

Introduction

# EG4 18K Monitor System User Interface (UI)

# Introduction

## Version:1.1 Date:2020-07-07

#### History

| Version         | Record of modification                      | Date      |
|-----------------|---|-----------|
| Initial version | Initial version                             | 2020-04-6 |
| 1.1             | Change some picture according to new design | 2020-7-7  |
|                 |   |           |

The purpose of this Document is to introduce the User Interface (UI) of the Lux Power Monitoring System to Lux Power users. The monitoring system may change due to updates, so if you find the following UI descriptions vary from the display, please contact EG4Electronics.com for assistance if you have any questions.



## Introduction

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## 1. Monitor

"Monitor" view is for customers (end users) to easily check real-time system information (including Battery, Photo Voltaic (PV), Emergency Power Supply (EPS) and Grid data), with both daily & total figures for solar yielding, battery charging/discharging, feed-in energy & consumption.

#### 1.1 Dash board

| LU <sup>⊗</sup> POWER™             | Monitor 🔤 Di                 | ata 🤹 Configuration | 🛤 Overview                       | Maintain       |                            | LuxPower    | User Center | <b>#</b> I          | Logout                    |
|------------------------------------|------------------------------|---------------------|----------------------------------|----------------|----------------------------|-------------|-------------|---------------------|---------------------------|
| Select plant first Ma              | arts power station 🗸 9392006 | 6140 🗸              |                                  |                |                            |             |             |                     |                           |
| Solar Yielding                     |                              | Battery Discharging |                                  | Feed-in Energy |                            | Consumption |             |                     |                           |
| -Ö-                                | 0.2 kWh<br>Today Yielding    | <b>*</b>            | 1.4 kWh<br>Today Discharging     | ant t          | 0 kWh<br>Today Export      |             |             | <b>1.</b><br>Toda   | 1 kWh<br>av Usage         |
|                                    | 577 kWh<br>Total Yielding    |                     | 175.2 kWh<br>Total Discharging   |                | 350.5 kWh<br>Total Export  |             |             | <b>226.</b><br>Tota | <b>1 kWh</b><br>al Usage  |
| LUISPOWER™                         | 🕑 Monitor 🛛 🖪 Da             | ata 🤹 Configuration | Cverview                         | Maintain       |                            | LuxPower    | User Center | <b>ж</b> 1          | Logout                    |
| Select plant first Yo              | ur Choice- Rober 🗸 (8340011  | 1002 🗸              |                                  |                |                            |             |             |                     |                           |
| Solar Yielding                     |                              | Battery Charging    |                                  | Import         |                            | Consumption |             |                     |                           |
| 75% Load Today<br>25% Charge Today |                              |                     | <b>0.1</b> kWh<br>Today Charging | AT T           | 0.3 kWh<br>Today Import    |             |             | 2.2<br>Toda         | <b>2</b> kWh<br>ay Usage  |
| 0% Export Today<br>Today 0.4 kWh   |                              | ED                  | 2223.5 kWh<br>Total Charging     |                | 2515.2 kWh<br>Total Import |             |             | 5575.<br>Tota       | <b>7</b> kWh<br>tal Usage |

**Solar Yield**: The data shows power generated by the solar panels. For AC coupled inverters it shows the power generated by the grid tie inverter. To be able to show the data correctly the PV CT clamp for the AC ESS inverter will have to be installed. When the picture of the solar yield is clicked or touched (on the EG4 app), it will switch to portion display of how the solar energy has been used that day and a second click or touch shows the totals since commissioning. It shows the percentage portion of load supplied, charge of battery and export to grid.



## Introduction

**Battery Discharge/Battery Charge:** The data shows the charge and discharge energy from the battery/batteries. When the battery picture is clicked or touched the display will switch between battery discharging and battery charging, showing totals for that day and since commissioning.

**Feed-in Energy/Import:** It shows energy exported to grid for that day and since commissioning. When the picture is clicked or touched it shows energy imported from the grid for that day and since commissioning.

**Consumption:** The data shows the total energy consumption of the property for that day and since commissioning.



#### Introduction

## 1.2 Real time System Information

The picture shows the live energy data, with dynamic flows. When the battery image is clicked it will show battery charge and discharge limitation. When the battery's color is yellow or red it means there is a warning or fault with the battery.



## 1.3 Input & Output Power (daily)

The picture shows the power curve for each day, including solar power, battery charge/discharge power and grid import/export power and consumption.



#### 1.4 Energy Overview

With the 'Month' box highlighted the graph shows the energy statistics for each day. When the 'Year' icon is clicked or touched it will show energy for each month and when the 'Total' icon is clicked or touched it will show energy for each year.



| Introduction   |            |       |                           |
|--|------------|-------|---------------------------|
| Energy Overview (9262004024, 2020-04)  | Month Year | Total | <b>≮</b> 2020-0₄ <b>≯</b> |
| Solar Production     Battery     Export to Grid     Consumption     125  |            |       |                           |
| 100  |            |       |                           |
| 0000 m Date: 5 |            |       |                           |
| 25 <sup>50</sup> Solar Production: 77.3 kWh<br>Battery: 55 kWh<br>25 Export to Grid: 15.2 kWh  |            |       |                           |
| o <b>1 2 8 4 5 6 7 8 9 10 11 12 13 14 15 16 17 CH (3 ⊄ 20 21 22 23</b>   | 24 25      | 26 27 | 28 29 30                  |

# 2. Data

"Data" view shows more detailed running data, which helps for analysis and maintenance, including detailed technical parameters of PV, battery, grid and EPS.

"Data" view consists of five sections: "Chart", "Energy", "History data", "Local data" and "History event". Please see below for more information on each section.

|   | Monitor   | 🖪 Data   | Configuration                                | Cverview       | 🖹 Mainta | n 🗾                                      | User Center | 💥 Logout   |
|---|---|--|--|----------------|----------|--|-------------|--|
| Chart   | Select plant first  | Genesis  | ♥ 9192004039                                 | ✓ < 2020-      | 07-07 >  |  |             |  |
| Energy<br>History data<br>Local data<br>History event | PV Side           Vpv1(V)           Vpv2(V)           Ppv1(W)           Ppv2(W) | V<br>400<br>200<br>Time: 2020-0<br>Vpv1(V):: 11.8<br>0<br>07-7 | pv1(V) - (919200403<br>7-97 00:08            | 9, 2020-07-07) | 08:00    | SOC(%) - (9192004039, 2020-0)            | 05:00       | Battery<br>SOC(%)<br>VBat(V)<br>Charge Power(W)<br>DisCharge Power(W)          |
|   | AC Side<br>Vacr(V)<br>Qac(Var)<br>pToGrid(W)                                    | 0<br>07-7  | 4acr(V) - (919200403<br>38.7V<br>02.00 04.00 | 9, 2020-07-07) | 08:00    | Peps(W) - (9192004039, 2020-0<br>AVC: OW | 08:00       | EPS           Vepsr(V)           Feps(Hz)           Peps(W)           Seps(VA) |

Chart shows how key parameters of "PV side", "Battery", "AC Side" and "EPS" change along with time over a 24 period.

Below is the meaning of each parameter abbreviation with the 18K naming rule clarified.
Ppv: Power of solar input (first letter "P" stands for power, lower-case letter "pv" stands for PV)
SOC(%): Battery/batteries - State of charge.
Vacr: Voltage of AC output ("V" stands for voltage, "ac": AC, "r": phase R)
Qac: Reactive power of AC output ("Q" stands for reactive power)
Vepsr: Rated voltage of EPS(Emergency Power Supply)
Feps: Frequency of EPS
Peps: Out put power of EPS (first letter "S" stands for apparent power)
pToGrid: power feed in to grid

2.2 Energy



## Introduction



"Energy" section: above various bar charts show how energy (y-axis) changes with time, daily, by date (x-axis) in one month.

E\_pv1(kWh): Energy generated by PV string1
E\_pv2(kWh): Energy generated by PV string2
E\_inv(kWh): Energy output via AC output
E\_rec(kWh): Energy of AC charge
E\_charge(kWh): Energy used for battery charge
E\_discharge(kWh): Energy output by battery discharging
E\_eps(kWh): Energy output via EPS
EnergyToGrid(kWh): Feed-in energy
EnergyToUser(kWh): Energy import from grid

#### 2.3 History Data

The "History data" section are the measured technical parameters of PV, battery, EPS and Grid, mainly for 18K or its distributor's analysis to quickly address problems that may have occurred.

It is considered that professional, technical knowledge is required to fully understand this table. It is suggested that end users focus on the "Monitor" view, "Chart" section and "Energy" sections only as these provide easy to understand performance data.

It is suggested that 18K distributors should focus on the key parameters below to carry out rapid troubleshooting for their end users:

- 1. PtoGrid/PtoUser (to check if CT was connected correctly)
- 2. Vpv/Ppv (to check the MPPT)
- 3. Vo/Po/So (to check load type and if there is an overload when in EPS mode)
- 4. Vb/SOC (to check current state of charge and if battery is over charged or discharged)
- 5. **Vac/Fac** (to evaluate Grid performance and to check if working voltage and frequency range is adjusted to comply with Grid)
- 6. **E-xxday** (to evaluate energy distribution), Exxall (to check if the system is working well under off grid mode)



#### Introduction

| LU⊗POWER™     |    | Monitor         | 🖪 Data             |        | ? Con | figurat | ion    |         | Overvi | ew    |          | Maintain   |          |          |          |          |      |        | Viewer | i i  | Jser Cen   | ter     | *         | Logout     |
|---------------|----|-----------------|--------------------|--------|-------|---------|--------|---------|--------|-------|----------|------------|----------|----------|----------|----------|------|--------|--------|------|------------|---------|-----------|------------|
| Chart         | 2  | Select plant fi | rst Chú ngô long   | an 🗸   | 9     | 4320040 | 005    | ~       | <      | 2020  | -07-07   | >          |          |          |          |          |      | Export | data   | Ехро | ort data(i | 2020-07 | 7-07 - 20 | )20-06-30) |
| Energy        |    | Serial numbe    | Time               | Status | Vpv1( | Vpv2(\  | vBat(V | ) SOC(% | Ppv1(V | Ppv2( | A pCharg | e pDisChar | g Vacr(V | ) Fac(Hz | ) Pinv(V | V Prec() | V PF | Vepsr( | Feps(H | Peps | (W Seps(   | V. pToG | ric pToU  | se pLoad(  |
|               | 1  | 9432004005      | 2020-07-07 14:41:2 | 0x0C   | 287.2 | 268.7   | 55.6   | 100%    | 1273   | 1912  | 37       | 0          | 198.5    | 50.04    | 3071     | 0        | 1    | 198.5  | 50.04  | 0    | 0          | 0       | 4438      | 7509       |
| History data  | 2  | 9432004005      | 2020-07-07 14:38:2 | 0x0C   | 285.2 | 268.8   | 55.8   | 100%    | 1283   | 1913  | 37       | 0          | 195.1    | 49.97    | 3080     | 0        | 1    | 195.1  | 49.97  | 0    | 0          | 0       | 4156      | 7236       |
| Local data    | 3  | 9432004005      | 2020-07-07 14:35:2 | 0x0C   | 283.3 | 269.3   | 55.8   | 100%    | 1297   | 1938  | 40       | 0          | 205.5    | 49.99    | 3125     | 0        | 1    | 205.5  | 49.99  | 0    | 0          | 0       | 4831      | 7956       |
| Local data    | 4  | 9432004005      | 2020-07-07 14:32:1 | 0x04   | 285.2 | 268.7   | 55.2   | 100%    | 1319   | 1953  | 0        | 0          | 203.7    | 49.92    | 3167     | 0        | 1    | 203.7  | 49.92  | 0    | 0          | 0       | 4662      | 7829       |
| History event | 5  | 9432004005      | 2020-07-07 14:29:1 | 0x0C   | 284.3 | 272.9   | 55.7   | 100%    | 1330   | 1968  | 36       | 0          | 206      | 49.9     | 3180     | 0        | 1    | 207.1  | 49.94  | 0    | 0          | 0       | 4915      | 8095       |
|               | 6  | 9432004005      | 2020-07-07 14:26:1 | 0x0C   | 287.2 | 276.8   | 55.6   | 100%    | 1405   | 2033  | 36       | 0          | 203.9    | 50.01    | 3305     | 0        | 1    | 203.9  | 49.98  | 0    | 0          | 0       | 4588      | 7893       |
|               | 7  | 9432004005      | 2020-07-07 14:23:1 | 0x0C   | 283.3 | 268.9   | 55.7   | 100%    | 1339   | 1965  | 36       | 0          | 208.4    | 50.07    | 3183     | 0        | 1    | 208.4  | 50.07  | 0    | 0          | 0       | 4995      | 8178       |
|               | 8  | 9432004005      | 2020-07-07 14:20:1 | 0x0C   | 283.1 | 271.7   | 55.7   | 100%    | 1342   | 1971  | 34       | 0          | 204.2    | 49.85    | 3194     | 0        | 1    | 204.2  | 49.85  | 0    | 0          | 0       | 4650      | 7844       |
|               | 9  | 9432004005      | 2020-07-07 14:17:1 | 0x0C   | 286.2 | 269.9   | 55.8   | 100%    | 1343   | 1980  | 37       | 0          | 205      | 50.09    | 3205     | 0        | 1    | 205    | 50.09  | 0    | 0          | 0       | 4739      | 7944       |
|               | 10 | 9432004005      | 2020-07-07 14:14:1 | 0x04   | 284.9 | 267.8   | 53.3   | 24%     | 1347   | 1987  | 0        | 0          | 204.8    | 50.04    | 3225     | 0        | 1    | 205    | 50.05  | 0    | 0          | 0       | 4592      | 7817       |
|               | 11 | 9432004005      | 2020-07-07 14:11:1 | 0x04   | 287.2 | 271.1   | 53.3   | 24%     | 1361   | 2004  | 0        | 0          | 200.9    | 49.92    | 3250     | 0        | 1    | 200.9  | 49.92  | 0    | 0          | 0       | 4369      | 7619       |
|               | 12 | 9432004005      | 2020-07-07 14:08:1 | 0x04   | 284.2 | 270.8   | 53.3   | 24%     | 1388   | 2009  | 0        | 0          | 206.4    | 50.2     | 3282     | 0        | 1    | 206.4  | 50.2   | 0    | 0          | 0       | 4803      | 8085       |
|               | 13 | 9432004005      | 2020-07-07 14:05:1 | 0x04   | 285.2 | 269.8   | 53.3   | 24%     | 1377   | 2019  | 0        | 0          | 210.5    | 50.13    | 3283     | 0        | 1    | 210.5  | 50.13  | 0    | 0          | 0       | 5105      | 8388       |
|               | 14 | 9432004005      | 2020-07-07 14:02:1 | 0x04   | 285.3 | 268.9   | 53.3   | 24%     | 1384   | 2027  | 0        | 0          | 210      | 49.79    | 3298     | 0        | 1    | 209.9  | 49.81  | 0    | 0          | 0       | 5089      | 8387       |
|               | 15 | 9432004005      | 2020-07-07 13:59:1 | 0x04   | 286.2 | 268.8   | 53.3   | 24%     | 1386   | 2032  | 0        | 0          | 206.4    | 49.73    | 3301     | 0        | 1    | 206.4  | 49.71  | 0    | 0          | 0       | 4675      | 7976       |
|               | 16 | 9432004005      | 2020-07-07 13:56:1 | 0x04   | 285.2 | 268.8   | 53.3   | 24%     | 1394   | 2045  | 0        | 0          | 207.3    | 49.79    | 3321     | 0        | 1    | 207.3  | 49.79  | 0    | 0          | 0       | 4722      | 8043       |
|               | 17 | 9432004005      | 2020-07-07 13:53:1 | 0x04   | 288.1 | 270.9   | 53.3   | 24%     | 1396   | 2056  | 0        | 0          | 206.4    | 49.86    | 3334     | 0        | 1    | 206.4  | 49.86  | 0    | 0          | 0       | 4644      | 7978       |
|               | 18 | 9432004005      | 2020-07-07 13:50:0 | 0x04   | 285.3 | 272     | 53.3   | 24%     | 1398   | 2062  | 0        | 0          | 204.6    | 49.79    | 3339     | 0        | 1    | 204.6  | 49.79  | 0    | 0          | 0       | 4433      | 7772       |
|               | 19 | 9432004005      | 2020-07-07 13:47:1 | 0x04   | 287.1 | 267.9   | 53.3   | 24%     | 1411   | 2065  | 0        | 0          | 206.6    | 50.03    | 3353     | 0        | 1    | 206.6  | 50.03  | 0    | 0          | 0       | 4575      | 7928       |
|               | 20 | 9432004005      | 2020-07-07 13:44:0 | 0v04   | 284.2 | 268.9   | 53.3   | 24%     | 1417   | 2076  | 0        | 0          | 206.6    | 49 97    | 3369     | 0        | 1    | 206.6  | 49 97  | 0    | 0          | 0       | 4568      | 7937       |

#### 2.4 Local Data

"Local data" section show the data recorded during offline period(s) (loss of Internet or Wi-Fi). It is the same as history data with only the difference being it is for offline data recording.

Note: the local data is captured every 5 minutes and would be recorded when the system is offline for more than 20 minutes. The system can record data for 90 days maximum.





### Introduction

#### 2.5 History Event

"History event" section show a historical records of events. (Event types: Notice and Fault) If there is no "history event" record it means the hybrid inverter is well connected and operating without any problem.

| LUISPOWER™    |    | Monitor            | 🖪 Data      |                     | 🔲 Overview  | Maintain                      |                     |     |                | 💥 Logou    |
|---------------|----|--------------------|-------------|---------------------|-------------|-------------------------------|---------------------|-----|----------------|------------|
| Chart         | ø  | Select plant first |             | <ul><li>✓</li></ul> | ✓ All Event | ~                             |                     |     |                | Export dat |
| Energy        |    | Plant              | Serial numb | er Event Typ        | pe Event    |                               | Start Time          | Tir | me Recovered   |            |
|               | 1  | Elangeni Office    | 9432004014  | Notice              | Battery     | voltage low                   | 2020-07-07 06:15:11 | 20  | 20-07-07 08:06 | 21         |
| History data  | 2  | Office             | 9432004009  | ) Notice            | No AC 0     | Connection                    | 2020-07-06 15:18:41 | 20  | 20-07-06 15:54 | :52        |
|               | 3  | Office             | 9432004009  | ) Notice            | Battery     | failure                       | 2020-07-06 15:09:38 | 20  | 20-07-06 15:12 | :39        |
| Local data    | 4  | Office             | 9432004009  | ) Notice            | Battery     | voltage low                   | 2020-07-06 12:45:21 | 20  | 20-07-06 15:09 | 38         |
| History event | 5  | Office             | 9432004009  | ) Notice            | Commu       | nication failure with battery | 2020-07-06 12:45:21 | 20  | 20-07-06 15:09 | 38         |
| mistory event | 6  | REM Office         | 9432004010  | ) Notice            | No AC 0     | Connection                    | 2020-07-06 10:24:02 | 20  | 20-07-06 10:27 | :02        |
|               | 7  | Elangeni Office    | 9432004014  | Notice              | Battery     | voltage low                   | 2020-07-06 06:22:30 | 20  | 20-07-06 07:55 | :34        |
|               | 8  | Genesis            | 9192004039  | ) Notice            | AC Volt     | age out of range              | 2020-07-05 15:24:26 | 20  | 20-07-05 15:27 | :28        |
|               | 9  | Genesis            | 9192004039  | ) Notice            | AC Volt     | age out of range              | 2020-07-05 15:18:26 | 20  | 20-07-05 15:21 | :27        |
|               | 10 | Genesis            | 9192004039  | ) Notice            | AC Volt     | age out of range              | 2020-07-05 15:09:25 | 20  | 20-07-05 15:12 | :26        |
|               | 11 | Genesis            | 9192004039  | ) Notice            | AC Volt     | age out of range              | 2020-07-05 14:45:26 | 20  | 20-07-05 14:48 | :27        |
|               | 12 | Genesis            | 9192004039  | Notice              | AC Volt     | age out of range              | 2020-07-05 14:24:28 | 20  | 20-07-05 14:30 | :29        |
|               | 13 | Genesis            | 9192004039  | Notice              | AC Volt     | age out of range              | 2020-07-05 14:18:28 | 20  | 20-07-05 14:21 | :28        |
|               | 14 | Genesis            | 9192004039  | ) Notice            | AC Volt     | age out of range              | 2020-07-05 13:42:28 | 20  | 20-07-05 13:48 | :27        |
|               | 15 | Genesis            | 9192004039  | ) Notice            | AC Volt     | age out of range              | 2020-07-05 13:21:31 | 20  | 20-07-05 13:27 | :29        |
|               | 16 | Genesis            | 9192004039  | ) Notice            | AC Volt     | age out of range              | 2020-07-05 12:54:29 | 20  | 20-07-05 13:00 | 31         |
|               | 17 | Genesis            | 9192004039  | ) Notice            | AC Volt     | age out of range              | 2020-07-05 12:36:30 | 20  | 20-07-05 12:39 | :33        |
|               | 18 | Genesis            | 9192004039  | Notice              | AC Volt     | age out of range              | 2020-07-05 12:27:32 | 20  | 20-07-05 12:30 | :28        |
|               | 19 | Genesis            | 9192004039  | Notice              | No AC 0     | Connection                    | 2020-07-05 12:24:31 | 20  | 20-07-05 15:27 | :28        |
|               | 20 | Elangeni Office    | 9432004014  | Notice              | Battery     | voltage low                   | 2020-07-05 06:20:45 | 20  | 20-07-05 07:53 | :48        |
|               |    |                    |             |                     |             |                               |                     |     |                |            |

Figure 6 History event section view

# 3. Configuration

"Configuration" page is used for users to manage their station, datalog and user information.

#### 3.1 Stations

It is used to create another site if you have more than one property with the system installed.

| LU <sup>®</sup> POWER*** | (  | Monitor             | 🖪 Data     | Configuration | 🛄 Overviev        | v 🗈 Maint      | ain      |                 | ParaTe       | st User Cent   | er 🎛 Logout        |
|--------------------------|----|---------------------|------------|---------------|-------------------|----------------|----------|-----------------|--------------|----------------|--------------------|
| Stations                 | +  | Add Station         |            |               |                   |                |          |                 |              | Search by stat | ion name 🗙 Q       |
| Datalogs                 |    | Plant name          | Installer  | EndUser       | Solar PV Power(W) | Country        | Timezone | Daylight saving | Address      | Create date    | Action             |
|                          | 1  | ParaTest2           |            |               | 5000              | China          | GMT +8   | No              | shenzhen     | 2018-09-05     | Plant Management 🕶 |
| Inverters                | 2  | 000                 |            |               | 200               | China          | GMT +8   | No              |              | 2019-01-09     | Plant Management 🕶 |
| Union                    | 3  | XIEYING             | xieying    |               | 5000              | China          | GMT +8   | No              | 深圳           | 2019-09-03     | Plant Management 🔻 |
| Users                    | 4  | cch-test            | para-test  | cch-test      | 5000              | United Kingdom | GMT 0    | Yes             | zhongwubaoan | 2019-09-29     | Plant Management 🕶 |
|                          | 5  | sznari test         | Lux_sznari |               | 5000              | China          | GMT +8   | No              | 深圳市南山区高新技术   | 2019-09-29     | Plant Management 🕶 |
|                          | 6  | 能安电站                |            | 能安            | 500               | China          | GMT +8   | No              |              | 2019-10-15     | Plant Management 🕶 |
|                          | 7  | 重庆光储车棚              |            | 深圳涌泉          | 6000              | China          | GMT +8   | No              | 重庆市          | 2019-12-06     | Plant Management 🔻 |
|                          | 8  | 北京石景山项目             |            | 深圳涌泉          | 5000              | China          | GMT +8   | No              |              | 2019-12-12     | Plant Management 🕶 |
|                          | 9  | test _berlin        | Berlin     |               | 3600              | China          | GMT +8   | No              |              | 2020-01-16     | Plant Management 🕶 |
|                          | 10 | Three-phase paralle |            |               | 15000             | China          | GMT +8   | No              |              | 2020-03-12     | Plant Management * |

## 3.2 Datalogs

If users have more than one datalog in the system, they can add the datalog Serial Number (SN) in the station. After adding the datalog on the system and setting the correct password for the wifi data log, the inverter will be showed on the system automatically when powered on. **Note**: Please add the datalog in the monitor system before setting the password for the wifi datalog.



## Introduction

| LU⊗POWER™ |               | 🗳 Data 🤇         | Configuration   | Overview      | 🗋 Maintain |            |                |                 | ж      |            |
|-----------|---------------|------------------|-----------------|---------------|------------|------------|----------------|-----------------|--------|------------|
| Stations  | + Add Datalog | + Import Datalog |                 |               |            |            |                | arch by datalog |        | <b>x</b> Q |
| Datalogs  | Serial number | Datalog type     | -               |               | : .        |            | Connect Status | Action          |        |            |
|           | 1 A000000125  | Wi-Fi            | New datalog     |               |            | ×          | Lost           | Edit            | Remove |            |
| Inverters | 2 AH00002000  |                  |                 |               |            |            | Lost           | Edit            | Remove |            |
| Users     | 3 AH01010101  |                  | * Serial number | Serial number |            |            | Lost           | Edit            | Remove |            |
| Users     | 4 BA0000003   | Wi-Fi            |                 |               |            |            | Lost           | Edit            | Remove |            |
|           | 5 BA0000018   | Wi-Fi            | * PIN           | PIN           |            |            | Lost           | Edit            | Remove |            |
|           | 6 BA0000035   | Wi-Fi            |                 |               |            | 5          | Lost           | Edit            | Remove |            |
|           | 7 BA00000040  | Wi-Fi            | * Plant         | ParaTest2     |            | τ 3        | Lost           | Edit            | Remove |            |
|           | 8 BA0000052   | Wi-Fi            |                 |               |            |            | Lost           | Edit            | Remove |            |
|           | 9 BA10070091  | Wi-Fi            |                 |               |            |            | Lost           | Edit            | Remove |            |
|           | 10 BA10100197 | Wi-Fi            |                 |               |            | Add Cancel | Lost           | Edit            | Remove |            |
|           | 11 BA10100199 | Wi-Fi            |                 |               |            | j          | Lost           | Edit            | Remove |            |
|           | 12 BA10100220 | Wi-Fi            |                 |               |            | 2020-04-30 | Lost           | Edit            | Remove |            |
|           | 13 BA10100222 | Wi-Fi            | cch-test        |               | cch-test   | 2020-04-30 | Lost           | Edit            | Remove |            |
|           | 14 BA10100231 | Wi-Fi            | LUX TEST        |               |            | 2020-04-30 | Lost           | Edit            | Remove |            |

#### 3.3 Inverters

End users can see the inverter list and check if the inverter is online.

#### 3.4 Users

End users can edit password and personal information in the user page. Distributors can add an installer account and end user account on this page.

| LU⊗POWER™ |   | Monitor      | 💷 Data        | (           | Configuration           | Overvi  | ew 🗈     | Maintain    |          |             | Pa          | raTest User (     | Center 🎛 Logout   |
|-----------|---|--------------|---------------|-------------|-------------------------|---------|----------|-------------|----------|-------------|-------------|-------------------|-------------------|
| Stations  | 0 | Add installe | + Add end use |             |                         |         |          |             |          |             |             | Search by         | username XQ       |
| Datalogs  |   | Username     | Real name     | Role        | E-mail                  | Country | Timezone | Tel number  | Address  | Create date | User Permis | sior Customer cod | de Action         |
|           | 1 | xieying      | xieying       | Installer   | canhao.chen@luxpowe     | China   | GMT +8   |             |          | 2019-09-03  | Normal      | ХҮТ002            | User Management 🕶 |
| Inverters | 2 | para-test    | chen          | Installer   | canhao1.chen@luxpow     | China   | GMT +8   | 18306674435 | shenzhen | 2019-09-18  | Normal      | XYT003            | Edit              |
|           | 3 | Lux_sznari   | Sznari        | Installer   | wuxing@sznari.com       | China   | GMT +8   | 18576683339 | 深圳市南山区高  | 2019-09-29  | Normal      | Grace02           | Luit              |
| Users     | 4 | Berlin       |               | Installer   | berlin.li@luxpowertek.c | China   | GMT +8   |             |          | 2020-01-16  | Normal      | paratest          | Modify password   |
|           | 5 | CLLUXPOWER   | chentengkui   | Installer   | chentengkui@szclou.co   | China   | GMT +8   |             | 深圳市南山区科  | 2020-03-18  | Normal      | SZCL001           | User Management 🕶 |
|           | 6 | Xiex 01      | Xlexin        | Installer   | canhao.chen@luxpowe     | China   | GMT +8   |             |          | 2020-04-23  | Normal      | XXT01             | User Management 🕶 |
|           | 7 | wangzhe      | wang          | Installer   | canhao.chen@luxpowe     | China   | GMT 0    |             |          | 2020-06-13  | Normal      | WANG02            | User Management 🕶 |
|           | 8 | ParaTest     |               | Distributor | canhao1.chen@luxpow     | China   | GMT +8   |             |          | 2018-08-07  | Normal      | Grace01           | User Management 🕶 |

## 4. Overview

"Overview" is **for 18K or its distributor** to easily check overall system information for their end users, including solar yielding, battery discharging, etc.

| LU⊗POWER™        |    | Monitor            |           |            |             | Cverview      | 🗋 Ma  |               |                 |            |               |                   | *        |    |
|------------------|----|--------------------|-----------|------------|-------------|---------------|-------|---------------|-----------------|------------|---------------|-------------------|----------|----|
| Station Overview |    |                    |           |            |             |               |       |               |                 |            |               | Search by station | name     | ×Q |
| Device Overview  |    | Name               | Status    | SolarPower | ChargePower | DischargePowe | Load  | SolarYielding | BatteryDischarg | FeedEnergy | ConsumptionEn | Installer ‡       | EndUser  |    |
|                  | 1  | ParaTest2          | Ø Offline | 0 W        | 0 W 0       | 0 W           | 0 W 0 | 10095.6 kWh   | 8708.1 kWh      | 3649.4 kWh | 9583 kWh      |                   |          |    |
|                  | 2  | 000                | Ø Offline | 0 W        | 0 W         | 0 W           | 0 W   | 29.6 kWh      | 2.6 kWh         | 3.4 kWh    | 15.5 kWh      |                   |          |    |
|                  | 3  | XIEYING            | Ø Offline | 0 W        | 0 W         | 0 W           | 0 W   | 9.2 kWh       | 88 kWh          | 4.8 kWh    | -133.8 kWh    | xieying           |          |    |
|                  | 4  | cch-test           | Normal    | 5 kW       | 703 W       | 0 W           | 65 W  | 48.9 kWh      | 615.6 kWh       | 31.4 kWh   | -65.6 kWh     | para-test         | cch-test |    |
|                  | 5  | sznari test        | Ø Offline | 0 W        | 0 W         | 0 W           | 0 W   | 13.2 kWh      | 14 kWh          | 0 kWh      | -7.5 kWh      | Lux_sznari        |          |    |
|                  | 6  | 能安电站               | Ø Offline | 0 W        | 0 W         | 0 W           | 0 W   | 0 kWh         | 141.8 kWh       | 0 kWh      | 7.2 kWh       |                   | 能安       |    |
|                  | 7  | 重庆光储车棚             | Ø Offline | 0 W        | 0 W         | 0 W           | 0 W   | 0 kWh         | 0 kWh           | 0 kWh      | 0 kWh         |                   | 深圳涌泉     |    |
|                  | 8  | 北京石景山项目            | Ø Offline | 0 W        | 0 W         | 0 W           | 0 W   | 142.5 kWh     | 48.7 kWh        | 0 kWh      | 0 kWh         |                   | 深圳涌泉     |    |
|                  | 9  | test _berlin       | Ø Offline | 0 W        | 0 W         | 0 W           | 0 W 0 | 0 kWh         | 0 kWh           | 0 kWh      | 0 kWh         | Berlin            |          |    |
|                  | 10 | Three-phase parall | Ø Offline | 0 W        | 0 W         | 0 W           | 0 W   | 833.1 kWh     | 559.5 kWh       | 260.9 kWh  | 1471 kWh      |                   |          |    |
|                  | 11 | 科陆电子测试             | Ø Offline | 0 W        | 0 W         | 0 W           | 0 W   | 0 kWh         | 0.1 kWh         | 0 kWh      | 0 kWh         | CLLUXPOWER        |          |    |
|                  | 12 | SP Para Sys        | Ø Offline | 0 W        | 0 W         | 0 W           | 0 W   | 0 kWh         | 0 kWh           | 0 kWh      | 0 kWh         |                   |          |    |



## Introduction

|                               | <ul> <li>Normal</li> </ul>    | ¥   |   |  |   |   |   |   |  | Search by in  | verter SN   | ×Q  |
|-------------------------------|-------------------------------|---|---|--|---|---|---|---|--|---|---|---|
| Serial number<br>1 9452006170 | Status<br>🕑 Normal            | SolarPower<br>5 kW                          | ChargePower<br>703 W  | DischargePo<br>0 W   | we Load<br>68 W   | SolarYielding<br>21.4 kWh   | BatteryDischarç<br>12.7 kWh   | FeedEnergy<br>11.5 kWh  | ConsumptionEr<br>20.3 kWh  | Plant name<br>cch-test  | Parallel  | Action  |
|                               |                               |   |   |  |   |   |   |   |  |   |   |   |
|                               |                               |   |   |  |   |   |   |   |  |   |   |   |
|                               |                               |   |   |  |   |   |   |   |  |   |   |   |
|                               |                               |   |   |  |   |   |   |   |  |   |   |   |
|                               | Serial number<br>1 9452006170 | Serial number Status<br>1 9452006170 Normal | Serial number Status SolarPower<br>1 9452006170 ♥ Normal 5 kW | Serial number Status SolarPower ChargePower 1 9452006170 Status 5 kW 703 W | Serial number     Status     SolarPower     ChargePower     DischargePo       1     9452006170 <ul> <li>Normal</li> <li>S kW</li> <li>703 W</li> <li>W</li> </ul> 0 W <ul> <li>Mormal</li> <li>S kW</li> <li>S kW</li></ul> | Serial number     Status     SolarPower     ChargePower     DischargePower     Load       1     9452006170 <ul> <li>Normal</li> <li>S kW</li> <li>703 W</li> <li>D W</li> <li>68 W</li> </ul> | Serial number         Status         SolarPower         ChargePower         DischargePower         Load         SolarVielding           1         9452006170         Image: Normal         5 kW         703 W         0 W         68 W         21.4 kWh | Serial number     Status     SolarPower     ChargePower     DischargePower     Load     SolarVielding     BatteryDischarg       1     9452006170     ● Normal     5 kW     703 W     0 W     68 W     21.4 kWh     12.7 kWh | Serial number     Status     SolarPower     ChargePower     DischargePower     Load     SolarVielding     BatteryDischarg     FeedEnergy       1     9452006170     Image: Normal Signal Si | Serial number     Status     SolarPower     ChargePower     DischargePower     Load     SolarVielding     BatteryDischarg     FeedEnergy     ConsumptionEr       1     9452006170 <ul> <li>Normal</li> <li>S kW</li> <li>703 W</li> <li>W</li> <li>68 W</li> <li>21.4 kWh</li> <li>12.7 kWh</li> <li>11.5 kWh</li> <li>20.3 kWh</li> <li>20.3</li></ul> | Serial number     Status     SolarPower     ChargePower     DischargePower     Load     SolarVielding     BatteryDischarg     FeedEnergy     ConsumptionEr     Plant name       1     9452005170     Image: Normal     5 kW     703 W     0 W     68 W     21.4 kWh     12.7 kWh     11.5 kWh     20.3 kWh     cch-test | Serial number       Status       SolarPower       ChargePower       DischargePower       Load       SolarVielding       BatteryDischarg       ConsumptionEr       Plant name       Parallel         1       9452006170       Image: Normal       5 kW       703 W       0 W       68 W       21.4 kWh       12.7 kWh       11.5 kWh       20.3 kWh       cch-test |

## 5. Maintain

"Maintain" view is for remote setting & upgrade. For more instructions about remote setting, please refer to "LXP Hybrid Inverter Website Setting Introduction".

| LUIØPOWER™    |                             |                     | Cverview      | 🗋 Maintain             |                | User Center 🛛 💥 | Logout |
|---------------|-----------------------------|---------------------|---------------|------------------------|----------------|-----------------|--------|
| Remote Set    | Select plant first LUX TEST | ✓ 0022004007        | Read          |                        |                |                 |        |
| Batch Set     | Common Setting              |                     |               |                        |                |                 | ~      |
| Remote Update | Time (?)                    | yyyy-MM-dd HH:mm:ss | Set           | Com Addr               | [0, 150]       | Set             |        |
| Update Record | PV Input Mode               | No PV Panel         | ▼ Set         | Start PV Volt(V)       | [90, 500]      | Set             |        |
|               | Battery Type                |                     | v             | Lead-acid Type         | •              |                 |        |
|               | Lithium Type                |                     | • Set Battery |                        |                |                 |        |
|               | Neutral Detect Enable       | Enable Disable      |               |                        |                |                 |        |
|               | Application Setting         |                     |               |                        |                |                 | $\sim$ |
|               | Power Backup (?)            | Enable Disable      |               | Seamless EPS switching | Enable Disable |                 |        |
|               | Micro-Grid                  | Enable Disable      |               | PV Grid Off (?)        | Enable Disable |                 |        |
|               | Feed-in Grid                | Enable Disable      |               | Feed-in Grid Power(%)  | [0, 100]       | Set             |        |
|               | Fast Zero Export            | Enable Disable      |               | Normal / Standby       | Normal Standby |                 |        |
|               | Set Master or Slave (?)     |                     | ▼ Set         | Battery Shared         | Enable Disable |                 |        |
|               |                             |                     | •             | . Cot                  |                |                 |        |

18K monitor system also support batch setting function for distributors, so distributor can handle all settings for all inverters at one time. Please refer to "LXP Hybrid Inverter Website Setting Introduction" for batch setting function.

| LUISPOWER™     |   |               |            |                    | D M |                      |                 | er 👯 Logout |  |  |  |
|----------------|---|---------------|------------|--------------------|-----|----------------------|-----------------|-------------|--|--|--|
| Remote Set     | Inverter Sele   | ection        |            |                    |     |                      |                 | ~           |  |  |  |
| Batch Set      | Select All Clear Al   | I             | Sear       | ch by station name | ×Q  | Select All Clear All | Search by inver | ter SN X Q  |  |  |  |
| Remote Update  | Plant name  |               | EndUser    |                    |     | Serial number        | Plant name      |             |  |  |  |
| Lindate Record | 1 ParaTest2   |               |            |                    |     |                      |                 |             |  |  |  |
| opulie Record  | 3 XIEYING   |               |            |                    |     |                      |                 |             |  |  |  |
|                | 4 🔲 cch-test  |               | cch-test   |                    |     |                      |                 |             |  |  |  |
|                | 5 sznari test   |               | \$K#       |                    |     |                      |                 |             |  |  |  |
|                | 7 🗌 重庆光储车棚  |               | 深圳涌泉       |                    |     |                      |                 |             |  |  |  |
|                | 8 🔲 北京石暴山项目   | 1             | 深圳涌泉       |                    | -   |                      |                 |             |  |  |  |
|                | 20 • H 4 Page 1 of 1 • H O Displaying 1 to 17 of 17 items 20 • H 4 Page 0 of 0 • H Add to List Save List Displaying 0 to 0 of 0 items |               |            |                    |     |                      |                 |             |  |  |  |
|                | Inverter V  |               |            |                    |     |                      |                 |             |  |  |  |
|                | Upload List Delete All Save Result Save Success Result Save Failure Result Set  |               |            |                    |     |                      |                 |             |  |  |  |
|                | Status  | Serial number | Set Result | Fail Reason        |     | Parameter            | Value Set Resu  | lt          |  |  |  |
|                |   |               |            |                    |     |                      |                 |             |  |  |  |
|                |   |               |            |                    |     |                      |                 |             |  |  |  |
|                |   |               |            |                    |     |                      |                 |             |  |  |  |
|                |   |               |            |                    |     |                      |                 |             |  |  |  |



Introduction