Series CF(M)-3K-12

Inverter+Charger SuperCombi

Australian Version

Users' GUIDE (Ver. 4.2.1)

Power Science Australia Group Pty Ltd

Jan. 2020

Table of Content

1. Safety Instructions

1.1 General Safety Warnings

- In order to avoid the malfunction and danger, please do not expose the machine to the environment such as rain, clouds, mist, dust, high temperature and so on or place it in the bilge. (For more details, please refer to the 4-2 section of the second chapter "installment advice")
- Stay away from the fire and welding places. Use good electric conductivity wire with appropriate length and wire diameter. (For more details, please refer to the wire available instructions of 3.3) Devices would be damaged and its performance would be reduced if the wire does not meet the requirement.)
- Product contains internal components, which may bring electric arc and sparks. In order to prevent fire or explosion, it is not allowed to install the machine in the narrow space with battery or inflammable material. (including machines powered by gasoline in any space, fuel tanks or pipe fitting and other components)

1.2 Attentions to the Batteries

- When the chemicals inside of the batteries touch the skin or clothing, please wash immediately with plenty of soapy water.
- No smoking or sparks or ignition engine near the batteries.
- When using the metal tools, please be care and do not drop it on the batteries. The dropped metal tools may cause sparks or short circuit and the explosion of battery.
- When installing the batteries, please remove metal objects such as rings, bracelets, necklaces, watches, and so on. The current generated by the short circuit of the battery is very large, and it is possible to weld and burn the metal, which can cause severe burns.

2. Product Introduction

2.1 Basic Introduction

"The series CF(M)-3K-12 Charging-Inverter-MPPT SuperCombi" (hereinafter referred to as "SuperCombi") is independently developed by Power Science Technology Co., LTD.. The power

electronic transformation device with high power density, super large charging current is integrated with charging, inverted and photovoltaic MPPT controller, and is achieved by the patented bidirectional convert technology:

- As a charger, the machine can output an up to 200Ampere charging current;
- As an inverter, the pure sine wave is output, which is very fit for the sensitive and motor loads;
- As an MPPT controller, the module is so small that it can be installed inside the machine. All the resources, including the cable, the screen, the cooling system can be shared;

The *Inverter Enhanced Functions* of the SuperCombi can dramatically improve the adaptable ability to large loads; The *ChargePro* Function of the SuperCombi can make full use of the AC power from the utility and protect the battery; Hierarchical management and strong and perfect set up function can be suitable for all kinds of users' habits, and provide great convenience for users.

The SuperCombi is applicable to vehicle, marines and Energy Storage System etc.

2.2 Model Definition

The model format of the series products is defined as follow:

CF M -3K-12-200A - D -100 -A C N C G P R T B Y -001

* a b # ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ (11) (12) (13)

Table 1: ModelDefinition

No.	Spec.	Values
*	Solar Panel MPPT Module	M: With MPPT module Empty: Without MPPT module
a	Invert Power	2K: 2000W; 3K: 3000W
b	Max. Charge Current	200: 200A/150: 150A/100: 100A 135: 135A/100: 100A/60: 60A 0: 0A(Only Inverter, not Combi)
#	AC Outputs	D: Double Outputs. Find more in *6.1 Dual AC Outputs.* Empty: Single Output
②	Actual Max. Charge Current	If *a*=2K Then Empty If *a*=3K Then 100: 100 Amperes 150: 150 Amperes Empty: 200 Amperes
③	Country Code	A: Australia
④	Invert AC Voltage	A: 220Vac / B: 230Vac / C: 240Vac
⑤	Charge function	Empty: With *Charge* Function N: Without *Charge* Function
⑥	ChargePro Function	C: With *ChargePro* Function. Find more in *6.2 ChargePro Function (Optional)*

		Empty: Without *ChargePro* Function
⑦	Invert Enhanced Function	G: With *On-Grid Supply* Function. Find more in *6.4 On-Grid Supply.* S: With *Power Support* Function. Find more in *6.5 Power Support.* Empty: Without *any Invert Enhanced* Function
⑧	Work in Parallel	P: The SuperCombis can work in Parallel Empty: Without *Work in Parallel* Function
⑨	Wire Compensation	R: With *Wire Compensation* Function. Find more in *6.6 Wire Compensation to the Battery Voltage (Optional)* Empty: Without *Wire Compensation* Function
⑩	Temperature Compensation	T: With *Temperature Compensation* Function. Find more in *Temperature Compensation to the Battery Voltage*. Empty: Without *Temperature Compensation* Function
(11)	To Charge the *Start Battery*	B: With the function of Charging the Start Battery. Find more in *6.7 Charge the Start Battery (Optional)* Empty: Without the function of Charging the Start Battery
(12)	Color	Empty: Green Y: Orange
(13)	Customer Number	3 Digitals: Customized for the special customer Empty: Standard Product

2.3 Application Areas

- Electric Tools: round saws, electric drills, grinder, buffers, weeding machine, air compressors.
- Office equipment: computer, printer, display, fax machine, scanner
- Household products: Fixed frequency, inverter air conditioner, hair dryer, vacuum cleaner, fan, fluorescent lamp, incandescent lamp, electric razor, electric sewing machine.
- Kitchen Appliance: Coffee maker, mixer, ice maker, toaster.
- Industrial equipment： Metal halide lamp, high pressure sodium lamp.
- Home entertainment electronic goods: TV, recorder, video games, audio, musical instruments, satellite equipment.

2.4 Dimension and Mounting Holes Chart

The maximum size of the *SuperCombi* is 386*262*83.1, and there are six symmetrical mounting holes on both sides with a diameter of 5.5mm. The specific dimensions charts are shown as in Figure 1.

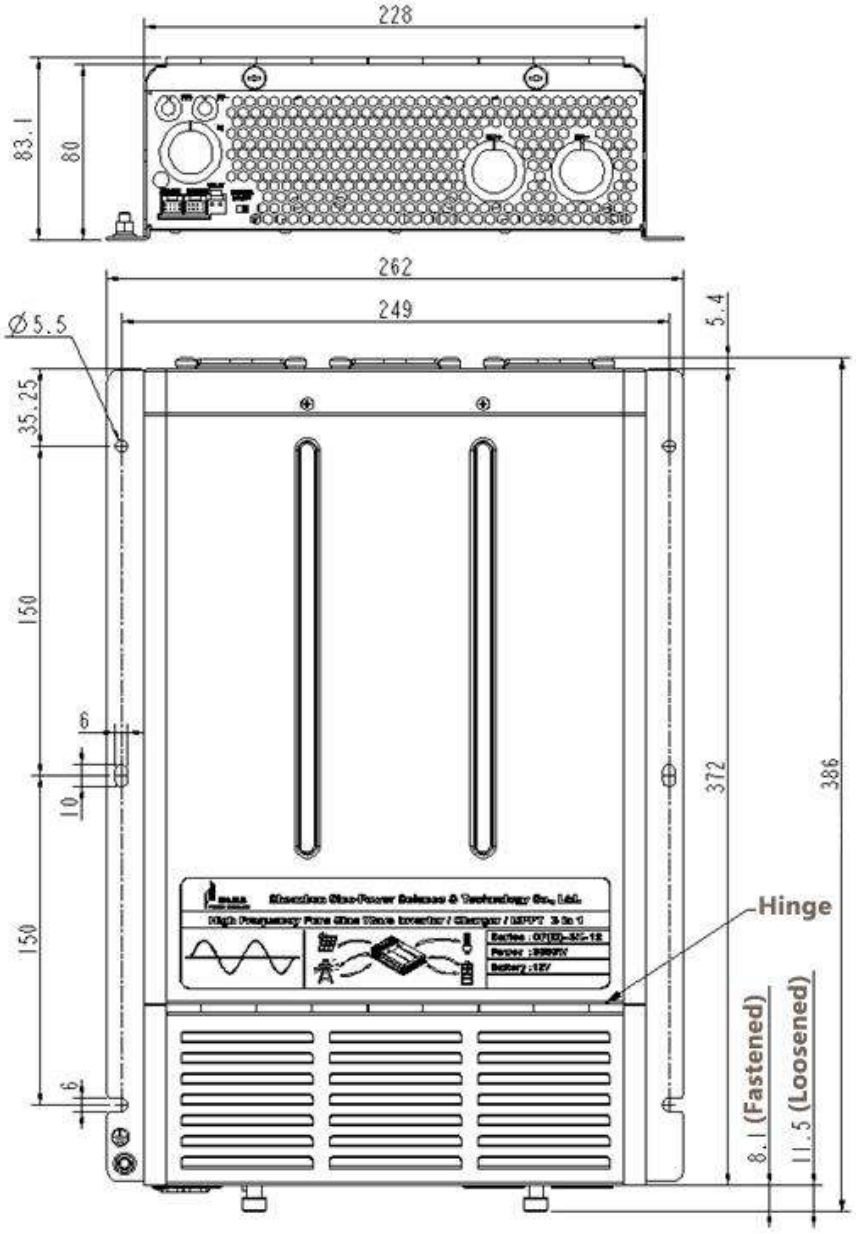

Fig.1. Dimension and Mounting Holes Chart

2.5 Introduction to the Interfaces of Device

User's installation chart shown as Figure 2:

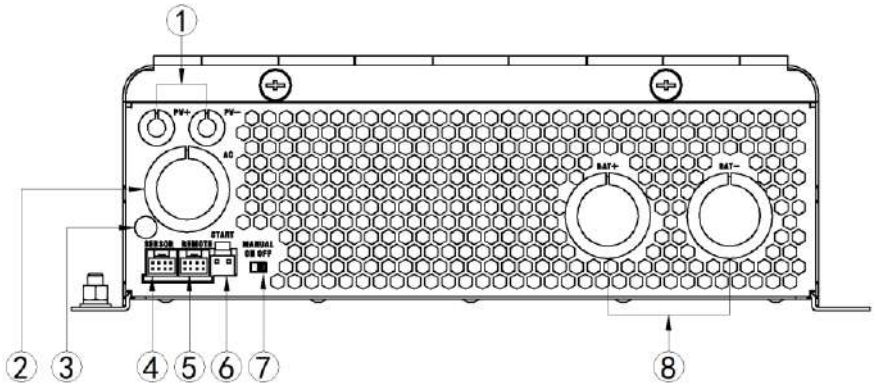

Figure 2 *SuperCombi* installation surface Chart

Each part is defined as shown in table 2:

No.	Function definition
①	PV Input
②	AC IN/OUT
③	Indicator
④	Black, Sampling of Battery (Optional)
⑤	White, Remote Control
⑥	Charge Port (2A) for Start Battery (Optional)
⑦	Emergency Swith
⑧	Battery

Table 2 All-in-One machine mounting surface definition table

2.6 Introduction of the Installation Cabin and the Interface definition

The diagram of the installation cabin is shown as Figure 3.

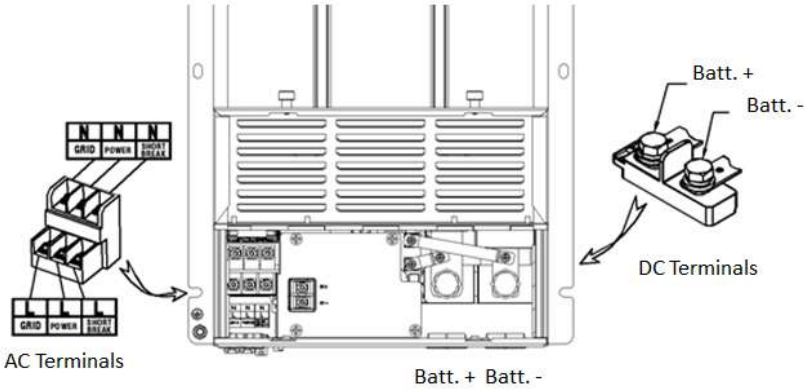

Figure 3: Diagram of the Installation Cabin

2.7 Display/Settings Panel Introduction

Display / settings panel are shown in Figure 4 and 5:

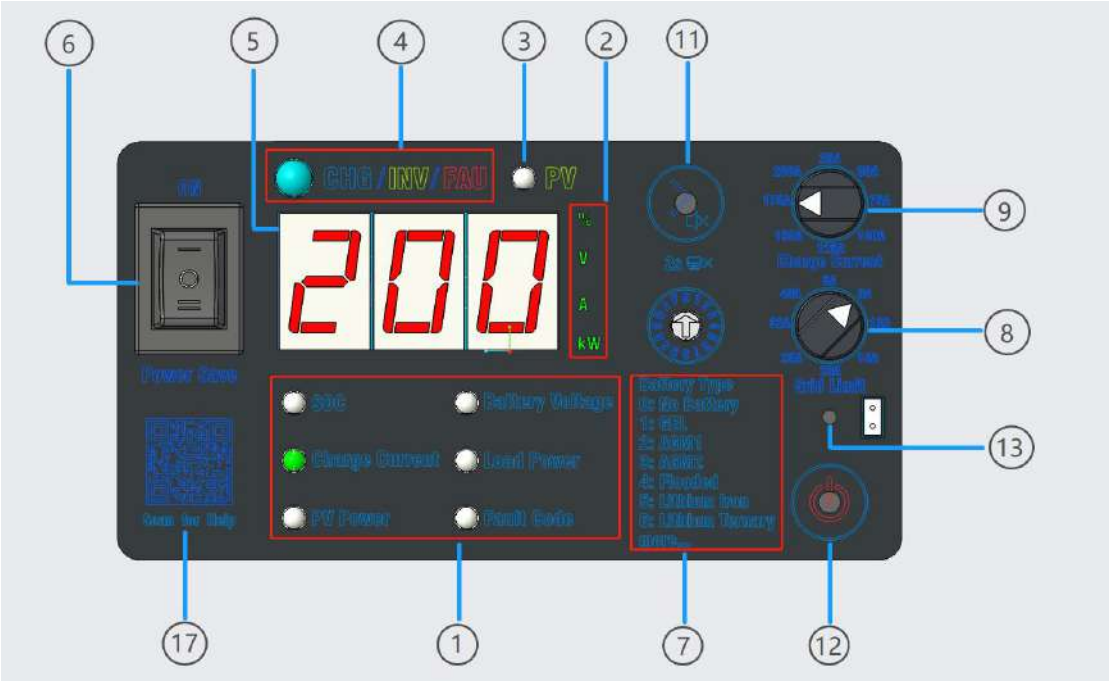

Figure 4: Panel Diagram (Front)

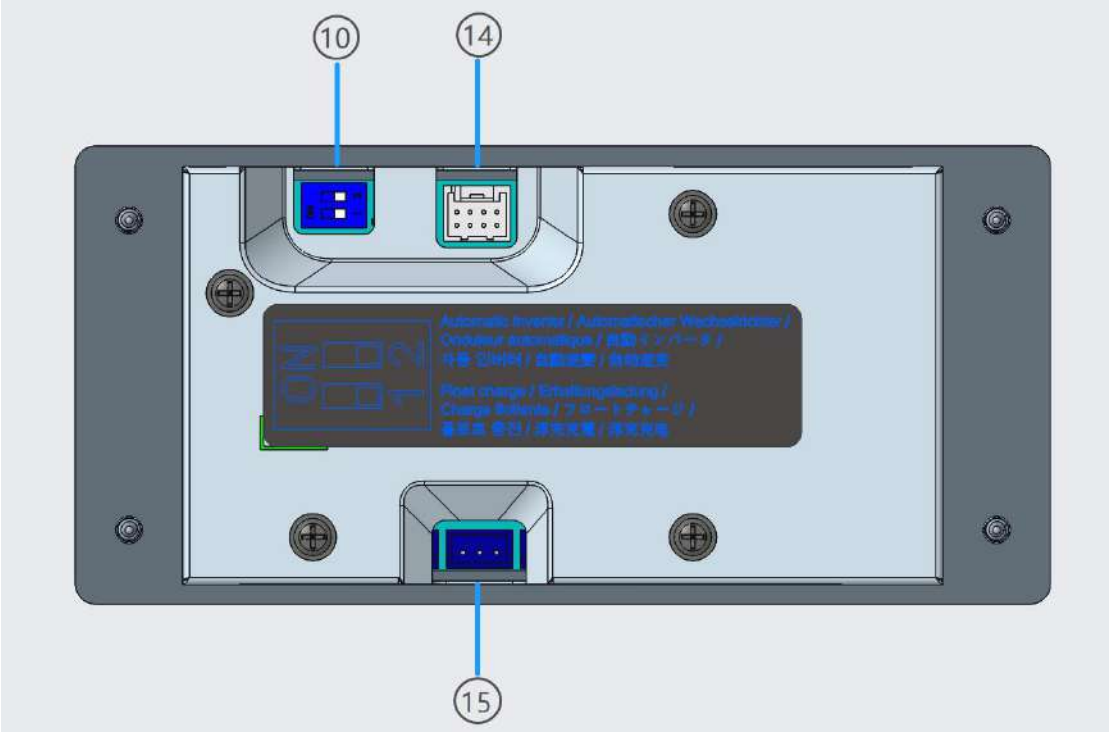

Figure 4: Panel Diagram (Back)

In which:

(1) Menu	(10) Dial Switch for Auto Invert/Floating Charge

(2) Parameter Unit	(11) PageDown/ Buzzer sound off
(3) PV Indicator	(12) Power On/Off
(4) Working Indicator	(13) Buzzer
(5) Parameter Value	(14) Remote
(6) Rocker Switch (On/Off/Energy Save)	(15) Reserved
(7) Battery Type Selector	(16) Reserved
(8) AC (Grid) Current Selector	(17) QR Code (For Help)
(9) Charge Current Selector	

Table 3 Panel definition table

2.8 Basic Features

- Pure Sine Wave Output
- High Efficiency: The efficiency can be up to 93%
- X-small size
- Large Charge Current: The Max. Current can be as high as 200A
- Surge power can be three times of continuous output
- Wide DC Input range: Full Power Output @ battery voltage 10~15V dc, De-rated Power output @ battery voltage 9~10Vdc
- The built-in 32A AC Relay can achieve larger bypass power.
- Energy Saving Mode: Ultra-low Loss, standby power consumption can be lower than 10W.

3. Installation instructions

Note: Before installing, make sure that the Emergency Manual Switch (Figure 8) of the SuperCombi is OFF. Otherwise, you will face the risk of battery damage! Excpet the "emergency mode", this switch must be kept OFF at other times.

Figure 5: Emergency Manual Switch

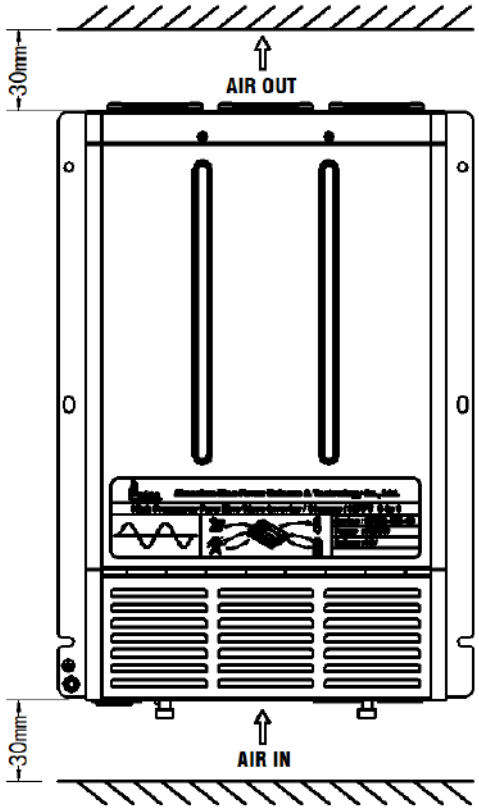

Fig. 6 Super-Combi Installation Space Diagram

3.1 Installation environment

Installation site of All-in-One machine must comply with following rules and requirements:

(1) Dry: It is not allowed to place the product in the place with water and humid.
(2) Temperature: The suitable working temperature is between -20℃~+50℃.
(3) Safety: Do not place it near by the fire, inflammable, fuel, generator equipment.
(4) Ventilation: There shall be at least 30cm ventilation space without obstruction in the head and rear, so that the heat inside the product can be released. Shown as the Figure 6.
(5) Dust Proof: Do not install it in the place surround by dust, grind, or cutting. The dust will be sucked into the machine, and cause the malfunction of the machine.
(6) Anti-Corrosion Gas: Avoid exposing to the environment with corrosion gas for a long time.

3.2 System connection diagram

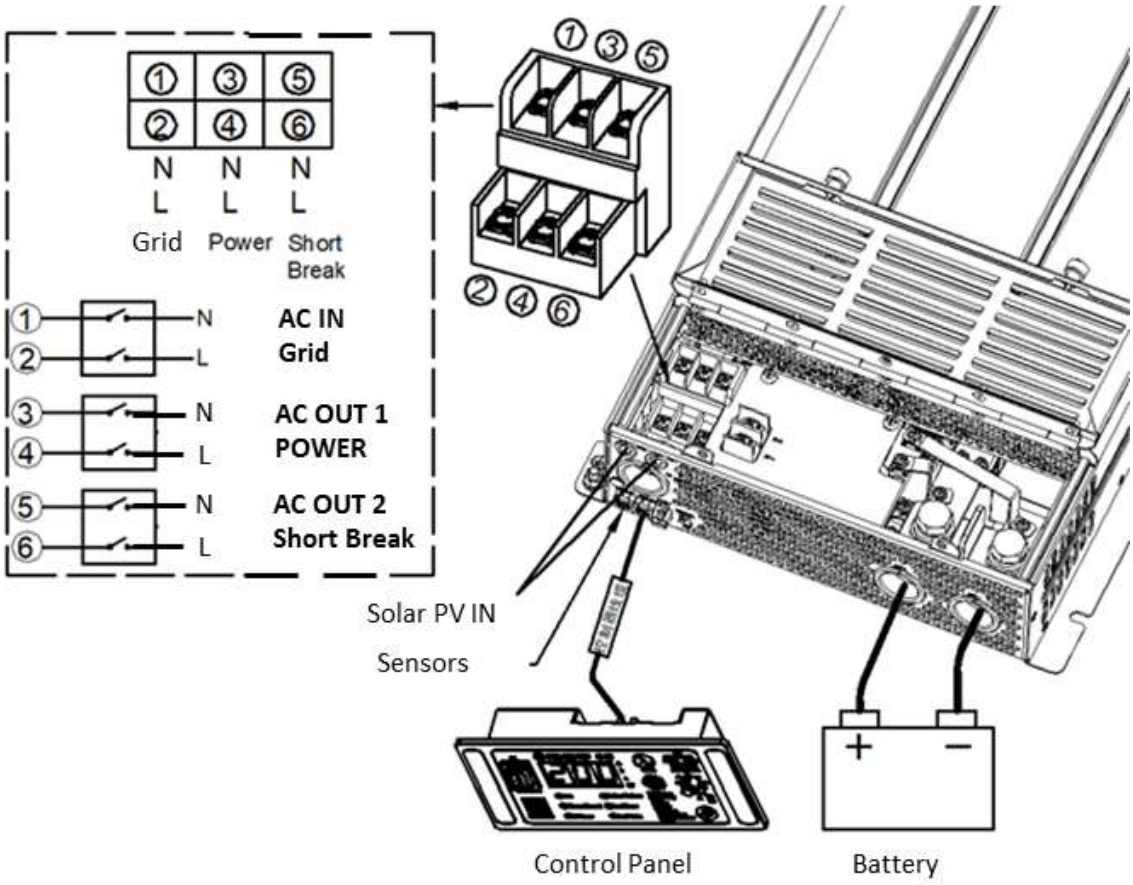

Fig. 7 System Connection Diagram

Note: Find more details about the Dual AC Outputs.in 6.1

3.3 Cabling

No.	Cabling Position	Recommend Cable Specification
1	AC IN	Copper Cable with the cross sectional area larger than 6mm^2
2	AC OUT1: Power	Copper Cable with the cross sectional area larger than 6mm^2
3	AC OUT2: Short Break	Copper Cable with the cross sectional area larger than 6mm^2
4	Battery	Copper Cable with the cross sectional area larger than 75mm^2 *（note）*
5	PV	Copper Cable with the cross sectional area larger than 4mm^2

Table 4 Cabling Instructions Table

Note：The length of the cable from the battery terminals to the All-in-One machine should be as short as possible. Less than 1 meter is preferred.

Warning: The consequences caused by the improper installation are not borne by our company!

- Before connecting the battery, please double check the input polarity to the battery is connected correctly. Wrong polarity connection will damage the appliances;
- For safety, the grid should be cut off before or during the installation;
- To avoid short circuit of the battery during the installation, the battery should be protected and inaccessible to other appliances;
- The torque of the cable should be strictly limited according to the requirements of Table 18. Excessive torque will causes the damage of the bolt and even cause other potential dangers such as short circuit or fire etc.;
- It's very normal that there might be spark during the first connection with the battery;

3.4 Match the Battery and the Charge Current

For charging safety, the "maximum charging current" of the SuperCombi should match the charge current recommended by the battery factory to avoid the risk of damage to the battery due to the mismatch of charging current

Note that if any accidental loss caused by the mismatch of charging current, battery damage or various losses caused by fire and explosion, is not within our responsibility!

4. Basic Settings

Note: Before setting, make sure that the Rocker Switch should be in the middle gear as shown in the following figure. Otherwise, it will damage the battery.

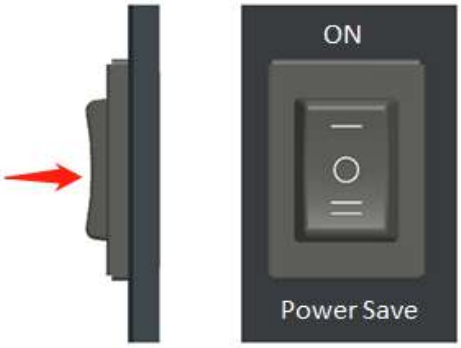

Figure 8: Turn off the Rocker Switch

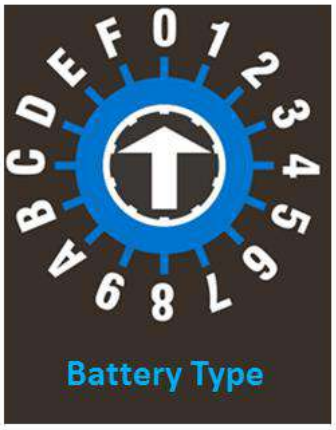

Figure 9: Battery Type Selector

4.1 Battery Type

According to the type of battery installed, the customer can adjust the corresponding battery position by turning the "Battery Type" Selector (see Figure 9) according to the battery information in the following table.

No.	Battery Type	Dead Battery Max Voltage		CV Voltage	Floating Voltage	LBCO
1	GEL	9V	/	14.1V	13.7V	10.2V
2	AGM 1	9V	/	13.8V	13.4V	10.2V
3	AGM 2	9V	/	14.3V	13.7V	10.2V
4	Flooded	9V	/	14.8V	13.3V	10.2V
5	Lithium Iron	9V	10V	14.5V	13.5V	10V
6	Lithium Ternary	7.2V	9V	12.6V	11.7V	9V

Table 5:Battery Type

4.2 Charge Current

In order to meet the needs of customers in different application scenarios, the all-in-one can adjust the battery charging current through the "charging current" selector (Figure 10). The larger the charging current, the faster the charging speed is, and the smaller the charging current, the slower the charging speed is.

The absolute value of "charging current" is calculated based on the "maximum charging current" of the SuperCombi and then the percentage set by the selector. For example, the "maximum charging current" of the SuperCombi is 200A and the Selector is set to 12.5%, the calculation result is: 200 * 12.5% = 25A, if the "maximum charging current" of the SuperCombi is 100A, and the selector is set to 12.5%, the calculation result is: 100 * 12.5% = 12.5A

Note:

(i) If customer has plenty of time, it is recommended to reduce the "charging current" to increase the battery life.

(ii) If you charge the battery in a limited time, you can increase the "charging current" to charge the battery full in a short time, but the current must be strictly in accordance with the safe charging current provided by the battery manufacturer

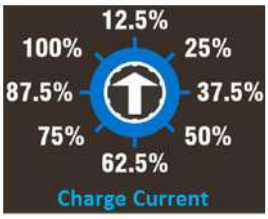

Figure 10: Charge Current Selector

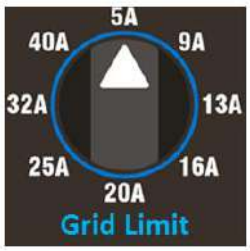

Figure 11: Grid Limit

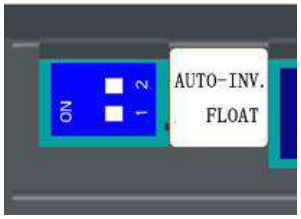

Figure 12: Auto Invert/Floating Charge

4.3 Grid Limit

In order to adapt to customers' different power usage occasions, customers can use the "mains maximum current" knob (see Figure 11) to set the max. current which the SuperCombi can get from the grid. According to the value, the SuperCombi can make full use of the power from the grid and also can prevent the grid be overloaded. This parameter is mainly used for "load priority" and optional "separate power supply" and "grid supply" functions.

Note: The value of the *Grid Current Limit* should not be larger than the value of the Mains Circuit Breaker, otherwise the breaker would be protected.

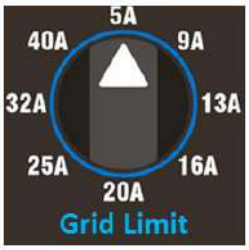

Figure 11: Grid Limit

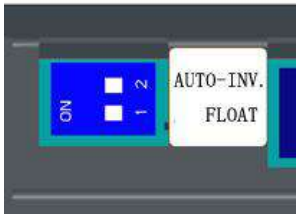

Figure 12: Auto Invert/Floating Charge

4.4 Auto Invert

The user can enable or disable *Auto Invert* function by different setting of the dial switch (See Figure 12).

1. When enable the *Auto Invert* function, the SuperCombi will output AC power automatically when the SuperCombi disconnect with the Grid;
2. When disable the *Auto Invert* function, the SuperCombi will not output AC power when the SuperCombi disconnect with the Grid and enter to Standby state;

4.5 Floating Charge

When battery fully charged, the user can enable or disable the *Floating Charge* function by different setting of the dial switch (See Figure 12).

1. When enable the *Floating Charge* function, the SuperCombi will still charge the battery at very small current to compensate the self-discharging current;
2. When disable the *Auto Invert* function, the SuperCombi will stop working till the battery voltage is only 1 volt higher than the cut off Voltage.

5. User's Guide

5.1 Invert

When disconnect with the Grid, the SuperCombi will have two working statuses according to different *Auto Invert* settings:

1. When enable *Auto Invert* function, the SuperCombi will output AC power to Short Break socket unless the Rocker Switch stays on the middle. The indicator will turn green;
2. When disable *Auto Invert* function, the SuperCombi will enter into Standby mode. The indicator will turn Red.

Note: Please find more information about the *Energy Save* mode in 5.2

5.2 Energy Save Mode

To reduce the loss when the SuperCombi work without load, the user can choose *Energy Save Mode* by putting the Rocker Switch to the second gear. Under the *Energy Save Mode*, if the AC load of the system is less than 30W in 10 minutes, the SuperCombi will enter into Standby status to reduce the loss. After 5 minutes, the SuperCombi will enter into Sleep status to further reduce the loss.

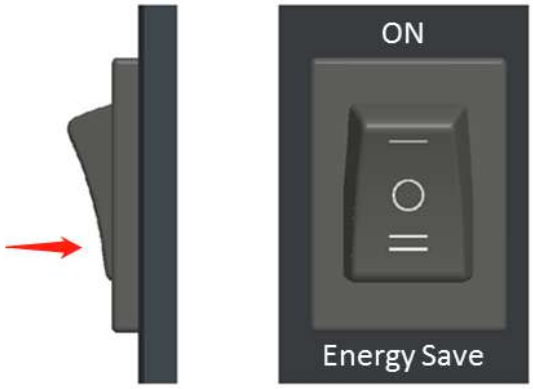

Figure 13: Energy Save Mode

5.3 AC Charge

When connect with the Grid, the SuperCombi will work as a charger unless the Rocker Switch is off. The grid will provide AC power to the AC output1/2 and also charge the battery. The indicator will turn blue at this time.

When charging, if the customer presses the power button for 3 seconds, the SuperCombi will stop charging. The SuperCombi will continue to provide AC power to AC Output1/2. The indicator will turn flashing blue.

Again, if the customer presses power button for 3 seconds, the SuperCombi will enter into charge mode.

If the *Charge Pro* function added, more features can be expected. For details about *Charge Pro* function, to see 6.5.

Note: When charging, there is no difference between *Power ON* and *Energy Save*.

5.4 PV Charge (Optional)

The solar panel will charge the battery automatically unless the SuperCombi is power off. Under

PV charging mode, the PV indicator will turn flashing green. There are 3 working statuses as follow:

(1) Under inverting condition: The solar and the battery will provide DC power together for inverting, but the solar power will have the priority to provide up to 500W energy for inverting.
(2) Under AC Charging condition: The solar and the Grid will provide energy for charging. As inverting, the solar has the priority to provide up to 500W energy for inverting.
(3) Under the Standby & Sleep mode: The solar will charge the battery directly.

5.5 Auto Sleep

To further reduce the loss, the panel will enter into sleep mode automatically when the standby mode last for 5 minutes. All the light of the digital cube and LED will turn off. The panel can be woken up by pressing any button.

5.6 Turn off the Panel Manually

To avoid disturbing the customers because of the light from the panel, the panel can be turned off manually.
Pressing the *PgDown* button for 2 seconds, the customer can turn off all the light.

Figure 14: Turn ON/OFF the Panel manually

To turn on the panel, pressing the *PgDown* button as shown in Figure 14.

5.7 Emergency Mode

In order to minimize the impact on the customer when a failure occurs, the SuperCombi can run normally when the control panel encounters an unexpected accident, such as: when the system

suddenly encounters the control panel during normal operation When the all-in-one cannot be operated normally due to damage or loss of connection, at this time, you can unplug the control panel cable at the end of the all-in-one and turn on the emergency manual switch. The all-in-one will restart operation and its original 6 parameter status will remain unchanged (Energy saving mode, charging current, mains maximum current, battery type, floating charge, automatic inverter). After the all-in-one runs normally, please contact the manufacturer to repair the control panel or cable as soon as possible.

6. Functions

6.1 Dual AC Outputs

The SuperCombi provides dual AC Outputs, *Power* and *Short Break*. Different AC loads can be connected to different ports. The heavy AC loads can be connected with the *Power* port, and the light AC Loads can be connected with the *Short Break* port.

Power Port: This port is directly connected with the AC input. When SuperCombi is connected with the grid, the *Power Port* can provide the AC power to the load from the grid. When SuperCombi is disconnected with the grid, the *Power Port* can't provide the AC power to the load.

Short Break Port: This port is connected with the AC input via the build-in relay. When SuperCombi is connected with the grid, the relay will be on. This port is connected with both the grid and the inverter output. The *Short Break Port* can provide the AC power to the load from the grid and the inverter. When SuperCombi is disconnected with the grid, the Short Break Port can still provide the AC power to the load from the inverter.

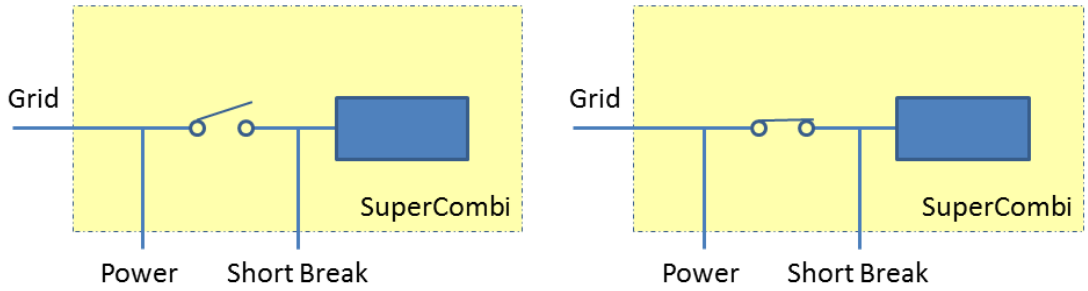

Figure 15: Dual AC Outputs

6.2 ChargePro Function(Optional)

The SuperCombi can provide DC Power to both the load and the battery. The DC output current of the SuperCombi can be adjusted according to different load while keeping a constant charging

current. Under this function, the 200Amperes of the SuperCombi is very useful.

6.3 Load Priority

When the utility is limited, the AC loads have the priority to get the power and then the rest of power will be converted to DC to the battery or the DC load.

6.4 On-Grid Supply

When connected with the utility, the SuperCombi can work together with the utility to provide another 3kW power to the AC load.

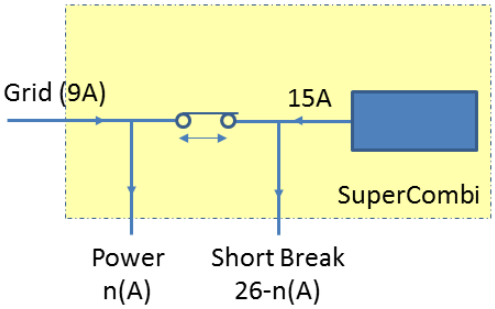

Figure 16: On-Grid Supply Diagram

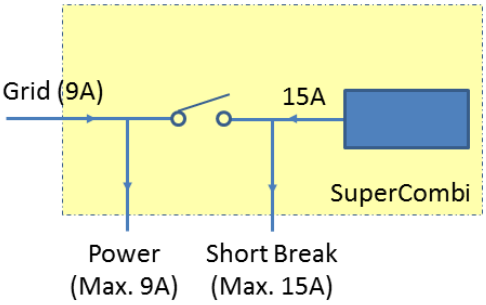

Figure 17: Power Support Diagram

6.5 Power Support

When connected with the utility, the SuperCombi can work together with the utility to provide another 3kW power to the AC load.

6.6 Wire Compensation to the Battery Voltage (Optional)

Line loss will have significant impact under the low voltage and high current circumstance. To charge or discharge the battery more accurately, the voltage on the SuperCombi DC ports should be modified..

By using the *Line Loss Compensation* function, the SuperCombi will get more accurate Voltage of the battery.

6.7 Charge the Start Battery (Optional)

The SuperCombi also provides a 2Ampere port to charge the start battery.

7. Special Functions

All the functions described here should be activated by the LCD panels or touch panels.

7.1 Battery Type Customization

Other than the 6 types of the batteries, the users can also customize the battery type by setting the LBCO, HBCO, Floating Voltage etc.
Find more detailed information from the *User's Guide of the LCD or Touch Panel*.

7.2 Temperature Compensation to the Battery Voltage

The lead acid battery has different capacity under different temperature. We provide an accessory of the cable to collect the temperature to get more accurate battery capacity.

7.3 Dead Battery Charging

The battery voltage will drop down under normal level when kept unused. This battery is often called *Dead Battery*. The *Dead Battery* can't be charged by the common charger. The SuperCombi can charge the *Dead Battery* by setting the battery type as *Dead Battery*.

Note: Only the specialist can judge the battery type as this kind of *Dead Battery*. Any loss caused by misusing this function is not borne by our company!

8 Electrical Parameters

Parameter		Index
Inverter Mode		
DC Input	Nominal Voltage	12VDC
	Input Voltage Range	9~15VDC
	Input Current (Max.)	350A
	Stand-By Current	0.5A
	Input Over Voltage Protection	≥15.5VDC
	Input Under Voltage Protection	≤8.9VDC
AC Output	Output Voltage	220VAC ±3%, 230VAC ±3% 240VAC ±3%
	Continuous Output Power	3000W ±3%
	Surge Power	300% of Continuous Output Power
	Output Waveform	＜5% Normal

	Frequency	50/60 Hz±0.3%（可设置）
	Efficiency (Peak)	≥91%
	Short-Circuit Protection	Yes
	INV. AC Output	14A Max
Charger Mode		
AC Input	Nominal Voltage & Range	176-264VAC
	Frequency & Range	50/60Hz ±3Hz
	AC Nominal Current	14A
	Efficiency (Full Load)	≥91%
	AC Input Current (Max.)	≤30A Max
	Power Factor	≥0.99 (Full Load)
DC Output	Current Range	0-200A
	Output Voltage Range	0~15VDC
	Battery Temp. Compensation	Optional
PV Charger(Optional)		
PV Charger	Input Voltage Max.	50VDC
	Input Current (Max.)	40A
	MPPT Efficiency	＞99%
Protection		
Battery Side	Battery Protection	Over Voltage / Under Voltage
	Battery Temp. Protection	Battery Temperature Sensor (Optional)
AC Side	AC Output Protection	Short Circuit / Overload
	AC Input Protection	Over Voltage / Under Voltage
Others	Temperature Protection, Fan Error, Internal Error Protection	
Environment		
Working Temp. Range	Full Load	-20℃~50℃
	Power de-rating (51℃~60℃)	60W per ℃
	Storage	-40℃~70℃
Working Humidity Range		10~95% RH Non-Condensing
Safety & EMC		
Safety & EMC	Safety Standards	UL60950;IEC 62477-1; IEC 60335-2-29
	EMC Standards	CISPR 25,EN55014; EN61000-3-2,3-3,4-2,3,4,5,6,8,11
	E-mark	ECE R10.V5;ISO7637-2
Control & Dimension		
Control & Dimension	Remote Control	CAN/RS485
	Cooling	Temperature & load controlled cooling fan
	Dimension(W*H*D)	262*83.1*386mm
	Packing Weight	7kg
Installation Parameter		

Torque	AC Terminal	1.2 N.m
	DC Terminal	26 N.m
	PV Terminal	1.2 N.m

Table 6: Parameters of the SuperCombi

9. Trouble Shooting

Code	Warning/Fault	Beep	Reason	Solution
01	Battery Low SOC	Yes	The battery is over discharged	1. Start the Charge mode 2. To check whether the cable of battery side is reasonable 3. Fasten the battery wiring
02	Battery Low Voltage	Yes	1. Disconnect or poor connect with battery 2. Battery is out of power 3. Battery cable is too long or too thin	1. Charging battery 2. To check whether the cable of battery side is reasonable 3. Fasten the battery wiring
03	Battery over voltage	Yes	Mismatched battery	Check if the battery is in the specification range.
04	Battery Short	Yes	"Dead" battery or short circuit of batter side	1. Confirm that the battery is "dead" and use the "dead" battery charging function. 2. Check if there is a short circuit on the wiring of battery side
21	Grid Under Voltage		The Grid voltage is too low.	1. Check if the wire of electric supply is connected correct. 2. Confirm if the electric supply is normal.
22	Grid Over Voltage		The Grid voltage is too high.	
23	Grid Frequency Over Range		The grid frequency is abnormal.	
24	AC Over Load (Off-Grid)	Yes	The load exceeds range in specification	Reduce the load of inverter
25	Invert Short	Yes	Too large loading stroke current or short circuit of inverter	1. Check the loading and try to replace it. 2. Check if there is a short circuit on the inverter side.
26	AC Over Load (Off-Grid)	Yes		

31	Invert Over Voltage		Abnormal inverter function	Contact the distributors to return to the factory for inspection
32	Over Temperature		Internal temperature of All-in-One machine is beyond specification range	1. Improve the Ventilation 2. Decrease the output power and ambient temperature 3. Check that the air vents of the All-in-One machines are not blocked.
33	Fan Fault		Fan blocked or invalid	1. Check whether the fan of the All-in-One machine is stuck by foreign matter. 2 Contact the distributor to return to the factory and replace the fan
34	Internal Fault		Internal abnormal of All-in-One machine	Contact the distributors to return to the factory for inspection
41	PV Under Voltage		PV Panel Invalid or no sunshine	Check the PV panel and confirm that the PV panel is within the sunshine range
42	PV Over Voltage		PV panel malfunction	Check the PV panel
43	MPPT Over Temperature		MPPT temperature is too high	To see "All-in-One machine" over temperature scheme
44	MPPT Internal Fault		MPPT internal error	Contact the distributors to return to the factory for inspection
51	Pump Over Load	Yes		

Table 7: Troubleshooting

10. Warranty

PowerScience provide 2-year warranty for this product from the date purchased. Shenzhen Sino-Power Science Technology Co., LTD. will take full responsibility to the product.

Please be care that if the product is damaged because of improper installation, immersion, foreign matter invasion or any malfunction caused by users, Power Science Technology Co., LTD. will not take the responsibility for it.

Power Science Technology Co., Ltd.

Headquarter
Add: The 2nd Floor, Building 1,
Hengchangrong Baoan,
Shenzhen P.R. China 518108
Tel: +86 755 8652 9986
Email: info@powerscience.net

Australia Branch
Add: 23/137-145 Rooks Road,
Nunawading VIC 3131
Tel: +61 416 766 688
Email: au@powerscience.net

European Representative Office
Add: An der Feuerwache 9,
41836 Hückelhoven, Germany
Tel.+49-2433-94018-0
Fax.+49-2433-94018-99
Email: eu@powerscience.net