Website Setting Introduction For SNA3-5k ECO Hybrid Inverter

Version:3.0

History

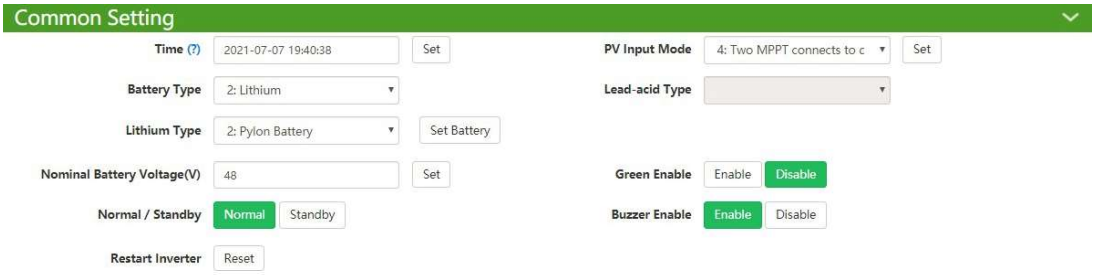
Version	Record of modification	Date
Initial version	Initial version	2020-8-27
V2.0	The settings function change a lot	2020-11-21
V3.0		2021-7-7

This Document is used to give a explanation of settings in the website and APP to Lux Power customers for ECO Hybrid Inverter. The monitor system may change anytime, so if you find the settings described below is different from what you see, you can contact info@luxpowertek.com for help.

Content

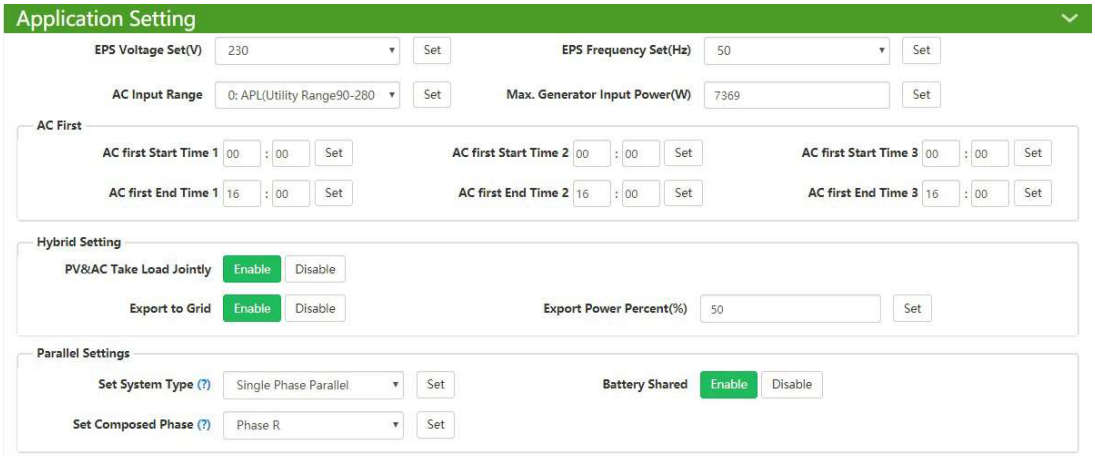
PART1： SETTING EXPLANATION

1. Common Setting



- **Time** : Local time of the inverter, the input fomat is 2019-02-14 14:44:00. Format yyyy-MM-dd HH:mm:ss
- **PV Input Mode**: The connection way of solar module for two strings
- **Battery Type:** Choose the battery type as lead acid or Lithium type
- **Lithium Type**: Choose battery brand for Lithium battery
- **Battery Capacity/Nominal battery Voltage** : Battery capacity and nominal voltage for lead-acid.
- **Normal/Standby**: "Standby" is used to set the whole system to standby mode, stop feed in and charge, discharge; "Normal" is used to set the whole system to auto run status.
- **Buzzer Enable:** When enable it, buzzer will on when press the key or there is any warning or fault
- **Restart Inverter:** Restart the inverter remotely,if there is any fault in the system and inverter can not restart automatically, users can try to restart remotely
- **Green Function Enable:** if users enable this, When off grid output power is lower than 60w for 10 minutes, the inverter will turn off the output to save energy

2. Application Setting



- **EPS Voltage Set**: Off- grid output voltage
- **EPS Frequency Set**: Off- grid output frequency
- **AC Input Range**: inverter will go to battery mode if the utility is out of range
  - 0:APL（Utility Range 90-280V 20ms）
  - 1:UPS（Utility Range 170-280V 10ms）
- **Max. Generator:**the max power generator able to output, after users set this setting, inverter will limit the load power and charging power lower than this setting
- **AC First Start Time/End Time1/2/3**: When users set AC first start time and AC first end time, then
  - system will use AC to take the load during the setting time if AC available
  - Battery will not discharge during the setting time if AC available

Hybrid setting group

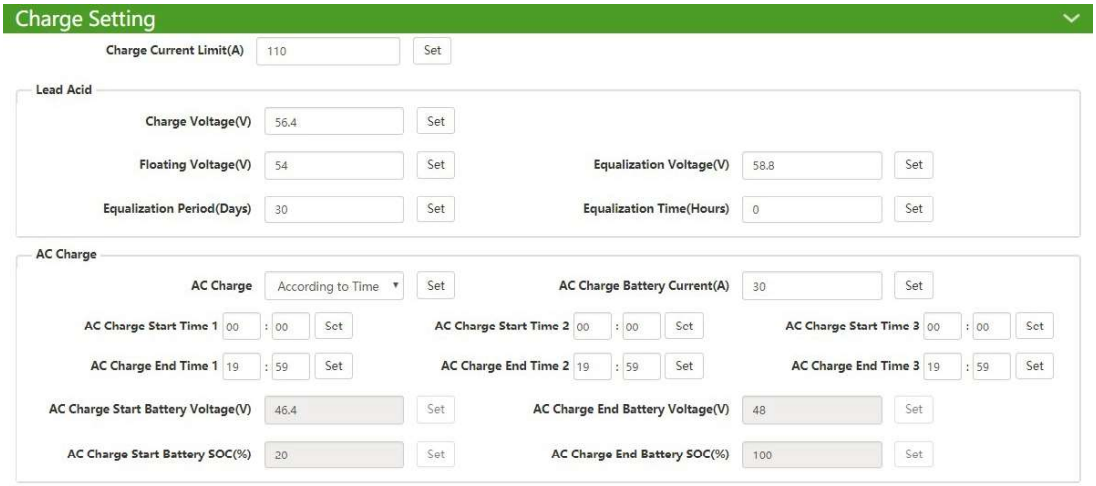
- **PV/AC Take Load Jointly:** SONAR can work as traditional off grid inverter or as a hybrid inverter. When disable PV&AC Take load Jointly, it will work as a traditional off grid inverter, otherwise it will work as a hybrid

- **Export to Grid/Export Power percent:** Users can also enable export function if it is allowed and set export power percent

Parallel setting group

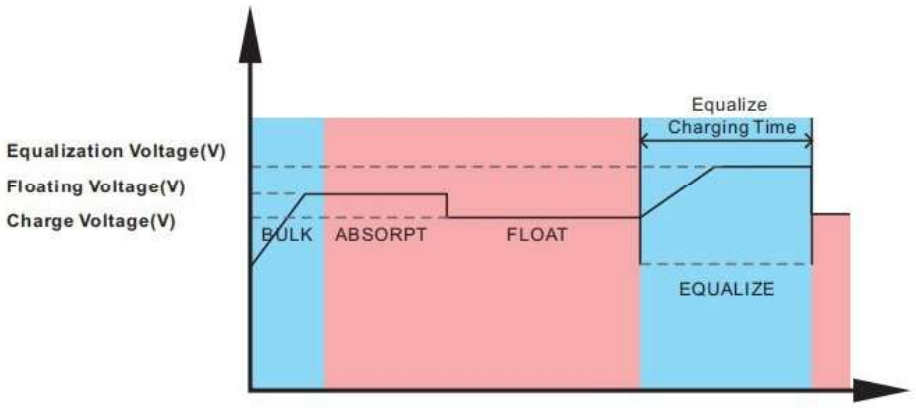
- **Set System Type**
  - **No Parallel:** System has only one eco hybrid inverter running
  - **Single Phase Parallel:** There are more than one inverter in the system and all the inverters are in the same phase
  - **Three Phase Parallel:** There are more than one inverter in the system and all the inverters are in three phase
- **Set Composed Phase :** if the system is three phase system, need to set the inverter phase in the system
- **Battery Shared**: If all inverters in the system share a battery bank, then need to enable battery shared setting.

3. Charge Setting



- **Charge Current Limit**: Max battery charge current include AC and solar charge， 140A max

- **Lead Acid battery settings：** inverter will charge battery as below curve, users can set voltage for each stage
  - **Charge Voltage(V)**
  - **Floating Voltage(V)**
  - **Equalization Voltage(V)**
  - **Equalization Period(Days)**
  - **Equalization Time(Hours)**



- **AC Charge**

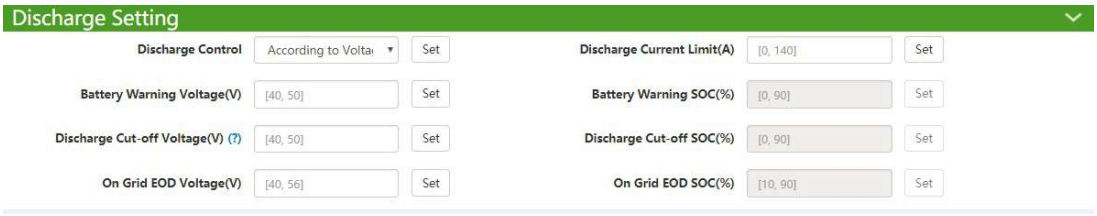
Disable: The system will not use AC to charge the battery(except Li ion BMS set force charge flag)

According to Time: During the setting time, system will use AC to charge the battery until battery full and battery will not discharge during the setting time.

According to Battery Voltage: During the setting time, system will use AC to charge the battery if battery voltage is lower than AC Charge Start Battery Voltage and will stop when Voltage is higher than AC Charge End Battery Voltage. And battery will not discharge during the setting time.

According to Battery SOC: During the setting time, system will use AC to charge the battery if battery SOC is lower than AC Charge Start Battery SOC and will stop when Voltage is higher than AC Charge End Battery SOC. And battery will not discharge during the setting time.

4. Discharge Setting



- **Discharge Control**： Using battery voltage or SOC to control battery warning or discharge point
- **Battery Warning Voltage**: If customer set 'Discharge control' as 'Accroding to voltage', when battery voltage is lower than the setting voltage, inverter will report battery low warning; when battery voltage is higher than setting+2V , the inverter will stop warning.
- **Battery Warning SOC /Battery Warning Recovery SOC**: If customer set 'Discharge control' as 'Accroding to SOC', when battery SOC is lower than the setting SOC, inverter will report battery low warning; when battery SOC is higher than setting+10%, the inverter will stop the warning.
- **Discharge cut off voltage/ Discharge cut off SOC**: stop discharging point when there is no utility, when battery voltage/SOC is lower than the setting voltage, inverter will go to standby mode when there is no utility
- **On grid EOD voltage:** stop discharging point when with grid. If customer set 'Discharge control' as 'Accroding to voltage', when battery voltage is lower than the setting voltage, inverter will go to bypass mode. When the battery voltage is higher than (EOD voltage+3V) , it will go back to battery discharge mode
- **On grid EOD SOC**: stop discharging point when with grid. If customer set 'Discharge control' as 'Accroding to SOC', if battery SOC is lower than the

setting voltage, inverter will go to bypass mode. When the battery SOC is higher than (EOD SOC+10%) , it will go back to battery discharge mode.

❖ Parameter

Battery Voltage Range	46.4V-60V(Li) 38.4V-60V(Lead_Acid)	
High DC Cut-off Voltage	59VDC(Li) 60VDC(Lead_Acid)	
High DC Recovery Voltage	57.4VDC(Li) 58VDC(Lead_Acid)	
Low DC Warning Voltage	load < 20%	44.0VDC（**Settable**）
	20% ≤ load < 50%	Warning Voltage@ load < 20% – 1.2V
	load ≥ 50%	Warning Voltage@ load < 20% – 3.6V
Low DC Warning Return Voltage	Low DC Warning Voltage **@ Different load** +2V	
Low DC Cut-off Voltage	load < 20%	42.0VDC（**Settable**）
	20% ≤ load < 50%	Cut-off Voltage@ load < 20% – 1.2V
	load ≥ 50%	Cut-off Voltage@ load < 20% – 3.6V
Low DC Cut-off Return Voltage	Cut-off Voltage@ load < 20% ≥ 45V	Low DC Cut-off Voltage @ **load < 20%** +3V
	Cut-off Voltage@ load < 20% < 45V	48V
Low DC Warning SOC	20% SOC（**Settable**）	
Low DC Warning Return SOC	Low DC Warning SOC+10%	
Low DC Cut-off SOC	15% SOC(GridOn) （**Settable**） 15% SOC (GridOff) （**Settable**）	
Low DC Cut-off Return SOC	Low DC Cut-off SOC+10%	
Charge Cut-off Voltage	58.4VDC	
Low DC Force Charge Voltage	40V or Cut-off Voltage@ load < 20% – 2V	
Low DC Force Charge SOC	5% or Cut-off SOC – 5%	