battery over temperature warn gate Default: 55°C
SOC_Low_Warning	5~80%	Can be set in TBB SUPER-L mode, the inverter warning when the SOC under the setting value Default: 15%
SOC_Low_Protect	3~40%	Can be set in TBB SUPER-L mode, the inverter warning when the SOC under the setting value Default: 5%
SOC_CHG_Enough	30~99%	Can be set in TBB SUPER-L mode, the inverter will stop charging once reaching this value and will switch to inverter mode. Default: 80%
Mask_OV_Warn	0-Disable 1-Enable	Can be set in TBB SUPER-L mode, the warning will be masked when BMS over voltage. Default: 1-Enable
Lower_CHG_Volt	0~2.0V	Can be set in TBB SUPER-L mode, the charging voltage can be reduced. Default: 0V

Any further quesiton, please feel free to contact: service@pylontech.com.cn