SUNGROW



iSolarCloud Remote Monitoring and O&M Platform O&M Management User Manual

iSolarCloud-V141-(O&M)-UEN-Ver14-201808

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1 About This Manual

1.1 Target Group

This manual is intended for operators responsible for the iSolarCloudO&M management platform.

1.2 Symbol Explanation

0

 "NOTE" indicates additional information, emphasized contents, or tips helping you solve problems or save time.

1.3 Expression Explanation

Туре	Example
Select a certain menu or option	Select "Plant Overview"
Select multiple menus or options	Select "All plants -> Plant unit"
Select a certain button	Select 【Confirm】



2 System Introduction

2.1 System Introduction

iSolarCloud is a remote monitoring system based on the web. In the system, after creating plants and binding device data,

- Display basic plant information, such as today energy, total yield, irradiance, temperature, co₂ emission reduction, and revenue.
- Display detailed plant information, such as data curve, diagram, plant unit, inverter, and combiner box.
- View device running states including fault, alarm, and other information.
- Display system data in the chart form, for example, daily report, monthly report, and annual report, or you may customize the report format.
- Receive reports via the email, for example, running reports and fault reports.
- Display work order information of the plant.
- Locate the plants in Bing Map.
- View the monitoring videos on the devices in the system.
- Effectively evaluate the running status of the plant by using various charts and reports.
- Analyze and display performance of the plant in real time, for example, daily load curve of power plant and I-V curve.

2.2 System Requirements

Item	Recommended	Supported
Browser	chrome	IE9 or later
Resolution	1920*1080	1366*768

3 Login

In this chapter, the method of logging into the iSolarCloud O&M platform is described.

Step 1 Enter the website, for example, www.isolarcloud.com, to enter the login interface shown in the figure below.



Step 2 Enter the username and password in the login dialog box, and click [Login].



For the convenience of subsequent login, the user may select "Remember user name".

Login successfully

After login, the home page is shown in the figure below.



	SUNGROW				Ø	Setting Help Notice	Ó iwla Logart
kume 4	Yield trend Day ~ Daly soud yields(SMN) 1,500 -			Daily total yields: Power(W) 150	Company Culture		
Plant map Plant tot	1,000 - 1000 - 6000 -			· · · · · · · · · · · · · · · · · · ·	A - Construction Construction of a first of the construction		
Rest report	200 - 2235 0033 0255 0251 0333 045 Real-time power 133.078 uw Power installed 122060/0p	15 00.1 00.1 07.5 00.1 1000 1100 12 Today energy 169.1 100 Today jeid 33,342.9100Wh	1100 1400 1500 1400 1700 18 accore today 169.900crv Total income 11&276/lion CNV	CO2 reduction Equivalent plant 642.756million trees	Alarm 88.84% untreated	Order)
ESE Panorama N [®]	Yield rankswa Day 🗸 Top for		Performance ranking»	th - V Eap five - V kithykilip v	Treated 25 untreated 199	Treated 11 untreated 0	
Analysis S Asset Catabase	12013022000.		XY18082755000 2058011008 A1807157917 VY771100025 A1802797773	-	Duty Info Shift Leader: WWWW Operator On Duty: WWWWW Take Over Time: 2018-08-13 C Shift Time: 2018-08-13 09:17	9:13:00	
	0 100	200	0 100.1	000,000 200,000			



The platform has two themes: the blue one and the orange one. Users with the modification permission can change the theme in "Personalization" - "Theme". Reference can be made to chapter "15 User Center".

4 Page Description

The iSolarCloud platform interface includes two parts: navigation bar and displaying area

Navigation Bar

Menu	Description
Home	Displays the overall information on the plant of the user.
Plant map	Positions the plants of the user and displays overall information on the selected plant.
Plant list	Lists all plants of the user, and displays detailed information on specific plants.
Plant report	Displays running reports of the plants of a user.
Plant manage	Used to manage plants of the user.
Panorama	Used to perform global management on the meter, inverter, and combiner box of the user.
Intelligent Analysis	Analyzes and displays performance of the plants of the user.
Asset	Used to manage devices of the user.
Database	Used to upload or manage processed faults or other information.
Service center	Used to view the communication module status and perform renewal reminder setting.
User center	Used to set user information

Displaying Area

After clicking a menu in the navigation bar, the corresponding information is displayed in the displaying area.



5 Home

On this interface, information such as plant power, power generation, revenue, co_2 emission reduction, yield trend, yield rank, and performance rank can be viewed.

Step 1 Log into the system.

- Step 2 Select the "Home" on the navigation bar to enter the home page.
- Step 3 Select data displaying conditions (day, month, year, and top five/last five) to display different data.



6 Plant Map

On this interface, plants can be positioned on the map, and overall plant information can be displayed.

Step 1 Log into the system.

Step 2 Select the "Plat map" menu on the navigation bar to enter the "Plat map" interface.

Step 3 Select a plant to view its information on the map.



- After clicking the icon $\mathbf{\hat{v}}$ on the map, a box of plant information pops up, and the basic plant information can be viewed. Alternatively, you may click the plant name in the left plant list to switch to corresponding plant on the map.
- Unfold
 Normal
 Alarm
 Fault on the lower left of the map to display the information on the selected power plant.



7 Plant List

On the plant list interface, detailed information of a selected plant can be viewed, for example, the chart, diagram, plant unit, inverter, combiner box, and alarm information.

Step 1 Log into the system.

Step 2 Select the "Plat list" menu on the navigation bar to enter the "Plat list" interface.

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fur Home	2018-08-31	09.55 E								E Refred	htime Smin Q	80	informatio	
٢	top.	NO.	Plant name 0	Power installed	Real-time power *	Radiation 0	Daily power yield O	PR 0	Equivalent hours	Alarm 0	communication	View unit	tingle	
Plant map	+	1	T20170222003899834	600kWp	94,95kW(Jave-ter)		Today 11.8kWh/Yday 900kWh(nverter)		Today 0.19h	0	0	2		
Place List	+	2	7170214003804038	190kWp	44.54kW(Inverter)		Today 33kWh/Yiday 323kWh(Inventer)		Today 0.29h	0	0	2	Chart	
Plant report	+	3	W17110302189号68	20ktWp	8.39kW(Inventer)		Today 10kWh/Viday 73kWh (Inverter)		Today 0.50h	0	0	2	0 0 Dispan	
Analysis 1000r1	+	4	A180201080907838	36kmp	1.8kW(inverter)		Today 15.1kWh/Vday 10.1kWh(Inverter)		Today 0.42h	0	0	2	7 Plant unit	
88	+	5	2CH18031300589₩38	12kWp	(MUrverte)		Today (kith/Yday (kith@rverter)		Today 0.00h	0	0	2		
Manage	+	6	EV40000000820838	12kWp	0%(Growter)		Today OVMs/Yelay OVMs(inverter)		Today 0.00h	0	0	5		
Panorama	+	7	2519031300199554	SkWp	(MUnverter)		Today (k/th/Yday (k/th(inverter)		Today 0.00h	0	0	5	Combine	
traligent Analysis	+		SSEL800104824234	skmp	0%(Severter)		Today (K/M//Yday (K/M/(inverter)		Today 0.00h	0	0	2	Battery	
5	+	9	251903130099558	SkWp	0/AUtoverted		Today (k/kh/Yday (k/kh(inverter)		Today 0.00h	0	0	E.	board	
-	+	10	2518031300799825	12kWp	0%(Inverter)		Today (K/M/Yday (K/M/(inverter)		Today 0.00h	0	0	2	Alarm	
on dese														
	Alarm: 🔵 No	ormal 🧿 Ala	erm 🧔 Fault commun	ication: 🥥 Normal	© Offine			308 items, Page Size	10 v Prev. 1 2 3	4.4	31 Next Page	1 60	*	

Step 3 Click the button + on the left of the plant name to view detailed information on the plant.

-	1	T20170222003889438	600kMp	94.95kW(Inverter)					Today 0	L19h	0	0	
inicom Inicom	Chundersho ent Today Chundersho Dri Duty	Deily total yields(kWh) 120 80 60 40 20	Coi	ily total yields - 🕜 Power	Power(000) 100 00 20 0	Power normalized 0.1skwykwp Total power generation	Fault lovel	Occurre	nce Eme	Source	a devica	Fault	name
board	Monitor	00:00 01:00	02:00 03:00	0400 0500 0500 0700 0	00.00 09.00	178.736MWh			Check	all			

Step 4 Click the "View unit" to jump to the " View unit" interface.

7.1 Single Plant Home

Step 1 Enter the "Plant list" interface.

Step 2 Select the "Single plant home" on the right function navigation bar to enter the "Single plant home" interface.

	A. 120570222003889%84			Flat
Figure Home Plant map	Yield trend Dry v 4 205.06-51 23+	Visit • Rad Grap power Factoria Factoria • 00000 • 00000	Arbier	information Single plant home
Plant For Flant report		- 70,000 - 60,000 - 50,000 - 40,000 - 80,000 - 80,000 - 80,000	Teday Tennemus The Day Alter Tennemus 120-207C 310-207C 310-207C Thurdenbuser Thurdenbuser Thurdenbuser	Chart Chart D Diagram
Analysis moort	0000 0100 0200 0100 0100 0500 0600 0700 0600 9900 1300 13	- 10,000 00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00	Alarm C Order	14 Plant unit
BB Flatt Manage	Current power sk Jockw Power installed 600.000 kWp Total yeld 128.736 MWh	Save standard coal CO2 reduction statisticity of the standard coal Statisticity of the statisticity of the statisticity of the statistic of th	100.00% Untreated	Inverter
	Power Analysis of Inv. www.	Current year power yield 🚾 🔹	untreated g	box
Analysis Asset	turestient Total/DPCS Good Total/DPCS E6.07%	Ten thousand MMh Plan power generation Energy yield (Actual) O Cumulative plan completion rate %	Duty Info More>	Battery board
Catabase	Ceremal Total/PCS A little difference Tatal/PCS Usagest to rectify Total/PCS	66	Operator On Duty: Immunormal Take Over Time: 2018-08-13 09:13:00 Shift Time: 2018-08-13 09:17:00	Alarm
	A intro animeteo issuares Suggest to rectify TotalIPCS	03 0 1 2 3 4 5 4 7 8 9 10 11 12	Shift Time: 2018-08-13 09:17:00	

Step 3 Select a plant name in the plant list to display the detailed plant information.

7.2 Chart

Step 1 Enter the "Plant list" interface.

Step 2 Select the "Chart" on the right function navigation bar to enter the "Chart" interface.

	魚 ∧ ℙ ธ ⊗											Plant
ଜ	001ab_wife31-A180206886 •	time frame	2018-08-31-00:00-	2018-08-31 23/59	iii 15min v			Select query terry	iate Save query template	📰 🗆 Refresh time		information
Plant map	등 문 Power plant 용 ②Inverter 유 첫/Wireless device										ž	Single plant home
Plane list	001ab_wiFe31-A180206886 001ab_wiFe31-A180206886											√ Chat
Flant report	001ab_wife31-A18020687 001ab_wife31-A18020687											
Analysis report	001ab_wife31-A18020688 001ab#85-699438											4 Plant unit
88 Flat	001ab#8A1902010890528K 001ab#899190#145#58											inverter
Panorama	001ab#8994\$#149#05											Combiner
N [*] Intelligent		2018/9/31	00.00 2058/8/	31 81.00 2018/8/3	1 02/00 2018/8/3	2018/8/31 04:00	2018/8/31 05:00	2018/8/31 06:00 2018/8/31 07:0	2018/8/31 08:00	2018/8/31 09:00 2018/8/3	10.00	
S		Plant nar	me	Object name		Measurement point name		Display	Туре	Statistical pattern	Û	board
Asset Catabase												Alarm
	4 1 2 = 11 →											

Step 3 Select parameters of a corresponding device in the plant list to add a parameter curve.

Click "Plant" to add the parameter curve.

	⋒ ∩ ♥ ₫ ♥								Flart
fni Home	001ab_wife31-A180206886 •	time frame 2018-08-3	1 00:00- 2018-08-11 21:59	ISmin w	Select que	y template Save query template	🔢 🛛 🖯 Refresh time		informatio
Dant map	B B Power plant B B 001ab_wfiv31-A D bally energy gen	Unit-MWh		001ab_wifw0	L-A.18022968648298256725582/E-total			÷	Single plant hom
Place Est	 Power/Load Daily anargy gan Bootal(Energy me 								Chart
Flant report	 Daily energy con Ectstal (Energy Pac-mater Pac-inverter 	120000							20
Analysis	 Ebotal (Inverter) Dolly energy gen P-radiation-H Observation data 	100000					_		5
report BB Flore		80000							
Manage	Pac-Non-inverter Daily theoretical Pac-Non-inverter Daily energy pen	60000							Ð
reconne N	Ambient tempera Modula tamp	40000 2018/8/71 00:00	2018/8/71 01:00 2018/8/71 02:00	0 2018/8/31 03:00 2018/8/31 04:00	2018/8/31 05:00 2018/8/31 06:00 2018/8/3	1 07:00 2018/8/31 08:00 2018	/8/31 09:00 2018/8/31	10:00	box
Intelligent Analysis	R Primireless device								Bettery
Ē	07120_075011-0101000000	Plant name	Object name	Measurement point name	Display	Type	Statistical pattern		board
Asset	001ab_wHw31-A18020685	001ab_wilw31-A18020688648 1815	001ab_wHv31-A18020688648948	001ab_miliv31-A180206864894886/72558	/E-total	Bar w	Sample w	Ť	
1	001ab_wifw31-A18020687								Alarm
	001ab_wifw31-A180206888								
	4 1 2 = 31 →								*

Similarly, you may click "Grid-connected point", "Unit", "Energy meter", "Inverter", "Combiner box", "Weather station", and "Line protection device" to add their corresponding parameter curves.

Save query template

This function is used to save the current query condition as a template for the convenience of future query. The method is as follows:

Step 1 Select a corresponding plant/device from the plant/device list on the left.

- Step 2 Click the to-be-queried measurement point (parameter type), for example, "Total yield".
- Step 3 Click "Save query template", so that the current queried chart can be save as a query template.

Select query template

• Prerequisite

There have been query templates in the system.

· Operation method

Click "Select query template".

- Change the "time frame", "display interval", and "Refresh time" on the top of this page to have the curve displayed according to requirements.
- 0
- Click the option on the bottom of the page to change the colour of the curve.
- Click the option
 Bar
 on the bottom of the page to change the display form.
- Click the "Statistical pattern bar" Sample on the bottom of

the page to select the statistical pattern.

• Click the "Operation bar" in on the bottom of the page to remove the added curve.

7.3 Diagram

Step 1 Enter the "Plant list" interface.

Step 2 Select the "Diagram" on the right function navigation bar to enter the "Diagram" interface.



- Click on the top of the page to change the background colour of the wiring diagram.
- Click the icon 55 on the upper right to display the wiring diagram maximally.
 - Click on the upper right to refresh the page according to the selected time interval.

7.4 Plant Unit

A

Step 1 Enter the "Plant list" interface.

Step 2 Select the "Plant unit" on the right function navigation bar to enter the "Plant unit" interface.



	2018-08-31 10:05 🔄 Display nor	malized data				C Refresh t	ime train 0 5
	- 1+22282 AC_preser(200) 500 400 500 500 500 500 500 500 500 500	 >- >>三元前室 100 014 9630 011 06 	n na c'a na na na	Today sensing/0366	1+222 MM - 2+223 MM	19 21.5 06.0 06.1 07.0 06.1	4 0000 0946
	Plant unit 0	Inverter	Pnom/Power installed	Equivalent hours	AC_power 0	Daily power yield O	View the inverter
	1400388	1#MV原豆類1 1#MV原豆類2	1MW/1.03MW	0.8	530.72kW	T <u>oday</u> 823.93k0h/Yday4.536MWh	E.
••E	24世交勝重	24001(王定晋1 24001(王定晋2	1MW/1.07MW	0.776	483,89kW	Techard 23.03kWh/mday4.59hmh	R
6 1							

Step 3 A specific unit can be selected from theselection tree on the left of plant unit.

ଳ	@ ^	with of all loans. I Directory of					E Rebula		Plant Information
Home Plant map Plant trap Plant trap Plant trap transfer Analysis report	• = Upera = 1 (2-200 = 1 (2-200 = 1 (2-200)	2018/06-11.53.33 D Dupty no AC_press(-10) 400 400 000 000 000 000 000 0			Today anego(30%)	1-22 Mg			Single plant hom Oust Diagram Plant unit
Hant Marrage	=	Plant unit 0	Inverter	Pnom/Power installed	Equivalent hours	AC power 0	Daily power yield O	View the inverter	Inverter Combiner
N Intelligent Analysis S Asset									Battery board
Catabase	4123)	Alerra 😋 Normel 📀 Alerra 🖉 Fault	communication 😋 Normal 🖉 Offic	58		1 item	, Page Size 12 + Pres.	Next Page 1 Ge	Alarm

- Step 4 Data of the plant unit may be displayed as normalized data, so thatthe power curve is changed to normalized power, and daily yield curve is changed to equivalent hour curve.
 - Select the time on the top display history data.
 - Click the icon 🛐 on the upper right to display the curve maximally.
 - Click Refresh time Smin Control on the upper right to refresh the page according to the selected time interval.

7.5 Inverter

9

Step 1 Enter the "Plant list" interface.

Step 2 Select the "Inverter" on the right function navigation bar to enter the "Inverter" interface.

	魚へ ■ ± ◎										Flant
ណ	—	2018-08-01 10:10	Display normalized data	0						🛛 Refresh time 🛛 Smin 🗢 🔤	informatio
10	-		- 14NN/20081 14N	VIZE082 -+- 2+MVIZE0	81 -+ 24MV(20082		1+M	VIZEB1 1+MV	2882 24MV(288)	- 2+MV正定器2	Single
Plant map	· · · · · · · · · · · · · · · · · · ·	350					500				plant home
	—	300				EA.	400			,	~
Plant Fut		250									Chart
Ê		200					300				<u>,</u>
Plant report		150			/		200				Diagram
3		100			_		100				
Analysis		50									7
report		0 00 00	02,00	04.00 06.00	08.00	10:00	0	02.00	04:00 06:00	08.03 10.00	Fiam unit
88											- <u>-</u> -
Manage		Inverter 0	Prom/Power installed	DC power 0	AC_power 0	Daily power yield 0	Total power generation	Alarm	communication	Check combiner box/string	1
Panorama		14541(三元前1	500kw/560.56kmp	192.79kW	189.11kW	434.0500%	1.891.0Wh	0	0	PJ	Combiner
N [*] Inteligent		1#1/1/2/2/202	500kW/468.93kWp	189.71km	196.1kw	428.09km	1.86GWh	0	0	E.C.	0
Analysis											Battery
\$		24MV正交勝1	500kW/533.61kWp	198.31kW	194.65ktw	440.07kWh	1.826GWh	0	0	Lad.	board
Asset		2411/1812182	500kw/533.61kwp	102.09kw	189.32km	424.06kWh	1.779GWh	0	0	E	Alarra
Detabase											
	€ 1 2 3 →	Alerre 🖉 Normal 🤨	Alarm 😋 Fault communica	tier: 🔵 Normal 🏐 Offine					4 Items, Page Size 10 +	Prev. 1 Next Page 1 9	•

Step 3 Select a plant name from the plant list.

Step 4A specific inverter can be selected from the selection tree on the left of the inverter.

for the second s	R <>> ₩ ± >	2018-08-33 10:10	Display normalized data	•						Befreshtime (Smin C)	Hant Information
Mant map	* () #Re # () 1+8582	AC_power(kW) 350	 1#MV(2081 				Today energy(kith) 500 p	MN(主交器1			Single plant home
Hart list	○ 1 #HV送交務2 ■ 2 # 注意開業	300 250				Γ	400				,√ Chart
Plant report	_	150					200				0 Diagram
Analysis report		50					0				9 Plant unit
88 Plant	_	0000	62.00	0400 0800	08.00	10:00	00:00	0200 04	00 0600	0800 1000	Inverter
Manage	-	Inverter 🗘	Pnom/Power installed	DC power 0	AC_power 0	Daily power yield O	Total power generation	Alarm	communication	Check combiner box/string	Ð
Panorama		14601(主义器1	500kW/560.56kWp	176.18kW	172.5kW	445kWh	1.8910Wh	0	0	₽0	Combiner
N [®] Intelligent Analysis											Battery
S Asset											
e Detabase											Alarm
	<123→	Alarm 😋 Normal 🧿	Alarm 😋 Fault communica	tien 🧑 Normal 🏐 Offine					1 items, Page Size 10 *	Pres. 1 Next Page 1 G	*

Step 5 Click Display normalized data: on the top of this page to display normalized data, so that the power curve is changed to normalized power, and daily yield curve is changed to equivalent hour curve.

2018-08-31 10	10 🖭 Display normalized data							El Refeat time Smin 0 43
Power normalized					uivalent hound(000,600)	MU))))))))))))))))))))))))))))))))))))		
0.5				\square	68			
0,4					0,6			
0.2					0.4			
0,1					62			
00.00	0200 0	+00 0000	0600	10.00	8000	0200 040	0 0000	08.00 10.00
Inverter 0	Pnom/Power installed	DC power 0	AC, power 0	Daily power yield 0	Total power generation	Alarm	communication	Check combiner box/string
MARKER	500kin(560.56kMp	176.18kW	172.8kW	445/05	1.8916Wh	0	0	





Step 6 Click an inverter name, and the device page pops up.

		Plant	1#MV name : Device space : 开用使	逆変點1 」#送意意 Device model SG300	MX		Chart X
Device Basic Info Device ala	rm(open) Device alarm(closed)	Device operation Device or	der records				
Measuring point parameter						Data u	pdate time : 2018-08-31 10:15 🔘
Total active power	187.26kW	Daily energy generation	454kWh	Total energy generation	1.891GWh	Total DC power	190.58kW
Uab	323.8V	Ubc	323.3V	Uca	323.3V	la la	336.4A
lb	334.8A	k	330A	Reactive power	-5.28kVar	Internal air temperature	45°C
Udc-1	528.8V	ldc-1	361.5A	Ude-2	V	Mc-2	A
Ude-3	V	Ide-3	A	Ude-4	V	lde-4	A
Module A1 temperature	69.4°C	Module A2 temperature	74.1°C	Temp-M81	71.3°C	Temp-M82	76.4°C
Temp-MC1	69.9°C	Temp-MC2	74.0°C	1-string1	A	1-string2	A
I-string3	A	1-string4	A	1-string5	A	1-string6	A
1-string7	A	Daily energy generation equivalent hours	0.83h	Grid frequency	49.9Hz	Anode earth impedance	1,000kΩ
Rgnd-	1,000kΩ						
Device into							
Current state	Online	Device name	1#MV还交替1	Device coding	1	Operation time	2017-09-09 14:29:00
Device model	SG500MX	Manufacturer	SUNGROW	Specification		Delivery Date	

Step 7 Click the "Chart" on the upper right corner to view the curve.

20						
36 35 27						200
	Plant name	Measurement point name	Display	Type	Statistical pattern	Operation
	Plant name 12.8	Measurement point name 14MV/HEIIIII/12047/VTstal active power	Display	Type Line V	Statistical pattern Sample *	Operation
*	Plant name 11.8 12.8	Massurement point name IMMOREBELIZER/Visite active power IMMOREBELIZER/Visite active power IMMOREBELIZER/Visite active powers	Display	Type Line = Ror =	Batterical pattern Sample * Sample *	Cperation
*	Plant name इ.स. क्षेत्रे इ.स.	Measurement point name 14M/02EBB112047/15td action power 14M/02EBB112047/15td action power 14M/02EBB112047/17told DC power	Explay	Type Line * Ser * Line *	Batterio gatteri Sample * Sample *	Cperation
*	Plant name cut cut cut cut cut cut cut cut	Masserment point same InviceSIBILIDAT/Viola active point InviceSIBILIDAT/Viola active point InviceSIBILIDAT/Viola active point InviceSIBILIDAT/Viola Copiese InviceSIBILIDAT/Viola	Display	Type Line * 2n * Line * Une *	Hatirital patters Sample * Sample * Sample * Sample *	Ciperation Circle Circl

Click Refresh time	5min 🌲	on the upper right to
refresh the page according to	the selected til	me interval.

7.6 Combiner Box

Step 1 Enter the "Plant list" interface.

- Step 2 Select the "Combiner box" on the right function navigation bar to enter the "Combiner box" interface.
- Step 3 Select a plant name in the plant list to display the information on the combiner box of the selected plant.

	⋒ ∩ ■ ± ♥										Hart
for Home	-	2018-08-31 10:15	Combiner box Combiner box	Search						🛛 Refresh time - Smin - C - 5 5	information
٢	-	Combiner box	Total current(A)	Bus voltage(V)	Temperature (*C)	Alarm	communication	SPD	String current	Combiner box 1-1-1	Single
Plant map	* (U=R4	1-1-1	53.50	573.70	44.70	0	0	0	_	Total current 53.5 A	plant home
Place list	-		49.60	574.20	44.50	0	0	0		Bus voltage 573.7 V Total power 30.693 kW	Chart
≙	_									Total 15 string	오
Hart report	_	14-3	48.70	560.80	44.60	0	•	•	md.	String current	Diagram
Analysis	_	1-1-6	53.10	1,093.10	43.80	0	0	0	Π.	0 1.67A	9 Plant unit
88	_	141-5	41.20	568.40	43.90	0	0	0	Π.	01054	74
Manage	_	1-1-6	52.50	570.00	44.10	0	0	0	5	9 160A	Inventer
Parceana		1-2-1	51.50	591.80	45.00	0	0	0	Π.	01584	Combiner
N [®] Inteligent		1-2-2	48.60	587.52	46.00	0	0	0	Π.	© 1.60A	D
S		144	69.90	585.90	46.30	0	0	0		() 3.49A	board
Asset		1/2/4	56.70	591.50	46.70	0	0	0	Π.	() 158A	Alarm
Detabase										() 3.60A	
								_	_	C 3.194	
	€ 1 2 3 →	Alarre 🧔 Nor 😣	Alarm 🥥 Fault commu., 🥥 Nor 💮 O	ñ		19 iterra,	Page Size 10 + Pro	. <u>1</u> 2 N	ext Page 1 🔤		*



Step 4 Click a combiner box name to display detailed combiner box information.

	1-1-1 / // Chart X Plant name : Device space : 用用式 148元 148元 148元 2484 / Device model :										
Device Basic Info Device ala	rm(open) Device alarm(closed)	Device operation Device or	der records								
Measuring point parameter						Data up	sdate time : 2018-08-31 10:15 🔿				
Communication status		Total current	52.7A	DC bus voltage	587.5V	Total power	30.96kW				
Internal temperature	45.5%	lpv-1	3.67A	Ipv-2	3.65A	Ipv-3	3.64A				
lpv-4	3.54A	lpv-5	3.56A	lpv-6	3.58A	Ipv-7	3.55A				
lpv-8	0A	lpv-9	3.51A	lpv-10 3.51A		lpv-11	3.4A				
Ipv-12	3.4A	Ipv-13	3.48A	lpv-14	3.46A	lpv-15	3.51A				
Ipv-16	3.14A										
Device Info											
Current state	Online	Device name	1:1:1	Device coding	3	Operation time					
Device model		Manufacturer		Specification		Delivery Date					
	Soloct t	ha tima an	the ten die	anlay histo	ny data						
			the top us	spiay misto	Ty Uala.						
			-								
					entre en alta		and the data				
	 Click th 	e icon 🔛		ne upper r	ight to als	play the d	ata in the				
	table for	m.									
	6	Refrec	h time	5min	-						
	Click	_ Kenes	in unite	Juni	on	the unne	r right to				
						the upper	i ngin to				
	refresh	the page a	ccording to	o the selec	ted time in	iterval.					

7.7 Battery Board

Step 1 Enter the "Plant list" interface.

Step 2 Select the "Battery board" on the right function navigation bar to enter the battery board information interface.

	೩ ∿ ® ± 0		Ratt
ŵ	And and a second se	Device StarentD Search Q, Q, M, 11	internation
100		ARE. ARE. ARE. ARE. ARE. ARE. ARE. ARE.	Single
Plant mag	CEDERAL	·	plant have
		ARE. ARE. ARE. ARE. ARE. ARE. ARE. ARE.	
Pleetin	the second s	388. JEEL JEEL JEEL JEEL JEEL JEEL JEEL JEE	Chief
First report		ARE. ARE. ARE. ARE. ARE. ARE. ARE. ARE.	3
C	BUILES BUILES BUILES	257. 357. 357. 357. 357. 357. 357. 357. 3	Disgum
Analysis	B (F1+F100) E ge+0201	ARE	Plant unit
88	田 (8年40202 田 (8年40202	ARE. ARE. ARE. ARE. ARE. ARE. ARE. ARE.	121
Flert	田 四年40205 田 四年40205 田 四年40205		Droverter
M	間 (四年×0207 間 (四年×0255		3-
Periorama	* C124323		bos
N			
Analysis			Battery Intered
3			0
Accel			Alaem
Database			
	4123 4	🕒 Namel 🧶 Alam 🔮 Fadi 🕲 Office	
			~

7.8 Alarm

Step 1 Enter the "Plant list" interface.

Step 2 Select the "Alarm" on the right function navigation bar to enter the "Alarm" interface.

Time	lpen Cl	osed	018-08-31 8	Alarm names Alarm rs	ame Search					Refresh time Smin 🗘 🛼
Alar Alar Alar	m type : 💌 m level : 💌 m processing :	Fault : 25 🖉 Important 🖉 state : 🕑 Uncor	Alarm : 52 Secondary firm	■ Prompt : 765 💌 Advis @ General Sing 💌 Processing 📽 S	ettled				Transfer defect e	imination ticket Eatch close Report fault
8	Plant name	Alarm type	Alarm level	Alarm name	Device space	Device name	State	Occurrence time	Operation	Alarm name
	間谷地一期	Alarm	General	Warn run	水環2_A1507210958	B301	Unconfirm	2018-08-31 09:59:42	8.28	Device model Fault type code
8	周谷地一期	Alarm	General	Fan fit	水果2_A1507210958	B301	Unconfirm	2018-08-31 09:59:42	B. 🖓 🛞	Occurrence time Source
8	201F	Alarm	Secondary	Open Circuit	并同点_1#单元_1#MV 运算器1	HL26	Unconfirm	2018-08-31 09:53:45	${} \bigcirc \bigcirc$	Reporter
0	周谷地一期	Alarm	General	Warn run	78#1_A1507210902	D107	Unconfirm	2018-08-31 09:52:44	ē. 🖓 🛇	Unconfirm Pending
8	同谷地一期	Alarm	General	Fan fit	冷库1_A1507210902	D107	Unconfirm	2018-08-31 09:52:44	₿₽⊗	* Processing
0	TCL—MB	Alarm	General	Warn run	电站分区1,电站子件4	4#MV还交错1	Unconfirm	2018-08-31 09:44:31	B. 🖓 🛇	Settled Closed
8	TCL#B	Alarm	General	Temperature abnormal ala rm	电站分区1_电站子称4	4#MV送安蕃1	Unconfirm	2018-08-31 09:44:29	B. 🖓 😣	
0	TCL—期	Alarm	General	Warn run	电站分区1,电站子阵3	3#MV送克器1	Unconfirm	2018-08-31 09:42:27	₿₽⊗	
8	TCL—期	Alarm	General	Temperature abnormal ala rm	电站分区1_电站子件3	3#MV送交器1	Unconfirm	2018-08-31 09:42:25	B. 🖓 😣	
					105 items	Page Size 10 *	Prev. 1	2 3 4 11	Next Page 1 Ge	

Step 3 After select a plant, click 【Report fault】 on the upper right, and the "Report fault" box pops up.



Report fault					×
Report fault Plant name* Fault name* Fault type* Source* Fault details Fault picture	Please select Please select Please select click to choose	▼ ▼ ▼	Device type* Fault device* Fault level* Processing time*	Please select Please select Please select Please select	× * * * *
Step 4 Select eliminat eliminat	an unconfirm tion ticket】 c tion ticket" page	Report of need fault, of on the "Ope ge.	onfirmation lick the butto	on C [Trar open the "Tra	nsfer defect
Transfer defect	elimination ticket				×
Fault name Repair time Remind person Remind method Processing opinion	Warn run Emergency @ PC @ SMS	☑Mail	V Select people		
Step 5 Select a "Operat	a fault in the	open state,	click the butt	on 🛞 [Clos	se] on the

Close fa	ult	×
Fault na Process opinior	ame Warn run	
	Close fault	
0	 The operator can select the notification manner for fault confirmation for example, via the PC, SMS, or email, and the fault changes as processing status. Select a fault on the fault list page, and the detailed information and processing status are displayed on the right. The assigned person can log into the system to close the fault on the working order processing page. Select the time on the top display history data. Click the icon Sign on the upper right to display the curve maximal on the upper left to refresh the page according to the selected time interval. 	on, er d he y.



8 Plant Report

On the plant report page, group reports, plant reports (daily report, monthly report, annual report, and custom report), and report library can be viewed and exported. In addition, the user can create customized reports according to needs.

Step 1 Log into the system.

Step 2 Select the "Plat report" on the navigation bar to enter the "Plat report" interface.

		Group Rej	port																	
		ala Mares Trate	100%	Week	Act, Mares Trade	AGL (M	anth area	ACI. Diares Trade	Acc. (Year	ACI.	120%	Total	(5		-		-	
E Flore Lee		Deer .		77% 72%			7% 12%			77%	Beer Voie		77% 72%			A				
Hart report		Genun divis	ional ne	775	Group divi	sinnal nower	75	Group divis	ional nove	775	Group die	isional no	775	Group p		tion r.	Group	ower nener	ation r.	
			View			View	ge		View)	Gioup un	View		croup p	View		citotp (View		
	_	Plant repo	ort		_					_									_	
		111-111	~	Day	- matternet	~	anth			Year							5	5		
		\sim		$\overline{}$	\sim	$\langle \rangle$	۰	\sim	\sim	\checkmark	. 1			. 1					í È	
		Dai	ily report		Monthly	operation rep	ort	Yearly of	peration re	port	Statistical	table for i	inverte	Inverter	power gener	ration	E-plant	comparison	analysi	
			View			View		0	View			View			View		1	View	6 H	

Step 3 Select the desired report type according to requirements, for example, group report, plant report, and report library.

Report type	Description
Group report	Displays running information reports of all plants, for example, group power generation statistical report.
Plant report	Displays running information report of a single plant, for example, daily report, monthly report, and annual report.
Custom report	Users can create self-defined report formats according to needs.

Group report

Group Re	port												
AOL	AOL	Week	AOL	AOL	Month	AOL	ACK.	Year	AOL.	A01.	Total		
Shares Trade		100%	Shares Trade		100%	Shares Trade		100%	Shares Trade				
Deer		72%	Deer		72%	Deer		72%	Beer				
Vine		72%	Vine		72%	Vine		72%	Vine				
Cider	\sim	72%	Cider	\sim	72%	Cider	\sim	72%	Cider	\sim	72%	20 40 47 80 100 120	
Group divi:	sional po	wer ge	Group divi	sional po	wer ge	Group divi	sional p	ower ge	Group divi	sional po	wer ge	Group power generation r	Group power generation r
_					_			_			_		
												View	View

• Group power generation compensation report

Power generation data includes power generation and compensation power generation. The power generation is data collected in real time, and the compensation power generation is data calculated in later phase according to specific algorithm due to data loss caused by communication interruption or other reasons. Currently, daily, monthly, annual, and total compensation power generations can be viewed.

Plant report

Plant report					
			шĪ	шĪ	
Daily report	Monthly operation report	Yearly operation report	Statistical table for inverte	Inverter power generation	E-plant comparison analysi
View	View	View	View	View	View
Plant power generation re					
View					

• Plant compensation power generation report

This kind of report supports power generation statistics based on a day, month, and year. The power generation is data collected in real time, and the compensation power generation is data calculated in later phase according to specific algorithm due to data loss caused by communication interruption or other reasons.



Report library

Repo	ort library			
	Plant 171,23 TIME	Grid Point 171,23 TIME	171,23 TIME	
				01 02 03 r 5 06 07 08 09
Plant	t time-shared power g	Grid-connected point time	Inverter time-shared powe	Plant time-shared power g
	View	View	View	View
6	Click the thistory data	putton 2015- ta.	09-01 🗰 on th	ne upper left to view
	 Click the tag and the rest 	putton on the upper port is exported in	r right of the page to the .xls format.	o export the report,

• Grid-connected point time-shared power generation report

Month	⊖ Year ⊖ Total	2018-08	E	Search												Export	
					Grid-	connected point	Time sharing po	wer generation	Monthly operati	on report 2018-	08(Power installe	rd:kWp)					
	Vield(kWh)							Eo	ut-grid-energy(k	nh)			Power consumption(k@h)				
Time	Grid-connected point	Тір	Peak	Flat	Valley	Total	Тір	Peak	Flat	Valley	Total	Тір	Peak	Flat	Valley	Total	
1	并现点			6,209.6		6,209.6			6,209.6		6,209.6						
2	并现点			7,050.2		7,050.2			7,050.2		7,050.2						
3	并现点			4,380.2		4,380.2			4,380.2		4,380.2						
- 4	并同点			4,109.8		4,109.8			4,109.8		4,109.8						
5	并同点			5,610		5,610	-		5,610		5,610						
6	并同点			7,200.2		7,200.2			7,200.2		7,200.2						
7	神程点			6,779.9		6,779.9			6,779.9		6,779.9						
8	并同点			7,049.8		7,049.8			7,049.8		7,049.8						
9	并同点			6,660.1		6,660.1			6,660.1		6,660.1						
10	并同点			6,570		6,570			6,570		6,570						
11	并现点			5,519.8		5,519.8			5,519.8		5,519.8						
12	并风点			5,910		5,910			5,910		5,910						
13	并现点			2,430		2,430			2,430		2,430						
14	并现点			6,870		6,870			6,870		6,870						
15	并现点			6,660.1		6,660.1			6,660.1		6,660.1						
16	神风点			2,639.9		2,639.9			2,639.9		2,639.9						
17	并同点			1,170.4		1,170.4			1,170.4		1,170.4						
18	并现点			3,929.6		3,929.6			3,929.6		3,929.6						
19	20 372 dT			5790.2		5790.2			5 790.2		5790.2						

• Inverter time-shared power generation report

❀ Month ① Year ① Total	2018-08 📧 Search				Export
		1#MV運受聞1 Inverter inteval power ge	nerationMonthly operation report 2018-08/Po	wer installed:2.1MWp)	
Time	Tip(kWh)	Peak(kWh)	Flat(kWh)	Valley(kWh)	Total(kWh)
1			2,041.98		2,041.98
2			2,329.98		2,329.98
3			1,441.92		1,441.92
4			1,864.07		1,864.07
5			2,242.05		2,242.05
6			2,544		2,544
7			2,233.98		2,233.98
8			2,320		2,320
9			2,473.98		2,473.98
10			2,311.94		2,311.94
11			1,710.08		1,710.08
12			2,097.92		2,097.92
13			816		816
14			2,332.03		2,332.03
15			2,201.99		2,201.99
16			952.04		962.04
17			368		368
18			1,200		1,200
19			1,857.92		1,857.92

• Plant time-shared power generation revenue report

® Day 0	Month © Year ©	Total	2018-08	-31 🔠 Searc	•						E	Details Export
	Flant intend charge revenue Daily operation report 2016 08-31(Power installed.15MNbj)											
Time	Grid-connected point		Yield(kWh)	Subsidy revenue(CNV)		Eout-grid-energy(kWh)	Eout-grid-revenue(CNV)		Power consumption(kWh)	EC-revenue(CNY)	(discount)Electricity income(CNY)	(discount)total revenue(CNY)
		Тір			Tip			Tip				
		Peak			Peak			Peak				
2018-08-31	并同点	Flat	1,020.4		Flat	1,020.4		Flat				
		Valley			Valley			Valley				
		Total	1,020.4		Total	1,020.4		Total				
total			1,020.4			1,020.4						

Create self-defined report

On this page, the user can create customized reports according to needs.



Step 1 Select a report type, period, and the indicators that need to be displayed.

Report template		
Report type : Plant report *		
Report period : * : Month : Year : Total		
Selection indicator : Select All		Selected indicators :
Daily power yield		
Total yield		
Power	Add >>	
Power station power/load	<< Remove	
Daly generated power (ammeter)		
Accumulative generated power (ammeter)		
Daily -ammeter		
E Tabl anus concursting (semanted		

- Step 2 Click [Add] to add parameters to the self-defined report.
- Step 3 Click [Save as], and the report can be added to the "Plant report"-"Custom report" after it is named.



9 Plant Manage

9.1 Introduction

The Plant Manage interface includes "Work order process", "Alarm", "Duty Info", and "onduty log".

9.2 Defect Elimination Management

Defect elimination management is managing common faults and alarms in the plant and performing corresponding operations.

The basic procedure is as follows:

Step	Operation
1. Report the fault	Refer to chapter "10.2.1 Report the Fault".
2.Transfer the defect elimination	Refer to chapter "10.2.2 Transfer the
ticket	defect elimination ticket".
3. Confirm repair	Refer to chapter "10.2.3 Confirm Repair".
4. Close Job Order	Refer to chapter "10.2.4 Close Job Order".
5. Evaluation	Refer to chapter "10.2.5 Evaluation".

9.2.1 Report the Fault

Auto report

The system detects the fault, and displays the fault on the interface.

Manual report

Step 1 Click "Plant Manage -> Alarm".

Step 2 Click "Report fault", fill the table, and submit it, to report the fault.



R ∩ ® ± ⊗											
1.40_w(5+31_A330204100		Open C	osed								
1(a), wife31-A38020080	Ter	- 2017-08-31	E · 2	118-08-31	Alarr name Alarr n	erre Search					🔝 Rahmah time - Innin - I
(146, 949-31-4181098887 0146, 949-31-4181098887 0146, 949-31-418109887	Ala Ala Ala	mitype i 😵 milead i 😵 miprocessing	Fault 205 B Important R date R Uncor	8 Alarm (19 Secondary aliza 🛞 Pea	Connect 1,204 @ A @ General ding @ Processing @ 5	dvice : 62 entired				Transfer defect	administration bicket Batch class Report fault top
nai, sife33 AMONGINE		Plant name	Alarm type	Alsem level	Alarm name	Device space	Device name	State	Occurrence time	Operation	Alarm name
na an think the second s		T170214003 (SHS5)	Advice	General	Comm exception	#月の1,第元1	5549452-13	Unconfirm	2018-08-33 10:06:05	BEØ	Device model
naamaaanaanaanaa.	0	1170214003 89404	Advice	General	Comm exception	99041,9711	CL-60A-2	Unconfirm	2018-08-31 10-21-13	BBØ	Occurrence time
1689-910964		A170915999 803%58	Fault	Ganaral	Leak current sampling cha mail fault	A1709159958899@31	SHEK.1	Pending	2018-08-21 09:07:05	۵	Reporter
	0	A170915999 NE9436	Fault	General	BDCT sampling chain fit	A1709159940329835	960	Unconfirm	2018-08-03 09403-03	₿₽⊗	Unconfirm Pending
	.0	A170615998 529436	Fact	General	Rattery hardware overvolta ge	A170915999089434	949(1	Unconfirm	2018-08-31 09:03:09	BBØ	* Processing
	0	1205752220 03809531	Alarra	General	Warn run	井円(01,単元)	\$080K7L-M-7	Unconfirm	3118-08-31 07:37:29	BRØ	* Settled
		1201702220	Alann	Gereral	Tao B	1996/01,4671	5580K7L-M-7	Unconfirm	2018-08-01 07/37/29	DEO	
	0	7205702220 030809834	Alarre	General	Warn nan	mRd1,#E1	5589K7L-M-3	Unconfirm	2018-08-31 07-25-15	BRØ	
		1305703220	Alem	Gereral	6th siring revenue corre ala	开闭进入都行3	5580K15-M-3	Uncontinu	2018-08-31 07-25-36	BEØ	

9.2.2 Transfer Defect Elimination Ticket

Step 1 Click "Plant Manage -> Alarm".

Step 2 Select a fault, and click "Transfer defect elimination tick" on the operation bar, to transfer the fault information to the monitor on duty/operator.

C	pen (I	osed								
Tim	2017-08-31	E · 20	018-08-31	Alarm name: Alarm r	same Search					🗐 Refresh time 🛛 🗇 🗍 💈
Alar Alar Alar	n type i 🛛 🖻 n level i 🖉 n processing i	Fault : 205 Important state : Uncor	€ Alarm: 19 5 Secondary - i nfirm € Parc	Prompt : 1,204 A General fing Processing S	dvice : 69 iettled				Transfer defect	elimination ticket Betch close Report fault 🔂 Export
8	Plant name	Alarm type	Alarm level	Alarm name	Device space	Device name	State	Occurrence time	Operation	Alarm name
	T170214003 895835	Advice	General	Comm exception	非转点1_单元1	\$G49K5J-11	Unconfirm	2018-08-31 10:36:15	BCØ	Device model
8	T170214003 的电站	Advice	General	Comm exception	并构成1,单元1	CL-60A-2	Unconfirm	2018-08-31 10:21:13		Occurrence time
0	A170915999 883年38	Fault	General	Leak current sampling cha nnel fault	A1709159998的电站	SH5K_1	Perding	2018-08-31 09:07:05	D.	Reporter
0	A170915999 研究性は	Fault	General	BDC1 sampling chan fit	A1709159998的电话	SH5K_1	Unconfirm	2018-08-31 09:03:10	₿₿⊗	Unconfirm Pending
	A170915999 8的电站	Fault	General	Battery hardware overvolta g#	A1709159998824816	SH5K_3	Unconfirm	2018-08-31 09/03/09	BBØ	* Processing
8	T201702220 03885/EAG	Alarm	General	Wern run	并発症1_单元1	SG80KTL-M-7	Unconfirm	2018-08-31 07:37:29	BRØ	Settled Closed

Step 3 Select the maintenance time, remind person, and remind method.

Transfer defect	eliminatior	n ticket						×
Fault name	Comm excep	ption						
Repair time	Emergency	1		•				
Remind person				Select peopl	le			
Remind method	₽ PC 🖉	SMS	☑ Mail					
Processing opinion								

9.2.3 Confirm Repair

Step 1 Click "Plant Manage -> Work order process".

- Step 2 Select a fault, view detailed job order information on the operation bar, and if the information is correct, click "Confirm repair".
- Step 3 Select the processing method according to actual situation. Click "Back" to ignore the fault, and click "Confirm repair" to fill in the maintenance steps.
- Step 4 Click "Confirm" to finish the maintenance.

9.2.4 Close Job Order

Step 1 Click "Plant Manage -> Work order process".

Step 2 "Repair complete" is displayed on the operation bar corresponding to the fault. Select a close user, evaluate the job order, and close the job order.

9.2.5 Evaluation

Step 1 Click "Plant Manage -> Work order process".

Step 2 Select a reviewer on the operation bar corresponding to the fault to fill in the evaluation opinion.

9.3 Alarm

Click "Plant Manage" -> "Alarm" to enter the alarm interface. For the operations, refer to chapter 7.7.



9.4 Duty Information

Step 1 Click "Plant Manage -> Duty Info".

	record time : 2017-0	- 31 10-46 · 2018-08-31 10-46 ·	On Duty Monitor :	Search						Work order
ផ្ល								5	nift change On Duty	process
৷জ	On Duty Date	Company name	Duty Ordinal	On Duty Mervitor	Take Over Time	shift Time	On Duty Status	anduty log	Operation	0
Plant map	2018-08-13	RINGRAUTEST	1		2018-08-13 09:13	2018-08-13 09:17	Shift charge	<u>.</u>	B. 🕆	0=
	2018-08-10	REDELETEST	1		2018-08-30 14:01	2018-08-10 14:47	Shift change	.	B. 📋	Duty Info
, A.	2008-08-03	RUSRALTEST	1	fpdp	2018-08-01 14:13	2018-08-09 10:12	Shift charge	D.	B. 🕆	[¥]
E Faet report	2018-07-23	把IDBATEST	1	gorghm	2018-07-23 09:07	2018-07-24 12:00	Shift change	.	B. 📋	onduty log
C										
Analysis report										Emergency Plan
88 •										12m
Plant Manage										U El
										kind of ticket
Panorama										12m
N Intelligent										Electric two
Analysis										tickets
S										G
										Opt ticket
Database										0
										Smart alarm
							4 items, Pag	e Size 10 * Prev. 1	Next Page 1 Ge	analysis

Step 2 Click "On Duty" to add on duty information.

cord time : 2017-08-1	31 10.46 🗐 - 2018-08-3	1 10:46 • On Duty Moni	tor : Search							
									5	ift change On Daty
On Duty Date	Company name	Duty Ordia	Sal On Duty Monitor	Take	Over Time	Shift Time	On Duty Status	_	enduty log	Operation
2018-08-13	REDUSTEST	onduty (RistHEASTEST)						×	<u>.</u>	D. 🗇
2018-08-10	REDEALTEST	On Duty Date	2018-08-31		On Duty Ordinal *				E.	ē. 🝵
2018-08-03	RECTLOSTEST	Co Duty Manitas I		+	Oranatas On Data I			-	<u>.</u>	ē. 🖞
2018-07-23	REPRESENTES	On Duty Monitor		+	Operator On Duty *			-	2	e. 💼
		Take Over Time	2018-08-31 10:47		Shift Time					
		Current Note								
		Over Duty Note								
				On	Duty					

Step 3 Click "Shift change" to add shift information.

n Duty Date	Company nam	ne Duty Ordi	nal On Duty Menitor	Take Over Time	Shift Time On Duty Status	enduty log	Operatio
2018-08-01		onduty (initial)				× 🗈.	D. 1
2018-04-10		On Duty Date	2018-08-01	On Duty Ordinal	111	<u>.</u>	B. 1
2018-04-10		On Durke Manifest	sheed 22.4	Oranatas Ora Dutu		E.	E. 1
2018-04-10		On Duty Monitor	aDC01234	Operator On Duty	TO POLICE DO POLICIE N	.	B. 1
2018-04-02		Take Over Time	2018-08-01 01:21	Shift Time	2018-08-31 10:48	E.	E. 1
2018-04-02			11			.	D. 1
2018-03-26		Current Note				.	R. 1
018-01-27						D.	B. 1
017-11-08						D.	D. 1
017-10-11		Over Duty Note *				D.	D. 1
				Chift channa			

9.5 Onduty Log

Step 1 Click "Plant Manage -> onduty log" to enter the corresponding interface.

	record time : 2017-08-01 10-49	2018-08-31 10-49 🐑 Operator Or	n Duty : recording content :	record type : All * Search			Work orth
fri Home						Add 55 Esport	process
জ	Company name	Operator On Duty	record type	recording content	record time	Operation	
Plant map	_		Running method	dive	2018-08-01 01:17	D 🗇	0=
Elect Lat			Device operating status	11	2018-08-01 00:20	C> 🗇	Duty Info
(A)			Running method		2038-04-10 19:19	D 🗊	121
Flant report							onduty log
۹							
Analysis report							Plan
88 <							Ye
Plant Manage							Bectrical
B							kind of ticket
Panorama							()m
N Intelligent							Electric two
Analysis							tickets
5							Gê
							Opt ticket
Database							0
							Smart alarm
					3 items, Page Size 10 * Prev	1 Nest Page 1 Go	analysis setting

Step 2 Click "Add" to add logs.

onduty log()		×
Operator On Duty		+
record type		+
record time	2018-08-31 10:50	
recording content		
	Submit	

9.6 First ElectricalTicket

Manage work ticket

To ensure personal safety and prevent misoperations, the operation ticket or work ticket needs to be used during electrical operation such as maintenance, troubleshooting, and commissioning.

The "two tickets" needs to be used and managed in a standard, correct, and procedural manner. Therefore, it is necessary to create standard operation ticket and work ticket library.



First electrical ticket (the first kind of ticket)

Step 1: Click "Plant Manage" on the navigation bar to enter the corresponding interface.

Step 2: Click "Electrical kind of ticket", to enter the corresponding interface.

	⋒ ∧ ♥ ± ♥													Work order
ណ៍	001ab_wife31-A180206886	Create time: 2017-08	31 00:00 💌	- 2018-08-31 23	59 📰 No. No.	Person	is charge: Person in d	harge Search					23	process
থ	001ab_wife31-A18020686	O Not started 87	lending () Tre	nted 0 Comple	eted				Add Copy	Delete Start 1	he process Node s	talling Expor	t Print	
Plant map	001ab_wifw31-A180206886	0 Part	name	No.	Task name	Create time	Person in charge	Actual start time	Actual and time	Processing Sime	Procedure status	Current	Operation	0=
	001ab_wife31-A180206287											processor		CD= Duty Info
- cfba	001ab_wife31-A18020687						No da	ta found						[2]
E Fart report	001ab_wife31-A180206888													onduty log
C	001.46.66.6939年起													
Analysis	001ab/#A180201088052#K													Emergency
	001.46483029945394632													63
Real	001ab4829494529484													UE Electrical
C-31														kind of
Panorama														(-)
11														UE Electric two
Intelligent Analysis														kinds of tickets
5														
Asset														Opt ticket
Contraction of the														
														Smart
														alarm analysis
	4 1 2 _ 11 →													setting

Step 3 Select the corresponding plant on the left, and click [Add] to add the first electrical ticket.

001ab_w8v31-A18020988 •	Create time 2017-08-31 00:00	- 2018-08-31 2	159 🔄 No No.	Person	in charger Person in c	harge Search					5.5 2.2
001abi.w?v11-A18020688	© Not started @ Pending	© Treated © Comp	ieted				Add Copy	Delete Start	the process Node	staffing Expor	Print
001ab_w/lv11-A18020688	C. But sure		Task same	Country Kings	Barran in charac	Actual start time	Actual and lines	Benerative time	Beneral and allow	Current	Orestation
001ab_wiiiw11 A180200887	- Park land		Task faile	Create one	Person in charge	Picture start time	Access and only	rivering unit	Processie Plates	processor	operation
001ab_wiffwi11-A180206887					No di	eta faond					
001ab_wilw31-A18020688											
001ab386-Q80455											
001+6#A180201088052#											
00146838294689938											
001ab制的4号机的网站											

Operations including "Copy", "Delete", "Start the process", "Node staffing", "Export", and "Print" can be performed on the selected electrical ticket.

9.7 Second Electrical Ticket

Second electrical ticket (the second kind of ticket)

Step 1: Click "Plant Manage" on the navigation bar to enter the corresponding interface.

Step 2: Click "Electric two kinds of tickets", to enter the corresponding interface.

	® ® ® ®														Wath other
fri Home	001ab_wFw31-A180206285	Create time: 20	217-08-31 00:00	2018-08-31.2	159 📧 No. No	. Persor	in charge: Per	sos in charge 5e	arch					55	process
∅	001ab_wifw31-A180206286	© Not started	® Pending	© Treated © Comp	leted				Add	Copy Delete	Start the process	Node staffing	Export Print		() Alarm
Plant map	001ab_wife31-A18020688	0	Plant name	Ne.	Work task	Create time	Person in charge	Actual start time	Actual end time	Processing time	Procedure status	Current processor	Operation		8=
Plant Eat	001ab_wifw31-A18020687							No data found							Duty Info
٢	001ab_wFix31-A180206888														
Plant report	001ab486489488														
Analysis	001ab/EA18020108805285														Emergency
separt	0014648952494589484														Plan
1 HE 1	001ab4893498389498														Ϋ́в
Manage															Electrical kind of
2															ticket
Panorama															
N.															Electric two
Analysis															tickets
5															
Asset															Opt ticket
18															
															Smart
															alarm anabris
	€ 1 2 31 →														catting

Step 3 Select the corresponding plant on the left, and click [Add] to add the second electrical ticket.

001ab_wifv31-A18020686 •	Create times	2017-08-31 00:00	8 - 2018-08-31	23:59 📧 No. No.	Person	in charger Pr	erson in charge	arch				5.1 20
001ab_wiiv31-A180206886	() Not star	rted @ Pending	© Treated © Com	pleted				Add	Copy Delete	Start the process	Node staffing	Export Print
001ab_wiliv31-A18020686 001ab_wiliv31-A18020687	۰	Flant name	N6.	Work task	Create time	Person in charge	Actual start time	Actual end time	Processing time	Procedure status	Current processor	Operation
001ab_wifw31-A18020687							No data found					
001ab_wiliv31-A180205888												
001ablig6号的电站												
001ab很A180201088052舉												
001ab限的2号机的电站												
001ab被約4号机的电站												

Operations including "Copy", "Delete", "Start the process", "Node staffing", "Export", and "Print" can be performed on the selected electrical ticket.

9.8 Operation Ticket

Step 1: Click "Plant Manage" on the navigation bar to enter the corresponding interface.

Step 2 Click "Opt ticket" to enter the corresponding interface.

	⋒ ∩ ■ ± ⊗		G
ÎN	001ab_wife31-A180206886	Create firme 2027-06-31 0.000 🐑 2023-06-31 2.050 🐑 No. No. Operative Operative Operative task Operative task Operative task	process
r@1	001ab_wifw31-A180206886	Not started Pending O Treated O Completed Deport Print	
Plant map	001ab_wifw31-A180206886	Procedure provide a contraction of the contraction	Aure .
Ū	001ab_wifw31-A18020687	 Partn name Operation same Operation Ope	Duty Info
Plant list	001ab_wiFe31-A180206887	No data found	1521
_ 📋	001ab_wifw31-A18020688		onduty log
	001ab4864899438		-
Analysis	001ab/8A18020108805288		Emergency
report	001x648302494180408		Plan
88 (0014640394404189458		Ϋ́Ξ
Manage			Bectrical bird of
			ticket
Panorama			12m
N.			Electric two
Analysis			kinds of tickets
S			
Asset			Opt ticket
and the second			
			Smart
			alarm
	€ 1 2 = 31 →		setting

Step 3 Select the corresponding plant on the left, and click [Add] to add the operation ticket.

•	Create time:	2017-08-21 00:00	2018-08-3	1 23:59 📰 No. No.	Operati	on Operator	Operation task Operation	on task Search					A.A. K.W.
001ab.,wilv11.A18020686	© Not start	ed # Pending ()	Treated © Co	mpleted				Add Copy	Delete St	art the process	lode staffing	xport Print	
001ab_w6w11-A18020688 001ab_w6w11-A18020687	٠	Plant name	Ne.	Operation task	Create time	Operator	Operation start time	End of operation	Procedure status	Current processor	Download attachments	Operation	
001ab_w8v21-A18020687						No	data found						
001ab_w/6x31-A180206888													
001a64844899848													
001abi8A18020208905288													
001.46研約2時代約用は													
0144891424140201													

Operations including "Copy", "Delete", "Start the process", "Node staffing", "Export", and "Print" can be performed on the selected operation ticket.

9.9 Smart Alarm

Step 1: Click "Plant Manage" on the navigation bar to enter the corresponding interface.

Step 2 Click "Smart alarm analysis setting" to enter the corresponding interface.

	🔍 🎧 🖷 🖽 🍭						Citi
ណ៍	001ab_wiFe31-A180206885 +	Alarm name: Alarm name	Open state: All				process
ı®ı	001ab_wifir31-A18020686	NO.	Alarm name	Alarm target	Open state	Operation	()
	001ab_wiFir31-A180206886	1	DC bus how operation reliability	Combiner box	Shield	2	0.
	001ab_wiFe31-A180206887	2	String inverter operation reliability	Inverter	Shield	D	Duty two
-A.	001ab_wifir31-A180206887	3	Inverter stops naming	Seventer	Shield	2	
East report	001ab_wiFe31-A180206888	4	Plant stop operation	Power plant	Shield		enduty log
۳	001+6根6号的9号站	5	Plant operation reliability	Power plant	shield	2	
Analysis	001a648A18000108805286	6	DC bus box PV array current steady value	String	Shield		Emergency
	OOLAMBEST (HELENA	7	PV array constant current of string inverter	String	shield	2	0
Plant	OOLAD RED 4 TO REPORT	8	DC bus box PV amay low efficiency	String	Shield		Electrical
[3]		9	The group N-way tributary current is zero or low	String	shield	D	kind of ticket
Penorama		20	Low efficiency on string invester PV array	String	Shield		2
N.		11	DC converter box N-way branch current is zero or low	String	Shield		Electric two
Analysis		12	Communication Interruption	General Info	Open	D	kinds of tickets
S							
Asset							Opt ticket
Catabase							0
							Smart
							analysis
	€ 1 2						setting

Step 3 Select a plant from the left plant tree and enter the alarm name to view the alarm information, where when "Open state" is selected, alarms of different states can be viewed.

Step 4 Click the editing button on the operation bar to enter the parameter editing page.

Alarm name: Alarm name	Open state: All * Search			
NO.	Alarm name	Alarm target	Open state	Operation
1	DC bus box operation reliability	Combiner box	Shield	
2	String inverter operation reliability	Inverter	Shield	2
3	Inverter stops running	Inverter	Shield	2
4	Plant stop operation	Power plant	Shield	2
5	Plant operation reliability	Power plant	Shield	
6	DC bus box PV array current steady value	String	Shield	
7	PV array constant current of string inverter	String	Shield	2
8	DC bus box PV array low efficiency	String	Shield	2
9	The group N-way tributary current is zero or low	String	Shield	2
10	Low efficiency on string inverter PV array	String	Shield	
11	DC converter box N-way branch current is zero or low	String	Shield	
12	Communication interruption	General info	Open	2

Different alarms have different settable parameters, and execution frequencies are different.

inteligence analyse advise se	tting — 🖾 🗙
Alarm name :	DC bus box operation reliability
Open state :	Open 🛞 Shield
Execution frequency :	1440Minute/time
Judgment condition :	Power/Load_& > 30 %
Judgment rule :	eq:combiner box operation reliability is general: 5 % < Combiner box input dispersion ratio <= 10 % < Combiner box input dispersion ratio <= 10 % < Combiner box input dispersion ratio <= 20 %
	Confirm Confirm and copy to other plants

Step 5 After settings, click "Confirm and copy to other plants", so that the settings can be copied and used for other plants.

Step 6 Smart alarm analysis setting is completed, and the reported alarm information can be found in "Alarm".

9.10 Parameter Setting

Step 1: Click "Plant Manage" on the navigation bar to enter the corresponding interface.

Step 2 Click "Inverter parameter set" to enter the corresponding interface.

	® ® ®											
fri Home	e Dutikylant	Inverter model :	All * County	viregion) : All	* Grid type :	All * Ve	rsion no. : All	* Search				Plan
٢	· · · · · · · · · · · · · · · · · · ·								Initial grid co	nnection Parameter se	🕲 View history tasks	ĩe
Plant map		0	Plant name	Device name	Device SN	Inverter model	Country(region)	Grid type	Version no.	Device space	Operation	kind of
Plane Est	日本 日本 日本 日本		NIERAK电磁带发展	SGSKTL-D#1		SSSKTL-D				并同员_A1603317419	View No-instruction	ticket
r≜1			NEERACE (Parts)	SG40KTL-M#2		SG40KTL-M-V11				并现代_43603317419	View his-instruction	Ŭ.
Plant report	· · · · · · · · · · · · · · · · · · ·		MILEAUK电磁带发展	SGSEKTL-M#3		SGSOKTL-M				邦阿亞_A1603317419	View No-instruction	kinds of
۲			NEIWARK電話(研究電)	\$550KTL-M#4		SG33KTL-M				并Reff_A1603317419	View his-instruction	tickets
report	0 Fainin		MIEROA号絵(中放電)	5G34KJ		5034KJ				并死(①_A1603317419	Vew his-instruction	LE
88 •			NUBROWSKIPSED	SG60KTL		SG60KTL-Simple				并Ref_A1603317419	View his-instruction	
Plant Manage												Smart
周												alarm analosis
Panorama	· · · · · · · · · · · · · · · · · · ·											setting
N Inteligent	- C 4											12
Analysis												Srverter parameter
S												set
-												Q
Database												String verification
												+
									6 items, Page Size	10 * Prev. 1	Next Page 1 Ge	Device

Step 3 Select a plant device from the plants on the left, and click [Initial grid connection], and the dialog box of country and grid type pops up.

Initial	grid connection		×
Country (region) selection : Grid type :	Select countries and regions	v	
On / Off :	Boot	•	
	Cond down instruction		

After selecting the county and grid type, click 【Send down instruction】, and a prompt dialog box pops up.

Country selectio	Please enter the password	×	Ŧ	
Grid typ			Ŧ	
On / Of			Ŧ	

Enter the correct login password. Then a parameter setting interface pops up.

Parameter s	et	×
Task name :	2018-08-31 13:46Remote parameter setting	
Timeout perio	d :	
0.5h	Ŧ	
Declaration: received dev	Please confirm in advance whether setting information is accurate for the platform delivers data based on the ice attribute information updated latest.	
	Confirm and delivery Cancel	

Task name and timeout time can be set. The timeout time can be 0.5h, 1h, and 72h, and the user can select the time according to operation time and parameter setting time of the inverter. After setting, click [Confirm and



7 Jamis, Page Size 10 * Pres. 1 2 1 4 ... 246 Next Page 1 60

delivery], and the system generate the parameter delivery task. In addition, history tasks can be viewed.

View history task	la l					- 🛛 ×
2017-08-31	E - 2018-08-31 E Task name :	Search				
NO.	Task name	Operating Time	Complete time	Operator	Task status	Operation
1	2018-08-31 13:46Remote parameter setting	2018-08-31 13:47:53	2018-08-31 13:47:56	testapp	SuccessTriece FaledOffece TimeourOffece CancelDffece	View
2		2018-08-31 13:45:07	2018-08-31 13-45:19	testapp	Successifiere Failedoffiere Timourtoffiere Cancellifiere	View
3		2018-08-31 13:44:23	2018-08-31 13:44:26	testapp	Successifiere Faledoffere TimeoutOffere CancellPiere	View
4		2018-08-31 13:43:34	2018-08-31 13:43:37	testapp	Success2Fiece FaledOffice TimeocrOffice CancelDfiece	View
5		2018-08-01 13:42:15	2018-08-31 13:42:18	testapp	Success1Fiece FaledOffiece TimeoutOffiece CancelOffiece	View
6		2018-08-31 12:10:32	2018-08-31 12:10:44	testapp	Successifiere FaledOfiere TimesciOfiere CanceOffiere	View
7		2018-08-31 12:07:41	2018-08-31 12:08:10	testapp	Success100Fiece Failed0Fiece Timeour0Fiece Cancel0Fie ce	View
		2018-08-31 11:44:58	2018-08-31 11:45:14	testapp	SuccessOffice FaledIffice TimestOffice CancelOffice	View
		2018-08-31 11:39:34	2018-08-31 11:39:59	testapp	Success100Piece Failed0Piece Timeout0Piece Cancel0Pie ce	Vana
10		2018-08-31 11:36:20	2018-08-81 11:36:23	testapp	Successifiere FaledoPiece TimeoutoPiece CancelDPiece	View

Click "View" to view the current task. Click "Cancel the task" to cancel the task that can be cancelled.

Step 4 After setting the country and grid type, click 【Parameter set】, and the parameter setting page pop up on which system parameters/protection parameters/running parameters can be set.

	Inverter parameter set								
System	Protection parameter	Power regulation					Q Inverte	er parameter query	
NO.	Parameter name	Latest value	Numerical term	Data range (min.)	Data range (max.)	Coefficient	Unit	Remarks	
1	On / Off		Please select •						
2	Total energy generation compensation			-999_999	999,999	1	kwh		

After parameter setting, click 【Send down instruction】, then a dialog box pops up, and enter the login password into it.

			Inverter paramet	er set				- 🛛 ×
System parameter	Protection parameter	Power regulation					Q Inverte	r parameter query
NO. Pa	rameter name	Latest value	Numerical term	Data range (min.)	Data range (max.)	Coefficient	Unit	Remarks
	On / Off							
2 Total energy (generation compensation			-999,999	999,999	1	kWh	
			Please enter the pass	aord X				

When the password is verified, a parameter setting page pops up. Edit task and timeout time, and click 【Confirm and delivery】. The history tasks can be viewed.

Return to the parameter setting interface, click [Parameter set] to enter the parameter setting interface again, and click [Inverter parameter query] to view the set parameters.

			Inverter paramete	r set				- 🛛 ×
Syste	Protection parameter	Power regulation					Q inverter	parameter query
NO.	Parameter name	Latest value	Numerical term	Data range (min.)	Data range (max.)	Coefficient	Unit	Remarks
1	On / Off		Please select *					
2	Total energy generation compensation			-999,999	999,999	1	kWh	
			Send down inst	ution				
040	Deturn to	***	o o detino a lind	orfood a	مصط مانماد	V/iou	, histom	tooko I

Step 5 Return to the parameter setting interface, and click 【View history tasks】 to view the history parameter delivery tasks.



Inverter model :	All * Country	(region) : All	* Grid type :	All * Ve	arsion no. : All	* Searc				
							Initial grid corr	Initial grid connection Parameter set 🛞 View history tasks		
	Plant name	Device name	Device SN	Inverter model	Country(region)	Grid type	Version no.	Device space	Operation	
	T20184241234[V扫描的电路	SG33K3J-1			United Kingdom	50HZ		并网点1_单元1	View his-instruction	
	T20184241234IV扫描的电站	SG40KTL-M-1	A1511300229	SG40KTL-M				并网点1_单元1	View his-instruction	
	T20184241234IV扫描的电站	SG40KTL-M-2	A1511300697	SG40KTL-M				并网点1_单元1	View his-instruction	
	T20184241234IV扫描的电站	SG40KTL-M-3	A1512039673	SG40KTL-M				并网点1_单元1	View his-instruction	
	T20184241234IV扫描的电站	SG40KTL-M-4	A1602180893	SG40KTL-M				并网点1_单元1	View his-instruction	
	T20184241234IV扫描的电站	SG40KTL-M-5	A1604131135	SG40KTL-M				并网点1_单元1	View his-instruction	
	T20184241234IV扫描的电站	SG40KTL-M-7	A2017031414	SG40KTL-M				并网点1_单元1	View his-instruction	

View history tasks	lew history tasks - 13 1												
2017-08-31	E - 2018-08-31 E Task name :	Search											
NO.	Taak name	Operating Time	Complete time	Operator	Task status	Operation							
1		2018-08-31 13:50:03	2018-08-31 13:51:09	testapp	Success3Piece Failed16Piece Timecut3Piece Cancel0Piec e	View							
2		2018-08-31 13:48:37	2018-08-31 13:49:46	testapp	Success3Piece Failed4Piece Timeout0Piece Cancel0Piece	View							
3		2018-08-31 13:47:53	2018-08-31 13:47:56	testapp	Success1Piece FailedOPiece TimeoutOPiece CancelOPiece	View							
4		2018-08-31 13:45:07	2018-08-31 13:45:19	testap p	Successoffiece FailedOffiece TimeoutOffiece CancelDfiece	View							
5		2018-08-31 13:44:23	2018-08-31 13:44:26	testapp	Success1Piece Failed0Piece Timeout0Piece Cancel0Piece	View							
6		2018-08-31 13:43:34	2018-08-31 13:43:37	testapp	Success1Piece Failed0Piece Timeout0Piece Cancel0Piece	View							
7		2018-08-31 13:42:15	2018-08-31 13:42:18	testap p	Success1Piece FailedOPiece TimeoutOPiece CancelDPiece	View							
		2018-08-31 12:10:32	2018-08-31 12:10:44	testapp	Success4Piece Failed0Piece Timeout0Piece Cancel0Piece	View							
9		2018-08-31 12:07)41	2018-08-31 1208:10	testapp	Success100Piece FailedOPiece TimeoutOPiece CancelOPie ce	View							
10		2018-08-31 11:44:58	2018-08-31 11:45:14	testap p	SuccessOPiece Failed1Piece TimeoutOPiece Cancel0Piece	View							

Select a time range to view history tasks during the corresponding time period.

Step 6 Return to the parameter setting interface, and select an inverter model, country, grid type, and version to view the corresponding devices.

Inverter model :	All • Countr	y(region) : All	* Grid type :	All * Ve	ersion no. : All	* Searc	<i>t</i> h		
							Initial grid con	nection Parameter se	• 🕔 View history tasks
	Plant name	Device name	Device SN	Inverter model	Country(region)	Grid type	Version no.	Device space	Operation
	T20184241234IV扫描的电站	SG33K3J-1			United Kingdom	50HZ		并风点1_单元1	View his-instruction
	T20184241234IV扫描的电站	SG40KTL-M-1	A1511300229	SG40KTL-M				并风惊1_单元1	View his-instruction
	T20184241234IV扫描的电站	SG40KTL-M-2	A1511300697	SG40KTL-M				并网点1_单元1	View his-instruction
	T20184241234IV扫描的电站	SG40KTL-M-3	A1512039673	SG40KTL-M				并网点1_单元1	View his-instruction
	T20184241234IV扫描的电站	SG40KTL-M-4	A1602180893	SG40KTL-M				并网点1_单元1	View his-instruction
	T20184241234IV扫描的电站	SG40KTL-M-5	A1604131135	SG40KTL-M				并冈市1_单元1	View his-instruction
	T20184241234IV扫描的电站	SG40KTL-M-7	A2017031414	SG40KTL-M				并网络1_单元1	View his-instruction

After parameter setting, "msgPrompt" on the right corner displays the number of messages.

59 items, Page Size 10 * Prev. 1 2 3 4 ... 245 Next Page 1 Co

9.11 String Verification

Step 1: Click "Plant Manage" on the navigation bar to enter the corresponding interface.

Step 2 Click "String verification" to enter the string verification interface.

Step 3 Click [Set verification rules]. Default settings are displayed during the first visit, and then the latest settings are displayed during subsequent visit.

String verification configurat	on	- 🛛 ×
Judgment condition :	Power station power/load %	
Access string exception rules :	String is enabled but string current <	
Missing rules :	String not enabled but string current >= A	
No access rules :	String is not enabled and string current <	

Step 4 Configure verification rules. Values of the data of no access rules and data of missing rules are the same. Click 【Confirm】 to save the setting.

Click [Confirm and copy to other plants] to copy the same rule for the selected plant.

Step 5 Return to the string verification interface. The page displays the latest verification records when you enter the interface for the first time, and if there is no latest data, "No data, after clicking the check button the system will process string verification and display the verification results." is displayed.



Device type :	String inverter	¥	Verification												Bat	ch enable	Batch dia	sabled	Set ve	ification rules	s 🕓 Expo
Total O Station	equipment,Participate	in verifi	ication © St	stion, Comm	sunication in	nterruptio	in O PCS	Check time	e: Verific	ation statu	s i ⊯ No	t connected	Acces	s string exc	eption	🗷 Missing	🕑 To be r	echecked			
•	Device name				Dev	rice space						Strin	9				Verification st	tatus		Enable	or not
					No data	, after clic	king the ch	veck button	the system	m will proce	ess string v	erification a	nd display ti	he verificatio	on results						
	a sector of the short of the							the Freehold	la di stata						data a	and a second second					about the
record disappea Abnorm	te so pe re-checked is t rs. al communication equi	ipment (does not pa	or me syste	m record at	ation. Click	ser adjusts k on Plant I	the Tenab	er/Combin	iner Box to v	iew it.	re saning pro	orem is repa	sireo año cli	ck trië	venny" bu	tton again to	verny. Afte	er oner strang) problèm is s	lorvea, the
														oe Size 10			2 3	4	174	Next Pa	n 1 60

Step 6 Click [Verification] to display the verification result.

• If there is abnormal data, it will be displayed on the interface.

Device type :	String inverter *	Verification		Batch enable Batch disabled 🔅 Set	verification rules
Total 2 Station	equipment,Participate in verifi	ication 2 Station, Communication interruption 0 PCS Check time: 2017-1	1-22 16:40:33 Verification status : 🕑 Not connected 🕑 A	ccess string exception 🕑 Missing 🕑 To b	e rechecked
0	Device name	Device space	String	Verification status	Enable or not
	SG33KTL-M#1(說)	并同点_A1607140413(聞)	String3	Access string exception	
8	SG33KTL-M#1(南)	并现点点A1607140413(篇)	String6	Access string exception	
	SG33KTL-M#1(南)	并现成点A1607140413(限)	String7	Access string exception	
	SG33KTL-M#1(肥)	并网点_A1607140413(圈)	String8	Access string exception	
	SG33KTL-M#1(閏)	并现成_A1607140413(图)	String9	Access string exception	
8	SG50KTL-M#3(韓)	并现点_A1607140413(圈)	String9	Access string exception	
	SG50KTL-M#3(南)	件同(机_A1607140413(閘)	String6	Access string exception	
	SG50KTL-M#3(閱)	并阿杰杰_A1607140413(圈)	String4	Access string exception	
	SGSOKTL-M#3(增)	并现点_A1607140413(图)	String3	Access string exception	
	SG50KTL-M#3(韓)	并现成_A1607140413(間)	String2	Access string exception	
Remark: The sta record disappea	te to be re-checked is the tem rs.	porary status of the system record after the user adjusts the "enabled" stat doar out participate in string varification. (Lick on Plant Lick - Invester/Comb	tus. Confirm whether the string problem is repaired and click th inar Box to view it	e "Verify" button again to verify. After the st	ring problem is solved, the
ADHOM	an communication equipment	sever me per outpeter in come economication calls, on Plant DSC * Invester/Comm	11	Litems, Page Size 10 Y Prev.	2 Next Page 1 Go

• If there is no abnormal data, "No abnormal string was found in your power station string verification." is displayed.



On the string verification interface, only data of the string inverter and the combiner box can be queried.

Step 7 Select [Enable or not] to enable or disable a single string.

Device type :	String inverter * Veri	Scation	1	Batch enable Batch disabled	verification rules 🔀 Export
Total 2 Station	n equipment,Participate in verification	2 Station, Communication interruption 0 PCS Check time: 201	11-22 15:40.33 Verification status : 🗷 Not connected 🖉	Access string exception 🕑 Missing 🕑 To b	e rechecked
0	Device name	Device space	String	Verification status	Enable or not
	SGIDKTL-M#1(R)	并现在_A1607140413(雨)	String3	Access string exception	
0	SG33KTL-M#1(國)	并现点_A1607140413(图)	Stringfi	Access string exception	
8	5G33KTL-M#1(歳)	并完成_A1607140413(間)	String7	Access string exception	
	SG33KTL-M#1(南)	并现点_A1607140411(周)	5tring8	Access string exception	
0	SG33KTL-M#1(南)	并现点_A1607140413(圈)	String9	Access string exception	
8	SGSOKTL-M#3(R)	并死点_A1607140413(限)	String9	Access string exception	
8	SGSOKTL-M#3(B)	并死抗_A1607140413(微)	5tring6	Access string exception	
8	SGSOKTL-M#3(藏)	并同动_A1607140413(国)	String4	Access string exception	
	SGS0KTL-M#3(欄)	用现点_A1607140413(篇)	String3	Access string exception	
	SGSOKTL-M#3(R)	即现点_A1607140413(限)	String2	Access string exception	

Step 8 Select the string data and click [Batch enable/Batch disabled] to perform operations in batch.

Device type :	String inverter	fication		Batch enable Batch disabled	verification rules
Total 2 Station	n equipment,Participate in verificatio	n 2 Station, Communication interruption 0 PCS Check time: 2017-1	11-22 1640:33 Verification status : 🕑 Not connected 🛛 🖉 J	Access string exception 🖉 Missing 😢 To I	se rechecked
0	Device name	Device space	String	Verification status	Enable or not
	SG31KTL-M#1(B)	并同点_A15071404110图)	String3	Access string exception	
	SG33KTL-M#1(聞)	并用:但_A1607140413(戰)	String6	Access string exception	
	SG33KTL-M#1(間)	并现点_A1607140413(氧)	String7	Access string exception	
	SG33K7L-M#1(閘)	并同:但_A1607140413(隋)	String8	Access string exception	
	SG33KTL-M#1(順)	門問:但_A1607140413(間)	String9	Access string exception	
	SGSDKTL-M#3(B)	开同语_A1607140413(閏)	String®	Access string exception	
	SG50KTL-M#3(IB)	并同点_A16071404130戰)	String6	Access string exception	
	SGS0KTL-M#3(III)	并用ef_A1607140413(增)	String4	Access string exception	
	SG50KTL-M#3(開)	并同:但_A16071404130限)	String3	Access string exception	
	SGS0KTL-M#3(R)	評問:但_A1607140413(例)	String2	Access string exception	

Step 9 Click the button "Export" to export the verification data.

9.12 Device Upgrade

On this interface, the version of the software associated with the device in the plant system can be upgraded remotely. The steps are as follows:

- Step 1 Click "Plant Manage -> Device upgrade" to enter the device upgrade interface.
- Step 2 Select, from the device list bar on the left, the plant whose device needs to be upgraded. (Batch operation is feasible).
- Step 3 Select "Device type" and "Device model" and import the device serial number. Currently, the following two importing methods are available:
- Fill in the device serial number.
- Click "Device SN import" to import SNs in batch.
- Step 4 Select a device internal module, for example, ARM, BAT, and BOOT. Enter the version corresponding to the module.

Step 5 Select a device and click "Device upgrade".

SUNGROW

Device type	e : Inverter Y Device	model : SGBKTL-	M + Devic	e SN : Please enter SN r	number 9. Device S	N import Module :	Not selec * Module	version :	Search Reset
								Device upgrad	🕙 🕓 View history tasks
2	Plant name	Device SN	Device type	Device model	Online state	Current version	Device name	Device space	Operation
8		A20180404999	Inverter	SG8KTL-M	Offline	Check version	INHT10K_1		View his-upgrade
		A1802010929	Upload upgrade	package and select	t upgrade s	× Check version	SG50KTL-M		View his-upgrade
8		A20180404999	Upgrade select File			Check version	SG8KTL-M_1		View his-upgrade
8		A20180404999	*0 loorada parkaga no p	ore than 10M compressed	nackage for tin format	Check version	SGSK-D_1		View his-upgrade
8		A1802090123	upgrade package name	for software version numbe	() ()	Check version	SG50KTL-M_1		View his-upgrade
8		Y1801030548	Upgrade strategy :			Check version	SG6K-D_1		View his-upgrade
8		dh	 Upgrade to higher vers Can be upgraded to low 	ion ver version		Check version	SGSK-D_1		View his-upgrade
2		A1805210304	Can be upgraded to the	e same version		Check version	SG20KTL-M_1		View his-upgrade
8		A1804020590		Upgrade Cancel		Check version	SG8KTL-M_1		View his-upgrade
8		A1805210304		Provide The	Ground	Check version	SG8KTL-M_1		View his-upgrade

Step 6 Select an "Upgrade file", select an "Upgrade strategy" according to requirements, and click "Upgrade".

View history upgrade records

Click "View his-upgrade" to view history information.

Equipment upgrade his	iquipment upgrade history — 🖾 1												
Device type : Inverter Device name : INHT10K_1		Device n Device s	odel : SG8KTL-M	80404999									
NO.	Upgrade start time	Upgrade end time	Upgrade status	Reason for failure	Executor	Operation							
1	2018-07-23 11:10:50	2018-07-23 13:10:51	Timeout		ghm	Upgrade details							
2	2018-03-14 14:07:14	2018-03-14 14:38:13	Timeout		test123	Upgrade details							

10 Asset

The asset interface includes submenus like "Device Info", "Mat. Mgt", and "Spare parts".

10.1 Device Information

Step 1 Select "Asset -> Device Info".

	魚 ∿ ▣ ≞ ♡								Device Infe
fri	001ab_wife31-A18020686 +	Device name Device of	ading	Search Reset					18-
াজ	[2] Inverter [2] Wireless device	Device name	Device coding	Device model	Manufacturer	Operation time	Current state	Operation	Mat. Mgt.
Plant map	001ab_wifw31-A18020686	W91 V21	247	WIFI V31	SUNSROW	2018-06-09 09:15:19	Available	0.0	5
Flore Fot	001ab_wifw01-A180206886	\$650KTL-M_378	178	\$550KTL-M-V2	SUNGROW	2018-06-09 09:15:19	Available	ib. i>	Spare Part
ı ۲	001ab_wife31-A18020687	\$650KTL-M_3	1	SG4K-D	SUNSROW	2018-06-14 09:30:47	Available	D. 12	Overhaul
Plant report	ODIAD_WHWIT-ALBOOMET	\$050KTL-M-V2_6	6	\$65083	SUNSROW	2018-06-19 00:00:00	Available	0.0	
Analysis		164,2	2	\$Q3K-5	SUNGROW	2018-06-20 17/36/18	Available	0.0	
mport		\$617KTL-M_3	3	SG17KTL-M	SUNGROW	2018-06-21 08:53-42	Available	D. 🕞	
88 Plant		SGSOKTL-M_4	4	\$650KTL-M-V2	SUNSROW	2018-06-26 19:45:40	Available	D. D	
Marage [-3]									
Panorama									
\mathcal{M}									
Analysis									
S. Aver									
etabase									
	€ 1 2 = 31 →					7 Iterro, Page Size	10 * Pres. 1 No	n Page 1 Go	

Step 2 Click the [Edit] button to edit the device information.

Device name Device co	ding	Search Reset				
Device name	Device coding	Device model	Manufacturer	Operation time	Current state	Operation
WiFi V31	247	WIFi V31	SUNGROW	2018-06-09 09:15:19	Available	B. 🗈
SG50KTL-M_178	178	SG50KTL-M-V2	SUNGROW	2018-05-09 09:15:19	Available	Tò. T>
SGS0KTL-M_1	1	SG4K-D	SUNGROW	2018-05-14 09:30:47	Available	10. IZ
SG50KTL-M-V2_6	6	\$650K3	SUNGROW	2018-05-19 00:00:00	Available	Eð. E2
38-5_2	2	\$G3K-5	SUNGROW	2018-05-20 17:36:18	Available	D. D
\$617KTL-M_3	3	SG17KTL-M	SUNGROW	2018-06-21 08:53:42	Available	D. D
SG50KTL-M_4	4	SG50KTL-M-V2	SUNGROW	2018-06-26 1945:40	Available	D. D

Step 3 Modify the device information according to requirements, and click [Save] after modification.

Device Info			×
Device name WiFi V31	Purchase Date	Ė	*
Device coding 247	Operation time	2018-06-09	*
Device model WiFi V31 *	Supplier		
Device Location	Device Price(CNY)	-	
Manufacturer SUNGROW	Depreciation rate(%)	-	
Longitude	Warranty expiration date		*
Latitude	Scrapped due time	Ē	*
Specification A180206I864	Delivery Date		
	Save		

Step 4 Click the 【View】 button to view the device information.

Device name	Device coding	Device mode	el Manufactur	ar -	Operation time	Current state	Operation
ME 931	247	WiFi V31	SUNGROV	20	18-06-09 09:15:19	Available	DO
SGISKTL-M_178	Device Detail Info			- 🛛 :	× 8-09.09.13.19	Available	BD
SGSOKTL-M_1	Device name	WIFI V31	Purchase Date		5-14 09:30:47	Austable	BD
\$550K7L-M-V2_6	Device coding	247	Operation time	2018-06-09	5-19 00:00:00	Available	00
36423	Device model	WiFi V31	Supplier		5-20 17/36/18	Available	0.0
SG17KTL-M_3	Device Location		Device Price(CNY)		5-21 08/53:42	Available	0.0
SG50KTL-M_4	Manufacturer	SUNGROW	Depreciation rate(%)		5-26 19:45:40	Available	0.0
	Longitude		Warranty expiration date				
	Latitude		Scrapped due time				
	Specification	A180296864	Delivery Date				

Step 5 Click the device name to view basic device information, device alarm (open), device alarm (closed), device operation record, and device order records.

Device name Device co	oding	Search Reset				
Device name	Device coding	Device model	Manufacturer	Operation time	Current state	Operation
\$G30KTL#N809	20	\$G30KTL-V211	SUNGROW		Available	B. D
SG3DKTL#NB36	28	\$630KTL-V211	SUNGROW		Available	B. 12
SG30KTL#NB20	10	SG30KTL-V211	SUNGROW		Available	B. D
SG30KTL#N835	27	\$G30KTL-V211	SUNGROW		Available	ið. ið
SG30KTL#NB16	6	SG30KTL-V211	SUNGROW		Available	B. D
\$G30KTL#N828	18	\$G30KTL-V211	SUNGROW		Available	B. D
SG30KTL#NB17	7	\$G30KTL-V211	SUNGROW		Available	ið. 🗊
\$630KTL#N819	9	\$630KTL-V211	SUNGROW		Available	B. D
SG30KTL#NB08	19	SG30KTL-V211	SUNGROW		Available	i.
SG30KTL#NB32	24	\$G30KTL-V211	SUNGROW		Available	E. E

• Click the "Device Basic Info" to view measurement point parameters and device information.

			Plant name :]	SG30 Device space : 1	DKTL#NB09 Device model SG3	0KTL-W211		,
Device Basic Info	Device alarm	(open) Device alarm(closed)	Device operation Device orde	r records				
Measuring point pa	arameter						Data	gelate time : 2018-07-21 20:25 🔘
Total a	ative power	ow	Daily energy generation	146kWh	Total energy generation	114.383MWh	Total DC prover	ow
	Uab	229.8V	Ubr	230.1V	Ues	230.5V	Is	0.84
	1b	0.54	k	0.8A	Reactive power	0.41kVar	Grid frequency	50Hz
Internal air b	emperature	47%C	Ude-1	299.9V	Ude-2	300.5V	Mc-1	0A
	Ide-2	A0	Daily theoretical energy generation	200.354kWH	Daily energy generation equivalent hours	4.87h	Pac-Norn.	CkW/kWp
	Vp-theory	5.57h						
Device Info								
0	urrent state	Offline	Device name	SG30KTL#N809	Device coding	20	Operation time	
	- Income to a	EGRAPH VOLL	Mandatan	TINGROW	Frankforden		Definition Dates	

 Click "Device alarm (open)" to view device alarm information that is not closed, and select a time range to view the fault record within the specified time range.

		Plant name :	SG30KT	FL#NB09 Device model :563	IOKTL-V211		,					
Device Basic Info Device al	wice Basic Info Device alarm(open) Device alarm(obsed) Device order records											
time frame: 2017-08-31	2018-08-31	Fault name: Fault name 5	sarch									
Alarm level : R Important R Alarm processing state : Uncort	arm howi : @ Draportant : @ Sanonday : @ General arm processing state : @ Dranofing : @ Fording : @ Settled											
Device name	Device coding	Fault type	Alarm level	State	Fault name	Reporter	Occurrence time					
SG30KTL#N809	20	Prompt	General	Uncarliem	Running state	system	2018-07-21 05:19:54					
SG30KTL#NB09	20	Prompt	General	Unconfirm	Operation	system	2018-07-21 05:19:54					

 Click "Device alarm (closed)" to view device alarm information that is closed, and select a time range to view the fault record within the specified time range.

		Plant name :	SG30KT	CL#NB09 Device model :563	0KTL-V211									
Device Basic Info Device alar	rm(open) Device alarm(closed)	Device operation Device ord	ier records											
time frame: ┥ 2018-07	Search													
Alarm level : 🕑 Important 🕑 Se	econdary 🕑 General													
Device name	Device name Device coding Fault type Alarm level State Fault name Reporter Occurrence time													
SG30KTL#NB09	20	Prompt	General	Closed	Startup	system	2018-07-21 05:17:56							
SG30KTL#NB09	20	Prompt	General	Closed	Standby	system	2018-07-21 05:16:40							
SG30KTL#NB09	20	Prompt	General	Closed	Startup	system	2018-07-21 05:15:22							
SG30KTL#NB09	20	Prompt	General	Closed	Standby	system	2018-07-21 05:14:64							
SG30KTL#NB09	20	Prompt	General	Closed	Startup	system	2018-07-21 05:12:43							
SG30KTL#NB09	20	Prompt	General	Closed	Standby	system	2018-07-21 05:12:03							
SG30KTL#NB09	20	Prompt	General	Closed	Running state	system	2018-07-20 05:19:50							
SG30KTL#NB09	20	Prompt	General	Closed	Operation	system	2018-07-20 05:19:50							
SG30KTL#NB09	20	Prompt	General	Closed	Startup	system	2018-07-20 05:18:34							
SG30KTL#NB09	20	Prompt	General	Closed	Standby	system	2018-07-20 05:17:55							

 Click "Device operation record" to view device operation information, and select a time range to view the device operation information within the specified time range.



1 2 3 4 ... 20 Next Page 1 Ge

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ne range: 2017-08-31	2018-08-31	Secret				
Device name	Start Time	Downtime	Running Time	Total running time	Total down time	Shutdown reason
SG30KTL#NB09	2017-08-31 07:00	2017-08-31 07-25	25minute	172Day4Hour0minute	213Day3Hour3Smirute	
SG30KTL#NB09	2017-08-31 07:35	2017-08-31 07:40	Invinute	172Day4Hour5minute	213Day3Hour40minute	
SG30KTL#N809	2017-08-81 07/45	2017-08-31 16:05	8Hour 20minute	172Day12Hour25minute	213Day4HourOminune	
SG30KTL#N809	2017-08-33 16:25	2017-06-31 16-45	20minute	172Day12Hour4Sminute	213Day4Hour10minute	
SG30KTL#N809	2017-08-31 16:55	2017-08-31 17:10	15minute	1720ay13Hour0minute	213Day11Hour0minute	
SG30KTL#NB09	2017-09-01 07/20	2017-09-01 08:50	1Hour IOminute	172Day14Hour30minute	213Dey18Hour25minute	
SG30KTL#NB09	2017-09-01 08:55	2017-09-01 17:50	8Hour SSminute	172Day23Hour25minute	214DayOHour35minute	
5G30KTL#N809	2017-09-02 06:35	2017-09-02 06:50	15minute	172Day23Hour40minute	214Day7Hour15minute	
SG30KTL#NB09	2017-09-02 08:55	2017-09-02 07:00	Iminute	172Day21Hour45minute	214Day7Hour25minute	
SG30KTL#N809	2017-09-02 07:10	2017-09-02 17:30	10Hour 20minute	173Day10HourSminute	214Day13Hour55minute	

• Click "Device order records" to view work order information, and select a time range to view the work order information within the specified time range.

		SG30 Plant name : Device space :	KTL#NB09 Device model :5630KTL-V213		
Device Basic Info Device alarm(open)	Device alarm(closed) Device operation	Device order records			
Start time range: 2017-08-31	2018-08-31 Search				
Device name	Job order state	Fault name	Start time	End time	Reported by
		No	data found		

10.2 Material Management

Step 1 Select "Asset -> Mat. Mgt".

	Material	is Name	Material category -Pisas	e select	* Mat. sal	category -Please select- v	Search					Batch deteted Ad	Device Irde
ful Home													Ê
াজা	0	Materials Name	Material coding	Material category	Mat. subcategory	Materials warehouse	Material unit	Manufacturer	Materials Price (CNV)	Specification/Type	Material Status	Operation	Mat, Mgt
Plant map		_	02-01-167	Instrument Transformer	Current transformer	-	metar		4	54	Not used	8.21	3
Plant list	0		02-01-148	Instrument Transformer	Voltage transformer	-		-	111	111	Not used	BDŤ	Oppare Part
r≜1			01-01-147	Transformer	Power transformer	-	9	-	12	111	Not used	BDŤ	Overhaul
Flant report		-	01-01-146	Transformer	Distribution transformer	-	9	_	22	222	Not used	B.D.Ó	
Analasia	0	-	05-01-145	Isolation switch	High voltage isolation switch	-		_	11	111	Used	8.01	
mport	0		01-01-141	Transformer	Power transformer	-	9		123	123456	Not used	8.01	
88 Flant	0	_	01-01-140	Transformer	Power transformer	-	0	_	123	123	Used	BDÍ	
Manage	0	_	01-01-139	Transformer	Power transformer	-		_	10.00	AV2220	Used	B.D.Ú	
Panorama	0	_	04-00-137	Load switch		-	meter	_	123	12	Used	BDÚ	
11		_	01-01-136	Transformer	Power transformer	-	0	_	2	X123	Used	BDŤ	
Intelligent Analysis													
5 ·													
\$													
Ostabase													
									29 literrs, Pay	pe Size 10 * Prev.	2 3	Next Page 1	0

Step 2 Click the [Edit] button to edit the material information.

Ste	p 3 Sav	ve the e	dition.	Current transformer	-	meter		4	14	Not used	
Ste	• n 4 Clic	k the			n to view	, the r	naterial	inform	ation		
010	p 4 Olic		VIEW	J Dutte		v the i	nateriai				
	Materials Name	Material coding	Material category	Mat. subcategory	Materials warehouse	Material unit	Manufacturer	Materials Price (CNY)	Specification/Type	Material Status	Operation
	-	02-01-167	Instrument Transformer	Current transformer	-	meter		4	64	Not used	0. D
Ste	p 5 Clic	k the	[Dele	te] but	ton to de	elete tl	he mate	rial info	ormatior	۱.	

Material Name Material colling Material Mat. Mat. Subcitagory Materials various Material unt Manufacturer Materials, Specification/Type Material

8	Materials Name	Material coding	Material category	Mat. subcategory	Materials warehouse	Material unit	Manufacturer	Materials Price (CNY)	Specification/Type	Material Status	Operation
0		02-01-167	Instrument Transformer	Current transformer	-	meter		4	64	Not used	B.D

10.3 Spare Parts

Step 1 Select "Asset -> Spare Parts".

	⋒ ∩ ⊞ ± ⊗	● ① ● 本 ◎										
Î		Spare Parts List Inventory list	Storage check						18			
r®ı	-	Sparepart Name Material cat	egory Please select	+ Bla	a inventory prompt Search			Add	Mat. Mgt.			
Plant map		Sparepart Name	Spacepart Qty.	Materials Name	Warehouse name	Material category	Manufacturer	Operation	E			
Elect list			7			Transformer		已全合會	Epara Parts			
(≜)		-	۰	_	-	Transformer	-	已全合會	Overhaul			
Plant report			۰	_	-	Transformer		Decot				
() Annahanin	-	-	1			Transformer		Decon				
report		_	13		-	Transformer	_	Dece				
88			10	-	-	Transformer		Dece				
Manage			21		-	Transformer		Dect				
Panorama		-	7	-	-	Transformer		Dece				
N			12		-	Transformer	_	Decot				
Intelligent Analysis		-	11	_	-	Transformer	_	已全合首				
S ·												
Asset												
Detabase												
	<123 >					31 iteres, Page Si	ne 10 V Prev. 1 2	3 4 Next Page 1 Go				

11 Panorama

The demonstration levels vary with power station types. Unit-level demonstration is for the utility plant and commercial plant, and the device-level demonstration is for the residential plant by default.

The highest fault alarm status of the device of a unit is in the colour of the unit.

The current fault alarm status of a device is in the colour of the device.

For the panorama displayed at the unit level, click the unit and then the "» " in the pop-up box, to enter the device-level panorama.



Click the device icon in the panorama and the " \rangle " in the pop-up box, to view the device information interface.

User Manual

11 Panorama

		Plant	3#MV	3#MV逆変闘1 / Device space : Device model /5G500MX					
Device Basic Info Device ala	rm(open) Device alarm(closed)	Device operation Device or	der records						
Measuring point parameter Data upd									
Total active power	139.35kW	Daily energy generation	1.38MWh	Total energy generation	1.891GWh	Total DC power	142.33kW		
Uab	330.9V	Ubc	330.6V	Uca	330.6V	la	331.4A		
h	328.6A	le	326.4A	Reactive power	126.61kVar	Internal air temperature	50°C		
Udc-1	517.8V	lde-1	274.5A	Ude-2	V	Ide-2	A		
Udc-3	V	Ide-3	A	Udc-4		ldc-4	~~A		
Module A1 temperature	74.5°C	Module A2 temperature	-30.1°C	Temp-MB1	75.5°C	Temp-MB2	-30.1°C		
Temp-MC1	75.5°C	Temp-MC2	-30.1°C	1-string1	A	I-string2	A		
I-string3	A	1-string4	A	1-string5	A	I-string5	~~A		
1-string7	~~A~~	Daily energy generation equivalent hours	2.7th	Grid frequency	50Hz	Anode earth impedance	1,000kΩ		
Rgnd-	1,000kΩ								
Device Info									
Current state	Online	Device name		Device coding	1	Operation time			
Device model	SG500MX	Manufacturer	SUNGROW	Specification		Delivery Date			

5	U	Ν	G	R	5	M	

12 Database

Step 1 Select "Database" to enter the corresponding interface.

	Knowledge	base type Please select	* Device type Plaz	io sellect	 Knowledge base name and key 	word Knowledge base n	ame and keyword Search			Add	Batch deleted
ណ៍		Knowledge base name	Knowledge base type	Device type	Key words	Cited times	Add time	Add person	State	Oper	ation
Home		_	Scheduled test/repair specification	Inverter	-	0	2018-08-02 17:13:09	_	Audit passed	6.0	20
Plant map			Scheduled test/repair specification	Combiner box		0	2018-07-27 13:26:15	-	Audit pessed	6.	20
iiii Nare ire	0	-	Fault maintenance records	Inverter	-	0	2018-06-14 1415/04	-	Audit pessed	B.C	20
≜											
(B)											
Analysis report											
88											
Plant Manage											
Panorama											
Intelligent											
 [5]											
Asset											
Detabase											
									1 items, Page Size 10 *	Prev. 1 No	nt Page 1 Ga

Step 2 Click the [Add] button to add the database information.

Knowledge	base type Pisase select	* Device type Pico	ne nelect	* Knowledge base name and key	word Knowledge base n	ame and keyword Search			Add Batch deleted
	Knowledge base name	Knowledge base type	Device type	Key words	Cited times	Add time	Add person	State	Operation
		Scheduled test/repair specification	Inverter		0	2018-08-02 17:13:09		Audit passed	B.D.T
0		Scheduled test/repair specification	Combiner box		0	2018-07-27 13:26:15	_	Audit passed	B.D.T
		Fault maintenance records	Inverter	-	0	2018-06-14 14:15:04	_	Audit passed	C.C û

Knowledge base type	Please select	*	Knowledge	Knowledge
Device type *	Please select		Repair Type	Please select
Safety influence degree	-Please select-		Effects	-Please select-
Maintenance . cycle	- Hour *			
Knowledge base . content	click to choose picture			

Step 3 Select database records that need to be deleted and click [Batch

deleted] to delete the database information in batch.

Knowledge	base type Please select	* Device type Ploa	se select	 Knowledge base name and key 	word Knowledge base n	ame and keyword Search			Add Batch deleted
	Knowledge base name	Knowledge base type	Device type	Key words	Cited times	Add time	Add person	State	Operation
		Scheduled test/repair specification	Inverter	_	0	2018-08-02 17:13:09		Audit passed	B.C. Ú
0		Scheduled test/repair specification	Combiner box		0	2018-07-27 13:26:15	-	Audit passed	BDÓ
0		Fault maintenance records	Inverter	_	0	2018-06-14 14:15:04		Audit passed	BDů

Step 4 Click the [View] button to view the database information.

Knowledge	base type Please select	* Device type Pisa	se select	 Knowledge base name and key 	word Knowledge base n	ame and leyword Search			Add Batch deleted
	Knowledge base name	Knowledge base type	Device type	Key words	Cited times	Add time	Add person	State	Operation
0	_	Scheduled test/repair specification	Inverter	-	0	2018-08-02 1713-09	_	Audit passed	BDÓ
	-	Scheduled test/repair specification	Combiner box		0	2018-07-27 13:26:15	-	Audit passed	B.D.T
0	-	Fault maintenance records	Inverter	-	0	2018-06-14 14:15:04	_	Audit passed	C. C û

Step 5 Click the [Edit] button to edit the database information.

Knowledge	base type Please select	* Device type Pico	se select	* Knowledge base name and key	word Knowledge base n	ame and keyword Search			Add Batch deleted
	Knowledge base name	Knowledge base type	Device type	Key words	Cited times	Add time	Add person	State	Operation
0	_	Scheduled text/repair specification	Inverter	_	0	2018-08-02 1713-09	_	Audit passed	R 🖸 🖬
		Scheduled test/repair specification	Combiner box		0	2018-07-27 13:26:15	-	Audit passed	B.D.T
	—	Fault maintenance records	Inverter	_	0	2018-06-14 14:15:04	_	Audit passed	B.C ú

Step 6 Click the [Audit] button to review the database information.

Knowledge	base type Please select	* Device type Please	e select	* Knowledge base name and keys	word Khoeledge base r	ame and keyword Search			Add Batch deleted
	Knowledge base name	Knowledge base type	Device type	Key words	Cited times	Add time	Add person	State	Operation
		Fault maintenance records	Inverter	_	0	2018-01-31 18:58:05	_	Audit not passed	B.C.C.Ú
	- 011 - 41	I.D.							

Step 7 Click the [Delete] button to delete the database information.

Knowledge	base type Please select	* Device type Pisa	se select	 Knowledge base name and key 	word Knowledge base n	arre and keyword Search			Add Batch deleted
	Knowledge base name	Knowledge base type	Device type	Key words	Cited times	Add time	Add person	State	Operation
		Fault maintenance records	Inverter		0	2018-01-31 18:58:05	_	Audit not passed	B. D: D: 🛅



13 Intelligent Analysis

Intelligent analysis is analyzing and displaying various performance of the plant in real time, and users can view the detailed analysis results.

13.1 Daily Load Curve of Power Plant

Step1 Log into the system.

Step2 Click "Intelligent Analysis" on the navigation bar to enter the corresponding interface.

	Group AnalysisNEW					
fir Home	AAPL 11 coulor 2.56 pm			Eastanes Overview	 Bornan Kowaldal Yila pat Bornan Kowaldal Yila pat Bornan Ye Zentan Yeb pat 	ALC: NOT THE OWNER OF THE OWNER OWNER OF THE OWNER OWNE OWNER OWNE
Plant map	• 427.53 er mon			• Inser • Infer	3. Adam Lanar Miljipak 4. Ania Marjika Mila pak 5. Antar Kozyiwy Mila pak	- Infinite
Elect list					6. Karalina Narsha Magad 7. Qamian Potochi Magad 8. Isekara Ravalny Mit pat	
Flart report	Plant Daily Load Curve	Output Current Discrete R	Input Current Discrete Rat	Input Current Discrete Rat	Loss Analysis	Dusting Analysis
Analytis separt	View	View	View	View	View	View
88						
Narage Sanorama						
intelligent Analysis						
S	Effective equivalent hourly	String IV curve Scan and Di				
i e Detabase	View	View				
	Power Plant Analysis					

Step 3 Click "View" to view the daily plant load curve.

ack Daily load o	urve of power plant						
2018-08-31 Power(kW) 1.800		-O- Flant grid-con	n. Power -O- Inverter AC power	-O- Inverter DC power -O- H	torizontal transient radiation		Radiation power(
1.500			^	\mathbf{X}			0,8
900			Ju	2 2			0,6
				0	· · · · · · · · · · · · · · · · · · ·		•••••• 0,2
1018/8/31 00:00	2018/8/31 02:15 2018/8/31 0	94/30 2018/8/31 06:45	2018/8/31 09:00 2018/8/31 1	1:15 2018/8/31 13:30	2018/8/31 15:45 2018/8/31 18	100 2018/8/31 20:15 2018/	1/31 22:30
Fault : 0 🗷 Alarm :	0 E Prompt: 0 Advice: 0						
Fault type	Fault level	Fault name	Device space	Device name	State	Occurrence time	Operation
			No d	ata found			

Step 4 Click the "Export" button on the right to export the device alarm records.

13.2 Output Current Discrete Rate Analysis of the Inverter

Step1 Log into the system.

Step2 Click "Intelligent Analysis" on the navigation bar to enter the corresponding interface.

Step3 Click "View" to view the analysis on the output discrete rate of the inverter.



Step 4 Click the export button on the right to export the analysis data of the DC output discrete rate of the inverter.

13.3 Input Current Discrete Rate Analysis

Step1 Log into the system.

Step2Click "Intelligent Analysis" on the navigation bar to enter the corresponding interface.

Step3 Click "View" to view the analysis on the input discrete rate of the inverter.



< Back	Analysis o	f input di	screte rate of	inverter																	6 A K 3
4 2	18-08-31 14	55 🔠 🕨												Discrete rat	te > 20% : P Discrete rat	n conta pe 01 = 10-20% :	Total 0 PCS	96Total 0 Pi			
	Discret Discret Discret Discret	te rate >201 te rate 10-20 te rate 5-109 te rate 0-596	i : Percentage0%1 1% : Percentage0% 6 : Percentage259 : Percentage75%	otal O PCS Total O PCS Total 1 PCS Iotal 3 PCS				Discrete rat	e 0-3% : Pe	rcentage731	6Total 3 PC				Disor	tte rate 5-1/	% : Percent		al 1 PCS		
Analysis	of input di	iscrete rat	e of inverter																		Export
Discrete	rate: All	• 5	latio of deviations	from average	current :	-20%0	Proposed re	tification)	e -20%	0%(A little	difference)	2 - 10% − 1	L0%(general)	2 10%-	20%(good)		scellent)				
NO.	Device space ○	Inverter 0	Pnom./Power installed (kW)	Dispersion rate (%) ି	Average current(A) S1 0	\$2 ¢	\$3 ¢	\$4 °	\$5 °	\$6 ¢	\$7 ¢	S8 0	S9 0	\$10 °	S11 0	\$12 °	\$13 °	\$14 °	\$15 ¢	\$16 °
1		-	560.56/500.00	0	1.588					1.5875											
2			468.93/500.00	1.52	1.61			1.6296			1.5750		1.6250								
3		-	533.61/500.00	8.1	1.702	1.7917	1.6600	1.6000		1.5385		1.9214									
4			533.61/500.00	4.29	1.821	1.9000				1.8071	1.8785	1.7000									

Step 4 Click the export button on the right to export the analysis data of the DC input discrete rate of the inverter.

13.4 Input Current Discrete Rate Analysis of the Combiner Box

Step 1 Log into the system.

Step2 Click "Intelligent Analysis" on the navigation bar to enter the corresponding interface.

Step3 Click "View" to view the analysis on the input discrete rate of the combiner box.



Step 4 Click the "Export" button on the right to export the analysis data of the input discrete rate of the combiner box.

13.5 String IV curve Scan and Diagnosis

Step 1 Log into the system.

Step2 Click "Intelligent Analysis" on the navigation bar to enter the corresponding interface.

Click the button [View] under the IV curve intelligent diagnosis and analysis, to view the intelligent diagnosis and analysis.



On the top of the interface display [Unit level scan], [Inverter level scan], [Check history], [Setting], and full screen button.

At the lower part display all grid-connected points of the plant and unit graph list.

On the bottom display "Select All", "Diagnosis progress", and "Start scanning".

Step 4 Select a plant from the tree diagram on the left.

Click [Setting] to enter the parameter setting interface and set the parameters.

Enter the "Plant parameter setting" interface by default. The settings are applicable to global module parameters of the plant.



< Back IVIntelligent curve analysis-	8
Plant parameter setting Unit parameter setting	
STCirradiancer	1,000 W//# *
STCBattery temperature:	25 ° °
NOCTerradiance:	800 W/m
Environment detecting instrument for calculating:	
Irradiation intensity:	287.7 W/m
Temp-PV module:	7 111
PV module model:	HT60-156P-235 * New component model
The single string component number:	22 Piece ¹
Component run date:	2014/12/02
Minimum radiation intensity thresholds	1 WintDefault value is 800W/m)
	Seve

Click [Unit parameter setting] to select the specific inverter, click [Parameter setting] to set parameters, and click [Batch settings] to set parameters of multiple inverters at the same time.

< Back IVIntelligent	ack. Mintelligent curve analysis								
Plant parameter setting	Unit parameter setting				Batch settings				
8	NO.	loverter	Grid-connected point	Unit	Operation				
	1	SG40KTL-M#2		A1603317419	Parameter set				
0	2	SG55KTL-M#3		A1603317419	Parameter set				
8	3	SGSDKTL-M#4		A1603317419	Parameter set				
	4	SGSKTL-D#1		A1603317419	Parameter set				
	5	\$634KJ		A1603317419	Pasameter set				
0	6	SG60K7L		A1603317419	Pasameter set				

Step 5 Click [Return] to return the scanning interface. Click [Unit level scan], select a device, and click the button [Start scanning].



After the scanning starts, whether the parameters are configured is determined first. If no, the parameter configuration page is linked to, or users can click

[Setting] to enter the module parameter setting interface. Specifically, refer to step 4.

Enter the login password to pass the password verification when clicking the [Start scanning] for the first time.

After passing password verification, confirm the scanning task. The default display name is "XX plant date", and the scanning name can be set, after which click [Confirm] to save it.

< Back String IV curve Scan and Diagnosis		5.7 2.5
Unit level scan Inverter level scan	Check history	🔅 Setting
*		
¥ ASSESSA	Pease enter the passand X	
Select All Diagnosis progress:		Start scanning

After the instruction is delivered successfully, the page status will be refreshed in real time, and scanning results and progress are displayed.

The unit statue is updated to "Scanning".

< Back String IV curve Scan and Diagnosis		55
Unit level scan Inverter level scan	Check history	Setting
-		
e Manalitetej Sanong ● P ● 2		
Select All Diagnosis progress: 2000 Estimated time remaining 00022	1 St	tart scanning

After scanning, click [Confirm] to view the scanning result.

The "Intelligent IV curve analysis" interface is entered by default, and information on the abnormal string is displayed. Click [View] to enter the "String diagnosis analysis" interface.

Close the "String diagnosis analysis" interface, and click 【IV Curve】 so that IV



curve of the abnormal string is displayed by default.

Step 6 Return to the "Intelligent IV curve analysis" interface, click the button [Inverter level scan], select a device, and click the button [Start scanning], the same as step 5.

Step 7 Return to the "Intelligent IV curve analysis" interface and click 【Check history】, to view the history scanning results.



Check history										×
	2017-08-3	1 📧 - 2018-08-31 📧 Task ty	per All	* Task name: Task name	Search					
	NO.	Task name	Task type	Start Time	End time	Sweep time	String number	Abnormal string	State	Details
_	1	T20184241234IV 2018-06-27 104017	Unit level scan	2018-06-27 10:40:18	2018-06-27 10:42:21	00:02:03	0	0	Finished	View
	2	T20184241234IV 2018-06-23 16/56/53	Unit level scan	2018-06-23 16:56:58	2018-06-23 16:59:02	00.02.04	0	0	Finished	View
	з	T20184241234fv 2018-06-21 15:11:12	Unit level scan	2018-06-21 15:11:14	2018-06-21 15:13:19	00.02.05	0	0	Finished	View
	4	T20184241234fv 14:38:28	Unit level scan	2018-06-21 14:38:29	2018-06-21 14:40:36	00:02:07	0	0	Finished	View
	5	T20184241234fv 14:18:00	Unit level scan	2018-06-21 14:18:01	2018-05-21 14:20:06	00.02:05	0	0	Finished	View
	6	T201842412340A 2018-06-21 12/03/56	Inverter level scan	2018-06-21 12:03:58	2018-05-21 12:06:02	00.02.04	0	0	Finished	View
	7	T201842412340V 018-06-21 1147/54	Inverter level scan	2018-06-21 11:48:03	2018-06-21 11:48:15	00.00.12	0	0	Finished	View
	8	T2018424123400 15:37:10	Inverter level scan	2018-06-20 15:37:12	2018-06-20 15:39:18	00.02:06	0	0	Finished	View
	9	T2018424123404 2018-06-20 15:22:13	Inverter level scan	2018-06-20 15:22:16	2018-06-20 15/24/22	00.02.05	0	0	Finished	View
	10	T2018424123400 2018-06-20 15(13)29	Inverter level scan	2018-06-20 15:13:30	2018-06-20 15:15:34	00.02.04		0	Finished	View

€123 →



29 items, Page Size 10 * Prev. 1 2 3 Next Page 1 Ge

14 Service Center

14.1 Introduction

The service center interface includes two submenus: "Comm. module monitor" and "Renewal reminder".

14.2 Communication Module Monitoring

Select the "Service Center" -> "Comm. module monitor" to enter the corresponding interface. On this interface can display SN states of all bound devices.

On this interface, the user can perform the following operations:

- Query device SN status, for example, device SN number, opening date, and expiration date.
- Import SN information.
- Set module status.

Query device SN status

Step 1 Enter the communication module monitoring interface.

- Step 2 Enter query conditions into the condition screen bar, for example, card number, customer code, client name, and expiration date.
- Step 3 Click Search, to view the SN states that meets the conditions.

Import device SN

Step 1 Enter the communication module monitoring interface.

Step 2 Enter the device SN into the input box and click "Device SN import", to import the SN into the system.

Set module status.

If Renewal fee is paid after the SN expires, the SN status needs to be changed via this function. The method is as follows:

Step 1 Enter the communication module monitoring interface.



Step 2 Select the SN of a device and click "Module status settings", to change the status of this module.

14.3 Renewal Reminder

An SMS or email is sent to the personnel with related permissions to remind them to pay for the service within 90 days before the SIM card of the communication device expires, so as to ensure that the communication can be used normally.

14.3.1 Reminder Selection

Prerequisites

- The person who performs the operation has the permission to visit the WEB background management system.
- The operator has obtained the website of the corresponding background management system from Sungrow.
- The operator had had the corresponding account and password.

Background setting method

Step 1 Enter the WEB background management system.

- Step 2 Click "Renewal prompt management" > "Customer information maintenance" successively.
- Step 3 Click "Add" to add the customer information to the system. (If the customer information already exists, skip this step).
- Step 4 Click "Modify" on the operation bar to select a reminder way, for example, SMS and email.

14.3.2 Renewal Operation

Select "Service Center" – > "Renewal reminder" to enter the corresponding interface. On this interface displays the status of the communication module that will expire in 90 days from the current day.

If the "valid date" is a negative number, for example, "-403", it indicates that the device has expired for 403 days.

Renewal Method

Select the SN of a device and click "renewal fee".

										REASER	94 68
8	设备sN	8,9,9,6	卡明	遵保设备图码	开生日期	失敗日期	有效天数	客户编码	客户名称	遵訊模块状态	1845
8	A1711072270	已过账			2018-06-01	2017-06-29	-411			道行中	88
8	A1711071868	Bittle			2018-06-24	2017-06-28	-412			退行中	22
8	A1711072434	已过账			2018-06-25	2014-07-01	-1505			828	88
	A1711072445	BidM			2018-05-27	2014-03-31	-1597			日は明	22
8	A1711071797			12345678	2018-03-30	2014-03-30	-1598			8:248	
8	A1711073046	BidM			2018-05-28	2014-02-28	-1628			日は明	20



15 User centre

15.1 Function Description

On this interface, the user can perform the following operations:

- Modify user information, for example, username, account, permissions, and contacts.
- Personalized setting, for example, set the theme colour, time zone, language, and alarm manner.
- Account and safety setting, for example, modify the bound mobile number, email address, and account password.

15.2 Operation Method

Step 1 Log into the system.

Step 2 Click the user centre icon in the upper right corner to enter the user centre interface.



Step 3 Select a desired function button to enter the corresponding interface and perform operations.

16 Supplementary Description

Description of login

Only one account can log into the iSolarCloud system on the same browser. If multiple accounts need to be used at the same time, log into the system via different browsers.

Description of SMS verification

One SMS is sent to a mobile phone in a minute, five SMSs in an hour, and ten SMSs in a day (24 hours from the current time).

- Description of total energy yield
 - The total energy yield of the device in iSolarCloud system complies with the increasing rule. For example, if the total power generation falls, the system still displays the maximum data before falling until the uploaded total energy yield is greater than it.
 - The increase in the total energy yield in the iSolarCloud system should be logical. Otherwise, the increment will not be counted into the system.

If the compensation value of the total energy yield is set to an excessively large value, adjust the installed power of the inverter. In addition, the installed power of the device needs to be adjusted to the original value in the next day.

Description of time zone

Set the time zone correctly when creating a plant. If the time zone is adjusted when the plant has been put into operation, data overwrite or data loss may occur, or anomaly may even occur to telesignalisation and telemetering data during the adjustment. If the adjustment is requirement, it is recommended to perform the operation at night to lower the possibility of abnormal data.

- Resolution description
 - The browser should be Chrome55 or later.
 - The resolution of the used display should be 1080P or higher.



17 Disclaimer

If you have any question in using the software, contact us.

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Manual Description

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The content of the manual will be periodically updated or revised as per the product development. It is probably that there are changes in manuals for the subsequent module edition. If there any inconsistency, the actual product shall govern.