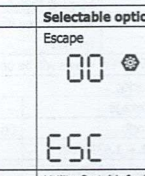
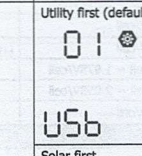
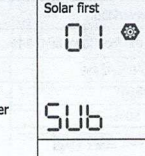
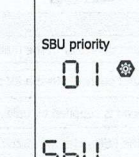
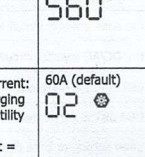
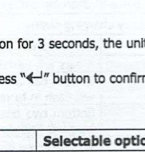
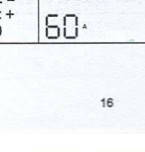
LCD Setting

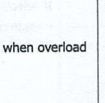
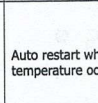
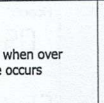
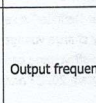
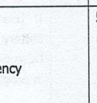
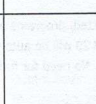
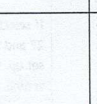
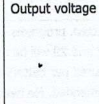
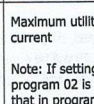
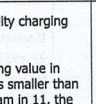
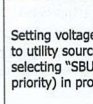
General Setting

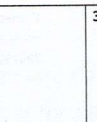
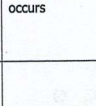
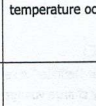
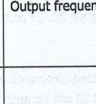
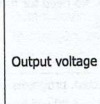
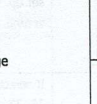
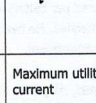
After pressing and holding "↵" button for 3 seconds, the unit will enter the Setup Mode. Press "▲" or "▼" button to select setting programs. Press "↵" button to confirm you selection or "⏻/↻" button to exit.

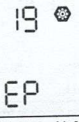
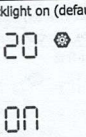
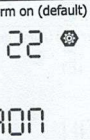
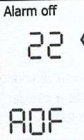
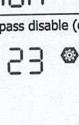
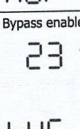
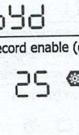
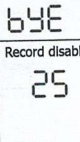
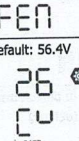
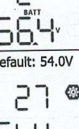
Setting Programs:

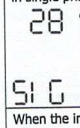
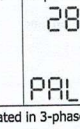
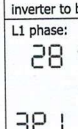
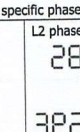
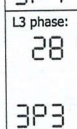
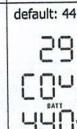
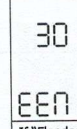
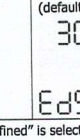
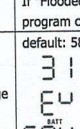
Program	Description	Selectable option	
00	Exit setting mode	Escape 	
01	Output source priority: To configure load power source priority	Utility first (default) 	Utility will provide power to the loads as first priority. Solar and battery energy will provide power to the loads only when utility power is not available.
		Solar first 	Solar energy provides power to the loads as first priority. If solar energy is not sufficient to power all connected loads, Utility energy will supply power to the loads at the same time.
		SBU priority 	Solar energy provides power to the loads as first priority. If solar energy is not sufficient to power all connected loads, battery energy will supply power to the loads at the same time. Utility provides power to the loads only when battery voltage drops to either low-level warning voltage or the setting point in program 12.
02	Maximum charging current: To configure total charging current for solar and utility chargers. (Max. charging current = utility charging current + solar charging current)	60A (default) 	Setting range is from 10A to 150A. Increment of each click is 10A.

03	AC input voltage range	Appliances (default) 	If selected, acceptable AC input voltage range will be within 90-280VAC.
		UPS	If selected, acceptable AC input voltage range will be within 170-280VAC.
05	Battery type	AGM (default)	Flooded
		User-Defined	If "User-Defined" is selected, battery charge voltage and low DC cut-off voltage can be set up in program 26, 27 and 29.
		Pylontech battery	If selected, programs of 02, 26, 27 and 29 will be automatically set up. No need for further setting.
		WECO battery	If selected, programs of 02, 12, 26, 27 and 29 will be auto-configured per battery supplier recommended. No need for further adjustment.
		Soltaro battery 	If selected, programs of 02, 26, 27 and 29 will be automatically set up. No need for further setting.
		LIb-protocol compatible battery	Select " LIb" if using Lithium battery compatible to Lib protocol. If selected, programs of 02, 26, 27 and 29 will be automatically set up. No need for further setting.

		3rd party Lithium battery 	If selected, programs of 02, 26, 27 and 29 will be automatically set up. No need for further setting. Please contact the battery supplier for installation procedure.
06	Auto restart when overload occurs	Restart disable (default) 	Restart enable 
07	Auto restart when over temperature occurs	Restart disable (default) 	Restart enable 
09	Output frequency	50Hz (default) 	60Hz 
10	Output voltage	220V 	230V (default) 
		240V 	
11	Maximum utility charging current Note: If setting value in program 02 is smaller than that in program in 11, the inverter will apply charging current from program 02 for utility charger.	2A 	30A (default) 
		Setting range is from 2A, then 10A to 150A. Increment of each click is 10A.	
12	Setting voltage point back to utility source when selecting "SBU" (SBU priority) in program 01.	46V (default) 	Setting range is from 44V to 51V. Increment of each click is 1V.

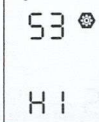
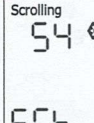
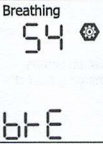
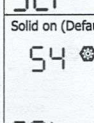
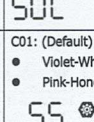
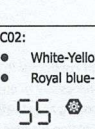
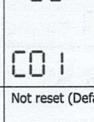
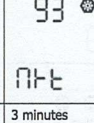
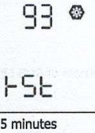
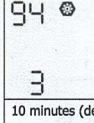
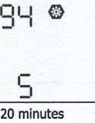
13	Setting voltage point back to battery mode when selecting "SBU" (SBU priority) in program 01.	Battery fully charged 	54V (default) 
		Setting range is from 48V to 61V. Increment of each click is 1V.	
16	Charger source priority: To configure charger source priority	If this inverter/charger is working in Line, Standby or Fault mode, charger source can be programmed as below:	
		Solar first 	Solar energy will charge battery as first priority. Utility will charge battery only when solar energy is not available.
		Solar and Utility (default) 	Solar energy and utility will charge battery at the same time.
		Only Solar 	Solar energy will be the only charger source no matter utility is available or not.
		If this inverter/charger is working in Battery mode, only solar energy can charge battery. Solar energy will charge battery if it's available and sufficient.	
18	Alarm control	Alarm on (default) 	Alarm off 
19	Auto return to default display screen	Return to default display screen (default) 	If selected, no matter how users switch display screen, it will automatically return to default display screen (Input voltage /output voltage) after no button is pressed for 1 minute.

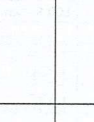
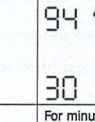
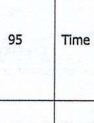
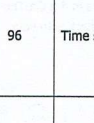
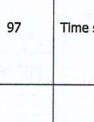
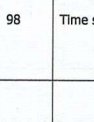
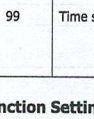
		Stay at latest screen 	If selected, the display screen will stay at latest screen user finally switches.
20	Backlight control	Backlight on (default) 	Backlight off 
22	Beeps while primary source is interrupted	Alarm on (default) 	Alarm off 
23	Overload bypass: When enabled, the unit will transfer to line mode if overload occurs in battery mode.	Bypass disable (default) 	Bypass enable 
25	Record Fault code	Record enable (default) 	Record disable 
26	Bulk charging voltage (C.V voltage)	default: 56.4V 	If self-defined is selected in program 5, this program can be set up. Setting range is from 48.0V to 61.0V. Increment of each click is 0.1V.
27	Floating charging voltage	default: 54.0V 	If self-defined is selected in program 5, this program can be set up. Setting range is from 48.0V to 61.0V. Increment of each click is 0.1V.

28	AC output mode *This setting is only available when the inverter is in standby mode (Switch off).	Single: This inverter is used in single phase application. 	Parallel: This inverter is operated in parallel system. 
		When the inverter is operated in 3-phase application, set up inverter to be operated in specific phase.	
		L1 phase: 	L2 phase: 
		L3 phase: 	
29	Low DC cut-off voltage: ● If battery power is only power source available, inverter will shut down. ● If PV energy and battery power are available, inverter will charge battery without AC output. ● If PV energy, battery power and utility are all available, inverter will transfer to line mode and provide output power to loads.	default: 44.0V 	If self-defined is selected in program 5, this program can be set up. Setting range is from 42.0V to 48.0V. Increment of each click is 0.1V. Low DC cut-off voltage will be fixed to setting value no matter what percentage of load is connected.
30	Battery equalization	Battery equalization 	Battery equalization disable (default) 
		If "Flooded" or "User-Defined" is selected in program 05, this program can be set up.	
31	Battery equalization voltage	default: 58.4V 	Setting range is from 48.0V to 61.0V. Increment of each click is 0.1V.

33	Battery equalized time	60min (default) 33 ❁ 60	Setting range is from 5min to 900min. Increment of each click is 5min.
34	Battery equalized timeout	120min (default) 34 ❁ 120	Setting range is from 5min to 900 min. Increment of each click is 5 min.
35	Equalization interval	30days (default) 35 ❁ 30d	Setting range is from 0 to 90 days. Increment of each click is 1 day
36	Equalization activated immediately	Enable 36 ❁ AEn	Disable (default) 36 ❁ AdS
		If equalization function is enabled in program 30, this program can be set up. If "Enable" is selected in this program, it's to activate battery equalization immediately and LCD main page will show "E9". If "Disable" is selected, it will cancel equalization function until next activated equalization time arrives based on program 35 setting. At this time, "E9" will not be shown in LCD main page.	
37	Reset all stored data for PV generated power and output load energy	Not reset(Default) 37 ❁ nrt	Reset 37 ❁ rSt
38	Solar energy feeds to the grid (It's requested to enter password)	Solar feeds to the grid disable(default) 38 ❁ Grd	Solar feeds to the grid enable 38 ❁ GrE

41	Maximum battery discharging current	Disable (Default) 41 ❁ ddS	If selected, battery discharge protection is disabled.
		30A 41 ❁ 30	The setting range is from 30 A to 200 A. Increment of each click is 10A. If discharging current is higher than setting value, battery will stop discharging. At this time, If the utility is available, the inverter will operate in bypass mode. If no utility is available, the inverter will shut down after 5-minute operation in battery mode.
		150A 41 ❁ 150	
51	On/Off control for RGB LED *It's necessary to enable this setting to activate RGB LED lighting function.	Enabled (default) 51 ❁ LEn	Disable 51 ❁ LdS
52	Brightness of RGB LED	Low 52 ❁ Lo	Normal (default) 52 ❁ nor
		High 52 ❁ Hi	
53	Lighting speed of RGB LED	Low 53 ❁ Lo	Normal (default) 53 ❁ nor

		High 	
54	RGB LED effects	Scrolling 	Breathing 
		Solid on (Default) 	
55	Color combination of RGB LED to show energy source and battery charge/discharge status: • Grid-PV-Battery • Battery charge/discharge status	C01: (Default) • Violet-White-Sky blue • Pink-Honey 	C02: • White-Yellow-Green • Royal blue-Lime yellow 
93	Erase all data log	Not reset (Default) 	Reset 
94	Data log recorded interval *The maximum data log number is 1440. If it's over 1440, it will re-write the first log.	3 minutes 	5 minutes 
		10 minutes (default) 	20 minutes 

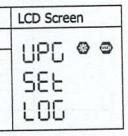
		30 minutes 	60 minutes 
95	Time setting – Minute	For minute setting, the range is from 0 to 59. 	
96	Time setting – Hour	For hour setting, the range is from 0 to 23. 	
97	Time setting– Day	For day setting, the range is from 1 to 31. 	
98	Time setting– Month	For month setting, the range is from 1 to 12. 	
99	Time setting – Year	For year setting, the range is from 17 to 99. 	

Function Setting

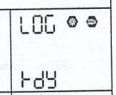
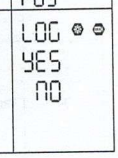
There are three function keys on the display panel to implement special functions such as USB OTG, Timer setting for output source priority and timer setting for charger source priority.

1. USB Function Setting

Insert an OTG USB disk into the USB port ( ). Press and hold "⚙/↻" button for 3 seconds to enter USB Setup Mode. These functions including inverter firmware upgrade, data log export and internal parameters re-write from the USB disk.

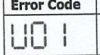
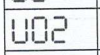
Procedure	LCD Screen
Step 1: Press and hold "⏻/↻" button for 3 seconds to enter USB function setting mode.	
Step 2: Press "⏻/↻", "⇨⏻" or "⇦⏻" button to enter the selectable setting programs (detail descriptions in Step 3)..	

Step 3: Please select setting program by following the procedure.

Program#	Operation Procedure	LCD Screen
⏻/↻: Upgrade firmware	This function is to upgrade inverter firmware. If firmware upgrade is needed, please check with your dealer or installer for detail instructions.	
⇨⏻: Re-write internal parameters	This function is to over-write all parameter settings (TEXT file) with settings in the On-The-Go USB disk from a previous setup or to duplicate inverter settings. Please check with your dealer or installer for detail instructions.	
⇦⏻: Export data log	By pressing "⇦⏻" button to export data log from the inverter to USB disk. If the selected function is ready, LCD will display "rdy". Press "⏻/↻" button to confirm the selection again.	
	• Press "⇨⏻" button to select "Yes", LED 1 will flash once every second during the process. It will only display LOG and all LEDs will be on after this action is complete. Then, press "⏻/↻" button to return to main screen. • Or press "⇦⏻" button to select "No" to return to main screen.	

If no button is pressed for 1 minute, it will automatically return to main screen.

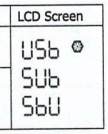
Error message for USB On-the-Go functions:

Error Code	Messages
	No USB disk is detected.
	USB disk is protected from copy.
	Document inside the USB disk with wrong format.

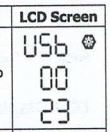
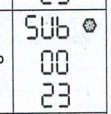
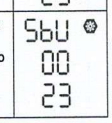
If any error occurs, error code will only show 3 seconds. After three seconds, it will automatically return to display screen.

2. Timer Setting for Output Source Priority

This timer setting is to set up the output source priority per day.

Procedure	LCD Screen
Step 1: Press and hold "⇨⏻" button for 3 seconds to enter Timer Setup Mode for output source priority.	
Step 2: Press "⏻/↻", "⇨⏻" or "⇦⏻" button to enter the selectable programs (detail descriptions in Step 3).	

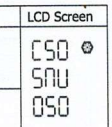
Step 3: Please select setting program by following each procedure.

Program#	Operation Procedure	LCD Screen
⏻/↻	Press "⏻/↻" button to set up Utility First Timer. Press "⇨⏻" button to select staring time. Press "▲" or "▼" button to adjust values and press "↵" to confirm. Press "⇦⏻" button to select end time. Press "▲" or "▼" button to adjust values, press "↵" button to confirm. The setting values are from 00 to 23, with 1-hour increment.	
⇨⏻	Press "⇨⏻" button to set up Solar First Timer. Press "⇨⏻" button to select staring time. Press "▲" or "▼" button to adjust values and press "↵" to confirm. Press "⇦⏻" button to select end time. Press "▲" or "▼" button to adjust values, press "↵" button to confirm. The setting values are from 00 to 23, with 1-hour increment.	
⇦⏻	Press "⇦⏻" button to set up SBU Priority Timer. Press "⇨⏻" button to select staring time. Press "▲" or "▼" button to adjust values and press "↵" to confirm. Press "⇦⏻" button to select end time. Press "▲" or "▼" button to adjust values, press "↵" button to confirm. The setting values are from 00 to 23, with 1-hour increment.	

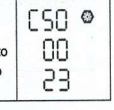
Press "⏻/↻" button to exit the Setup Mode.

3. Timer Setting for the Charger Source Priority

This timer setting is to set up the charger source priority per day.

Procedure	LCD Screen
Step 1: Press and hold "⇦⏻" button for 3 seconds to enter Timer Setup Mode for charging source priority.	
Step 2: Press "⏻/↻", "⇨⏻" or "⇦⏻" button to enter the selectable programs (detail descriptions in Step 3).	

Step 3: Please select setting program by following each procedure.

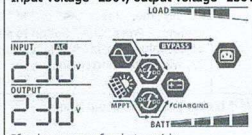
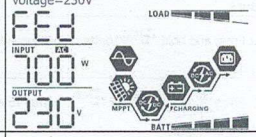
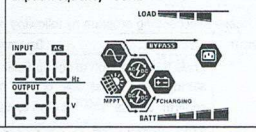
Program#	Operation Procedure	LCD Screen
⏻/↻	Press "⏻/↻" button to set up Solar First Timer. Press "⇨⏻" button to select staring time. Press "▲" or "▼" button to adjust values and press "↵" to confirm. Press "⇦⏻" button to select end time. Press "▲" or "▼" button to adjust values, press "↵" button to confirm. The setting values are from 00 to 23, with 1-hour increment.	

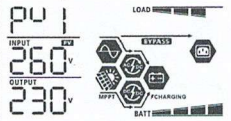
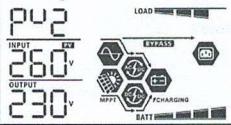
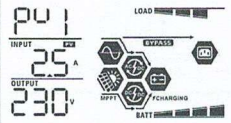
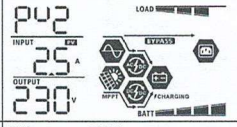
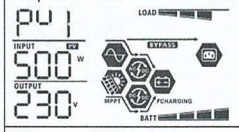
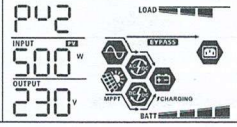
	Press "" button to set up Solar & Utility Timer. Press "" button to select staring time. Press "▲" or "▼" button to adjust values and press "↵" to confirm. Press "" button to select end time. Press "▲" or "▼" button to adjust values, press "↵" button to confirm. The setting values are from 00 to 23, with 1-hour increment.	
	Press "" button to set up Solar Only Timer. Press "" button to select staring time. Press "▲" or "▼" button to adjust values and press "↵" to confirm. Press "" button to select end time. Press "▲" or "▼" button to adjust values, press "↵" button to confirm. The setting values are from 00 to 23, with 1-hour increment.	

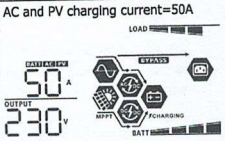
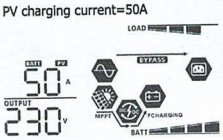
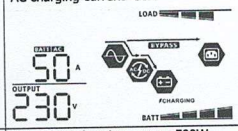
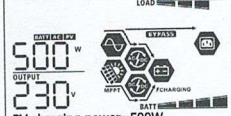
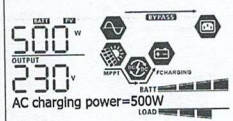
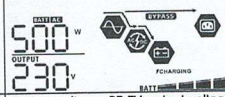
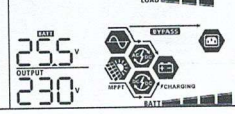
Press "/" button to exit the Setup Mode.

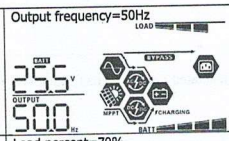
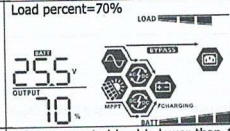
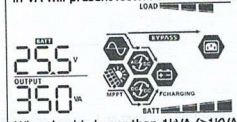
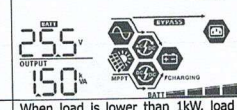
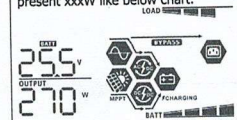
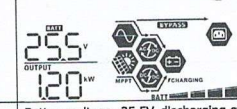
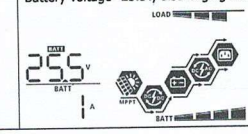
LCD Display

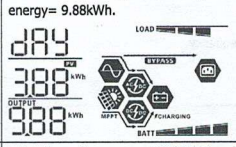
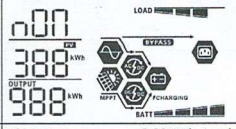
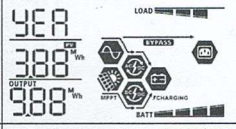
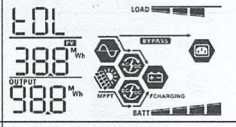
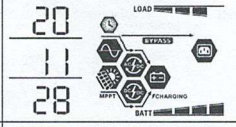
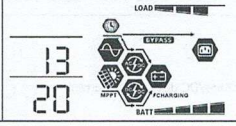
The LCD display information will be switched in turn by pressing the "UP" or "DOWN" button. The selectable information is switched as the following table in order.

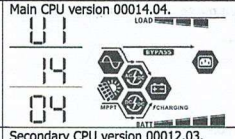
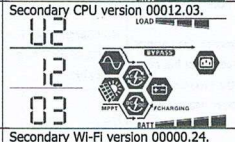
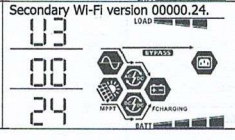
Selectable information	LCD display
Input voltage(or Solar energy feed to grid power)/Output voltage (Default Display Screen)	If solar energy not feeds to grid: Input Voltage=230V, output voltage=230V  If solar energy feeds to grid: Solar energy feed to grid power=700W, output voltage=230V 
Input frequency	Input frequency=50Hz 

PV voltage	PV1 voltage=260V  PV2 voltage=260V 
PV current	PV1 current = 2.5A  PV2 current = 2.5A 
PV power	PV1 power = 500W  PV2 power = 500W 

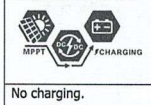
Charging current	AC and PV charging current=50A  PV charging current=50A  AC charging current=50A 
Charging power	AC and PV charging power=500W  PV charging power=500W  AC charging power=500W 
Battery voltage and output voltage	Battery voltage=25.5V, output voltage=230V 

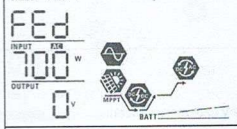
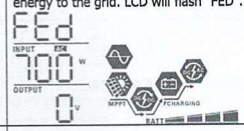
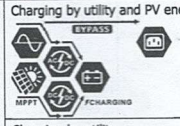
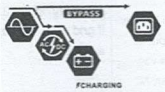
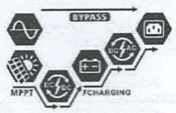
Output frequency	Output frequency=50Hz 
Load percentage	Load percent=70% 
Load in VA	When connected load is lower than 1kVA, load in VA will present xxxVA like below chart.  When load is larger than 1kVA (≧1KVA), load in VA will present x.xkVA like below chart. 
Load in Watt	When load is lower than 1kW, load in W will present xxxW like below chart.  When load is larger than 1kW (≧1KW), load in W will present x.xkW like below chart. 
Battery voltage/DC discharging current	Battery voltage=25.5V, discharging current=1A 

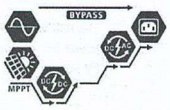
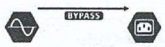
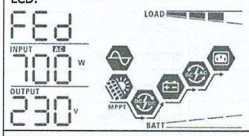
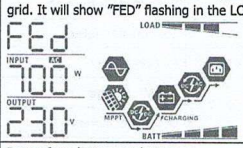
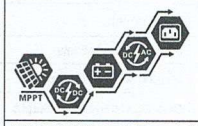
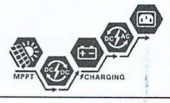
PV energy generated today and Load output energy today	This PV Today energy = 3.88kWh, Load Today energy= 9.88kWh. 
PV energy generated this month and Load output energy this month.	This PV month energy = 388kWh, Load month energy= 988kWh. 
PV energy generated this year and Load output energy this year.	This PV year energy = 3.88MWh, Load year energy = 9.88MWh. 
PV energy generated totally and Load output total energy.	PV Total energy = 38.8MWh, Load Output Total energy = 98.8MWh. 
Real date.	Real date Nov 28, 2020. 
Real time.	Real time 13:20. 

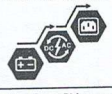
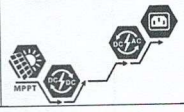
Main CPU version checking.	Main CPU version 00014.04. 
Secondary CPU version checking.	Secondary CPU version 00012.03. 
Secondary Wi-Fi version checking.	Secondary Wi-Fi version 00000.24. 

Operating Mode Description

Operation mode	Description	LCD display
Standby mode **Note:** *Standby mode: The inverter is not turned on yet but at this time, the inverter can charge battery without AC output.	No charging at all no matter if grid or PV power is available.	PV power and Grid is available. 
		Grid is available. 
		PV power is available. 
		No charging. 

Operation mode	Description	LCD display
Standby mode **Note:** *Standby mode: The inverter is not turned on yet but at this time, the inverter can charge battery without AC output.	No charging at all no matter if grid or PV power is available.	Power from PV energy only and feed PV energy to grid when battery is not connected. LCD will flash "FED". 
		PV energy charges battery and feeds remaining energy to the grid. LCD will flash "FED". 
Fault mode Note: *Fault mode: Errors are caused by inside circuit error or external reasons such as over temperature, output short circuited and so on.	No charging at all no matter if grid or PV power is available.	No charging. 
Line Mode	The unit will provide output power from the mains. It will also charge the battery at line mode.	Charging by utility and PV energy. 
		Charging by utility. 
		If "SUB" (solar first) is selected as output source priority and solar energy is not sufficient to provide the load, solar energy and the utility will provide the loads and charge the battery at the same time. 

Operation mode	Description	LCD display
Line Mode	The unit will provide output power from the mains. It will also charge the battery at line mode.	If either "SUB" (solar first) or "SBU" is selected as output source priority and battery is not connected, solar energy and the utility will provide the loads. 
		Power from utility. 
		Power is only generated from PV energy and feeds PV energy to grid when battery is not connected. It will show "FED" flashing in the LCD. 
		PV energy charges battery, provides power to the load and feeds remaining energy to the grid. It will show "FED" flashing in the LCD. 
Battery Mode	The unit will provide output power from battery and/or PV power.	Power from battery and PV energy. 
		PV energy will supply power to the loads and charge battery at the same time. No utility is available. 

Operation mode	Description	LCD display
Battery Mode	The unit will provide output power from battery and/or PV power.	Power from battery only. 
		Power from PV energy only. 

Faults Reference Code

Fault Code	Fault Event	Icon on
01	Fan is locked when inverter is off.	F01
02	Over temperature	F02
03	Battery voltage is too high	F03
04	Battery voltage is too low	F04
05	Output short circuited.	F05
06	Output voltage is too high.	F06
07	Overload time out	F07
08	Bus voltage is too high	F08
09	Bus soft start failed	F09
10	PV over current	F10
11	PV over voltage	F11
12	DCDC over current	F12
13	Battery discharge over current	F13
51	Over current	F51
52	Bus voltage is too low	F52
53	Inverter soft start failed	F53
55	Over DC voltage in AC output	F55
57	Current sensor failed	F57
58	Output voltage is too low	F58

Warning Indicator

Warning Code	Warning Event	Audible Alarm	Icon flashing
01	Fan is locked when inverter is on.	Beep three times every second	01
02	Over temperature	None	02
03	Battery is over-charged	Beep once every second	03
04	Low battery	Beep once every second	04
07	Overload	Beep once every 0.5 second	07
10	Output power derating	Beep twice every 3 seconds	10
15	PV energy is low.	Beep twice every 3 seconds	15
16	High AC input (>280VAC) during BUS soft start	None	16
32	Communication failure between inverter and remote display panel	None	32
E9	Battery equalization	None	E9
bP	Battery is not connected	None	bP