

专注偏远地区微电网解决方案





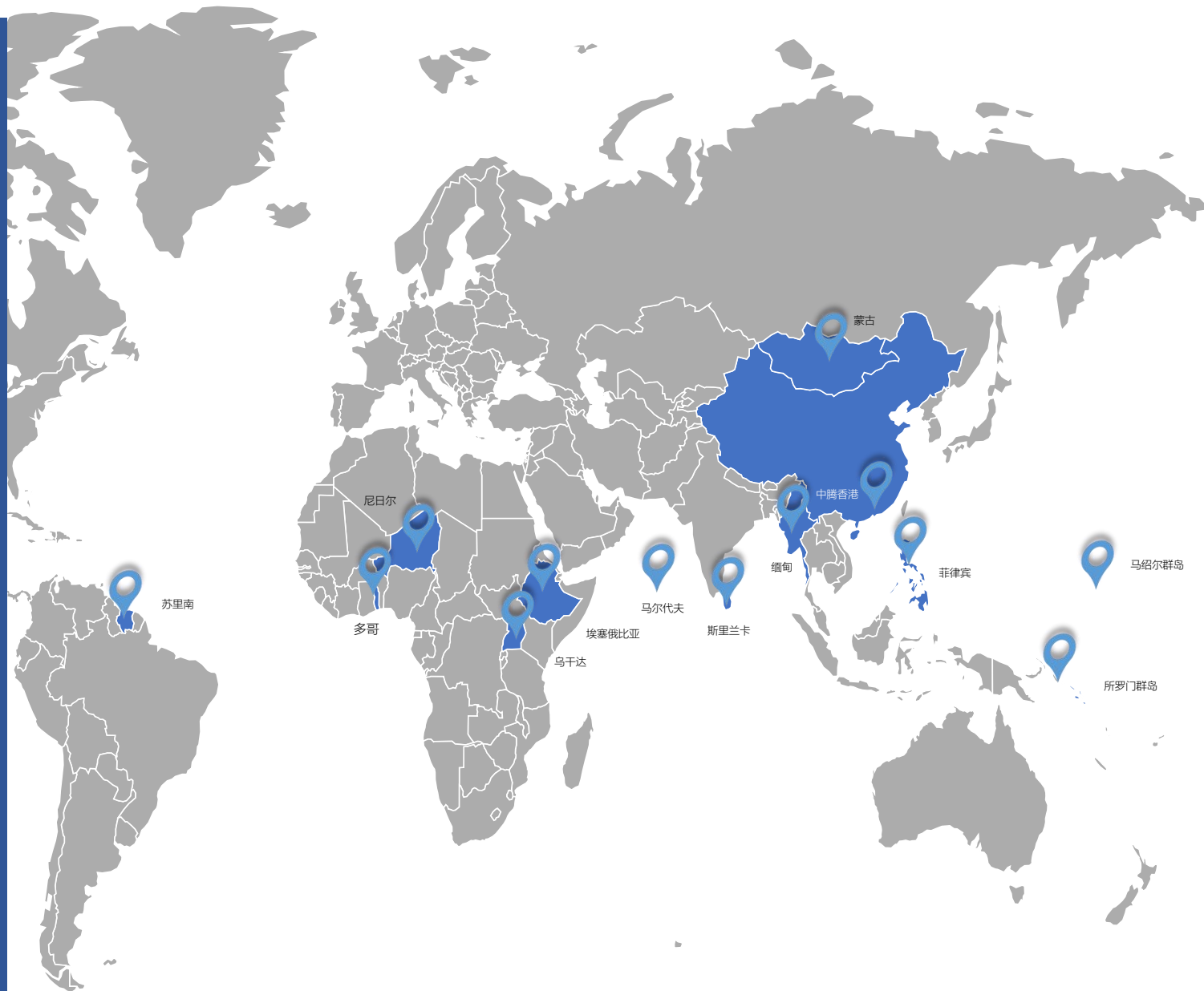
# 目录

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微电网领域的先行者  
微电网技术的佼佼者  
微电网市场的领军者  
微电网研发的坚持者



# 场景

偏远村庄



海岛



# 客户需求

微电网需求：

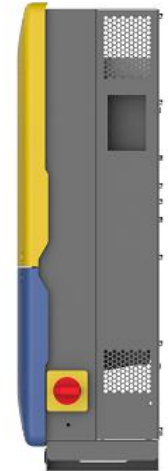
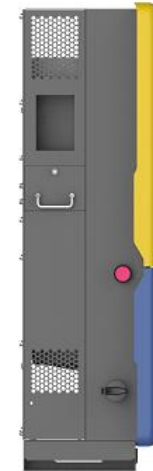
- 1、负载类型差异（居民用电、工厂用电、酒店类用电、电机、空调、水泵、电镐、冲击钻等等）
- 2、负载容量差异（从几千瓦到几百千瓦）
- 3、发电电源差异（有光伏、柴油机、小风电、潮汐能等容量也是千差万别）
- 4、环境恶劣差异（海岛、隔壁、沙漠、雨林、高海拔等，有室内安装，室外安装等等）
- 5、对噪音的要求：微电网就近供电，在酒店、民宅、别墅等场景对噪音的要求也是非常苛刻

## 主要产品特点：

- 1、标准化、模块化、高可扩展性（可与油机、光伏、风电交流并机，实现快速安装、平滑升级等）
- 2、智能化、低成本系统成本（内置EMS操作系统，实现负荷分析、发电预测、电池异构管理、柴油机控制等）
- 3、高防护、高可靠性、低噪音、快速安装（IP66防护等级设计、1.5倍过载能力、3P4L独立控制输出、C5防护等级）
- 4、高冲击性负载适应能力（电机、空调、电镐、水泵、冲击钻等）
- 5、并离网系统实现0切换（配合户外的STS可以实现）

# SP30H微电网控制器参数

Parameters	SP30H	Protection	
Max. DC voltage	850 V	Reverse protection	Yes
Min. DC voltage	400 V	DC switch	Yes
DC voltage range for nominal power	500 –850 V	AC switch	Yes
Max. DC current	62 A	Oversvoltage protection	DC Type II / AC Type III
Max. DC power	34 kW	Ground fault monitoring	Yes / Yes
<b>AC side (Grid)</b>		Insulation monitoring	Yes
AC output power	33 kVA @ 45°C 30 kVA @ 50°C	Overheat protection	Yes
Max. AC current	50A	<b>General Data</b>	
Nominal AC voltage	400 V / 230V	Dimensions (W*H*D)	520*750*220mm / 20.6in*29.6in*8.7in
AC voltage range	-20%~15%	Weight	37 kg / 82 lbs
Nominal grid frequency / Grid frequency range	50Hz / 47Hz~52Hz 60Hz / 57Hz~62Hz	Degree of protection	IP65
AC current THD	< 3 % (at nominal power)	Operating temperature	-25 to 60 ° (> 45 ° derating)
DC current injection		Allowable relative humidity range	0 –100 %
Power factor at nominal power / Adjustable power factor	> 1 leading –1 lagging	Cooling method	Temperature controlled forced air cooling
Adjustable reactive power	-100%~100%	Max. operating altitude	4000 m (> 3000 m derating)
<b>AC side (micro-grid)</b>		Display	LED, Bluetooth
Nominal AC voltage	400 V / 230V	Self-consumption at stop	< 10 W
AC voltage THD	< 1.5 % (Resistance load)	Communication	RS485 / Ethernet / CAN
Unbalance load capacity	100%	Communication protocol	Modbus-RTU / Modbus TCP, CAN2.0B
Nominal voltage frequency / Voltage frequency range	50Hz / 45.00Hz~59.8Hz 60Hz / 50.20Hz~66Hz	Compliance	ICE 62103 IEC 62477 IEC 62116 IEC 61727 IEC 61000 G 99 CIG 023
AC output power	45KW/30S	Grid support	LVRTI, active & reactive power control and power ramp rate control
<b>Efficiency</b>			
Max. charge efficiency	98.0%		





# 认证及系统

**CERTIFICATE of Conformity**  
TÜV Rheinland

Registration No.: AK 50490394 0001  
Report No.: CN2078KY 001

Holder: Sino Soar Hybrid (Beijing) Technology Co., Ltd.  
No.168 1st Floor, Building No.148, No.13 Jiu Xian Qiao Road, Chaoyang District, Beijing, P.R. China

Product: **Energy Storage system (Power Conversion System)**

Identification: Type Designation: SP300  
Serial No.: 001600041000  
Remarks: Refer to test report CN277802 001 for details.

Tested acc. to: IEC 62477-1:2012  
IEC 62477-2:2012

The certificate of conformity refers to the above mentioned product. This is to certify that the specimen is in conformity with the assessment requirements mentioned above. This certificate does not imply assessment of the production of the product and does not permit the use of a TÜV Rheinland mark of conformity.

Date: 05.01.2021

TÜV Rheinland LGA Products GmbH · Tillystraße 2 · 90431 Nürnberg

**CERTIFICATE of Conformity**  
TÜV Rheinland

Registration No.: AK 50490693 0001  
Report No.: NN202E15 001

Holder: Sino Soar Hybrid (Beijing) Technology Co., Ltd.  
No.168 1st Floor, Building No.148, No.13 Jiu Xian Qiao Road, Chaoyang District, Beijing, P.R. China

Product: **Energy Storage system (Power Conversion System)**

Identification: Type Designation: SP300  
Serial No.: 001600041000  
Remarks: Refer to test report SP221E15 001 for details.

Tested acc. to: IEC 62477-1:2012

The certificate of conformity refers to the above mentioned product. This is to certify that the specimen is in conformity with the assessment requirements mentioned above. This certificate does not imply assessment of the production of the product and does not permit the use of a TÜV Rheinland mark of conformity.

Date: 24.12.2020

TÜV Rheinland LGA Products GmbH · Tillystraße 2 · 90431 Nürnberg

**CERTIFICATE of Conformity**  
TÜV Rheinland

of Conformity  
Low Voltage Directive 2014/30/EU

Registration No.: AN 50491359 0001  
Report No.: CN20JUL3 001

Holder: Sino Soar Hybrid (Beijing) Technology Co., Ltd.  
No.168 1st Floor, Building No.148, No.13 Jiu Xian Qiao Road, Chaoyang District, Beijing, P.R. China

Product: **Energy Storage system (Power Conversion System)**

Identification: Type Designation: SP300  
Serial No.: 001600041000  
Remarks: Refer to test report SP221E15 001 for details.

Tested acc. to: IEC 62477-1:2012

This certificate of conformity is based on an evaluation of a sample of the above mentioned product. Technical Report and documentation are at the License Holder's disposal. This is to certify that the tested sample is in conformity with Annex I of Council Directive 2014/30/EU, referred to as the Low Voltage Directive. This certificate does not imply assessment of the production of the product and does not permit the use of a TÜV Rheinland mark of conformity. The holder of the certificate is authorized to use this certificate in connection with the CE declaration of conformity according to Annex IV of the Directive.

The certificate of conformity is based on an evaluation of a sample of the above mentioned product. Technical Report and documentation are at the License Holder's disposal. This is to certify that the tested sample is in conformity with all provisions of Annex I of Council Directive 2014/30/EU. This certificate does not imply assessment of the production of the product and does not permit the use of a TÜV Rheinland mark of conformity. The holder of the certificate is authorized to use this certificate in connection with the CE declaration of conformity according to the a.m. Directive.

Date: 05.01.2021

TÜV Rheinland LGA Products GmbH · Tillystraße 2 · 90431 Nürnberg

CE The CE marking may be used if all relevant and effective EC Directives are complied with.

**CERTIFICATE of Conformity**  
TÜV Rheinland

of Conformity  
EC Council Directive 2014/30/EU  
Electromagnetic Compatibility

Registration No.: AE 50490533 0001  
Report No.: NN20QWGX 001

Holder: Sino Soar Hybrid (Beijing) Technology Co., Ltd.  
No.168 1st Floor, Building No.148, No.13 Jiu Xian Qiao Road, Chaoyang District, Beijing, P.R. China

Product: **Energy Storage System (Power Conversion System)**

Identification: Type Designation: SP300  
Serial No.: 001600041000  
Remarks: Refer to above-mentioned test report for details.

Tested acc. to: IEC 62477-1:2012  
IEC 62477-2:2012

This certificate of conformity is based on an evaluation of a sample of the above mentioned product. Technical Report and documentation are at the License Holder's disposal. This is to certify that the tested sample is in conformity with all provisions of Annex I of Council Directive 2014/30/EU. This certificate does not imply assessment of the production of the product and does not permit the use of a TÜV Rheinland mark of conformity. The holder of the certificate is authorized to use this certificate in connection with the CE declaration of conformity according to the a.m. Directive.

Date: 23.12.2020

TÜV Rheinland LGA Products GmbH · Tillystraße 2 · 90431 Nürnberg

CE The CE marking may only be used if all relevant and effective EC Directives are complied with.

**Zertifikat Certificate**  
TÜV Rheinland

of Conformity  
EC Council Directive 2014/30/EU  
Electromagnetic Compatibility

Registration No.: AE 50490533 0001  
Report No.: NN20QWGX 001

Holder: Sino Soar Hybrid (Beijing) Technology Co., Ltd.  
No.168 1st Floor, Building No.148, No.13 Jiu Xian Qiao Road, Chaoyang District, Beijing, P.R. China

Product: **Energy Storage System (Power Conversion System)**

Identification: Type Designation: SP300  
Serial No.: 001600041000  
Remarks: Refer to above-mentioned test report for details.

Tested acc. to: IEC 62477-1:2012  
IEC 62477-2:2012

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Date: 23.12.2020

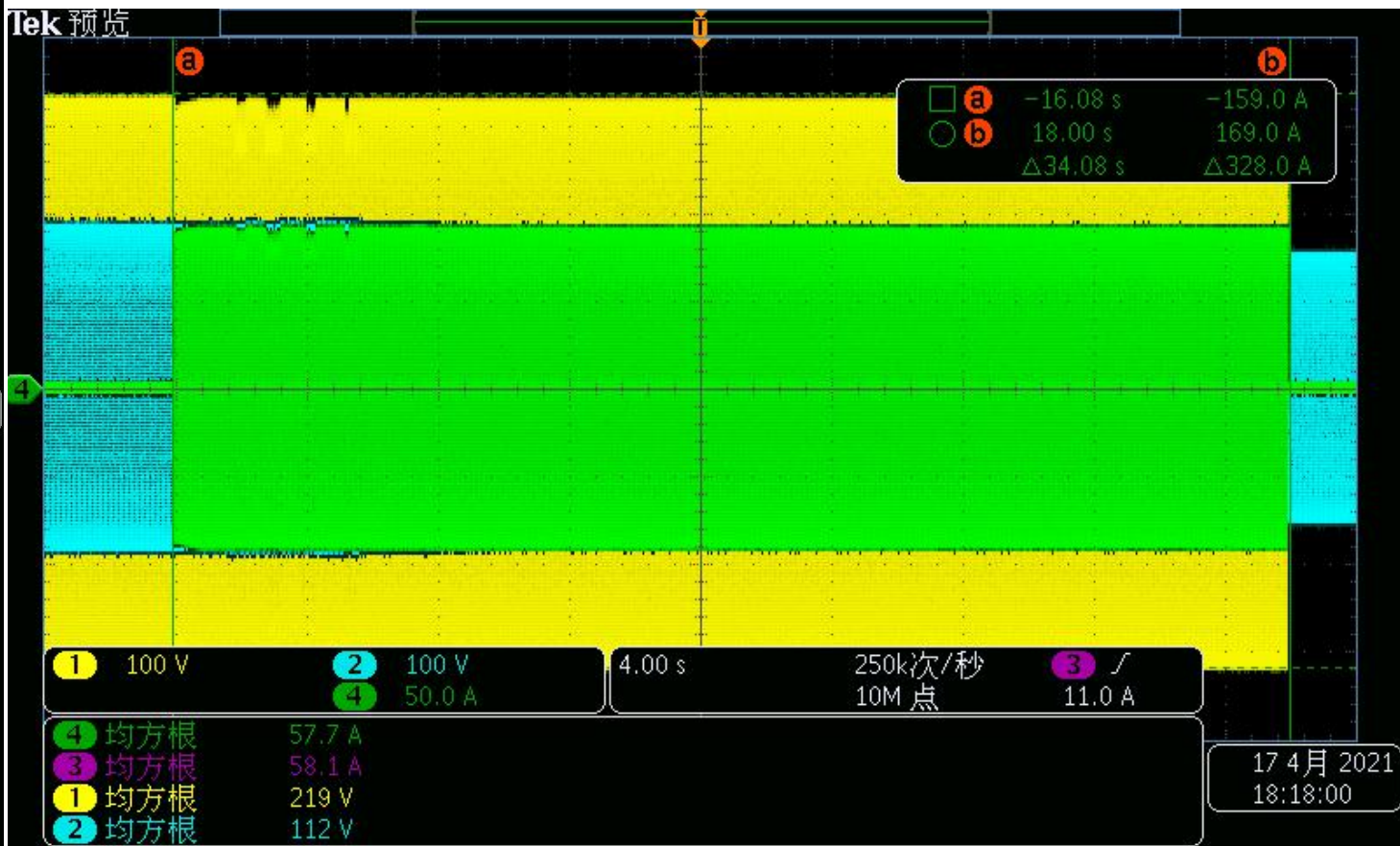
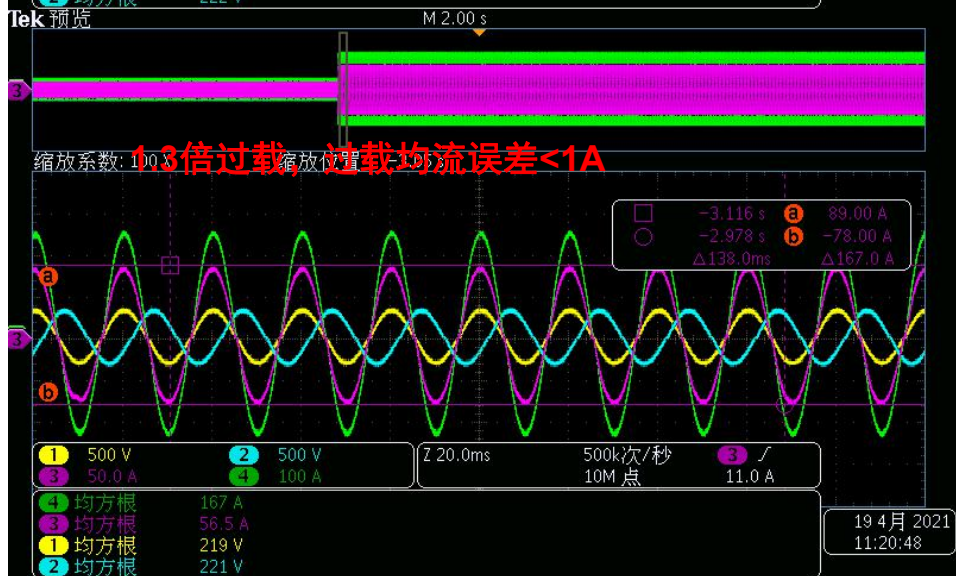
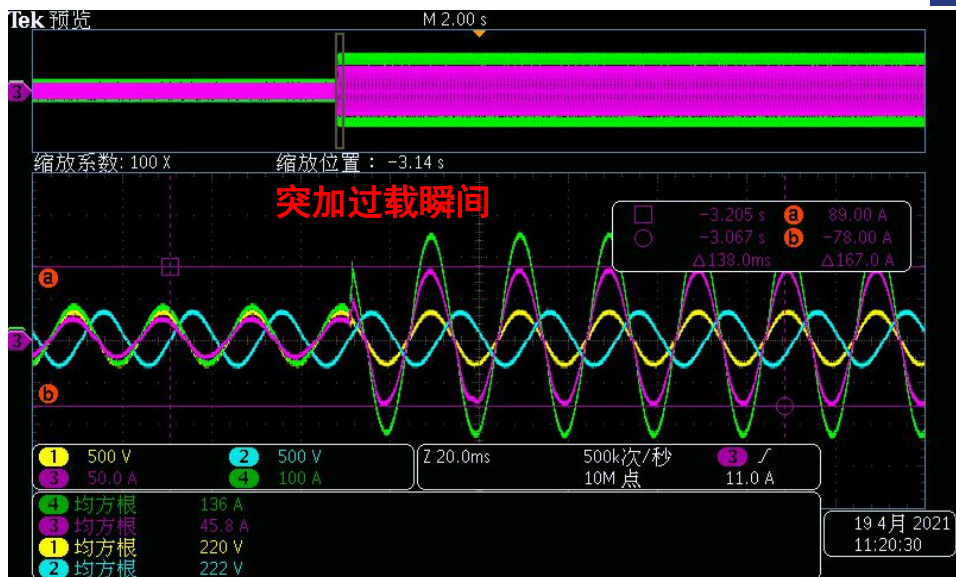
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CE The CE marking may only be used if all relevant and effective EC Directives are complied with.



# 产品介绍

过载和抗冲击能力--1.5倍过载30秒、三相不平衡带载（短时可达150%）

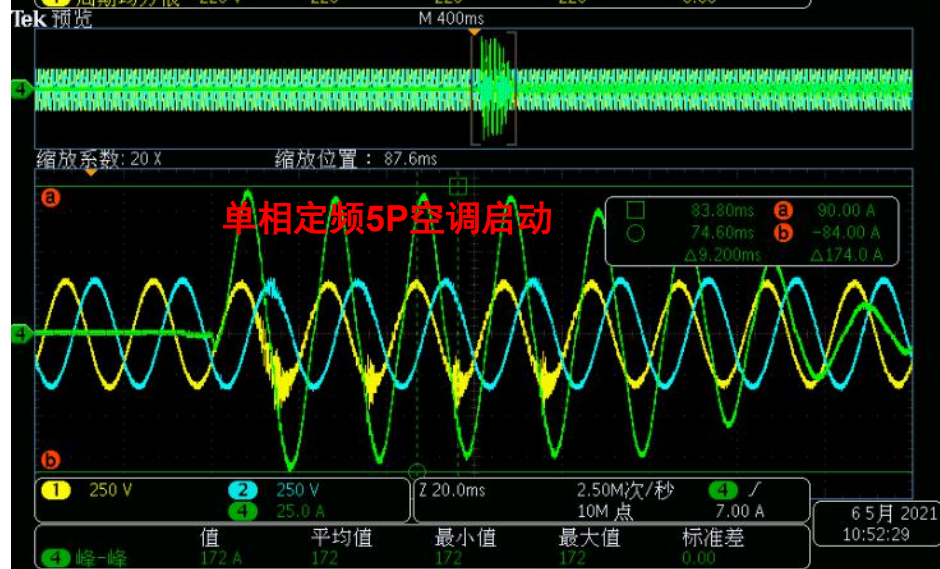
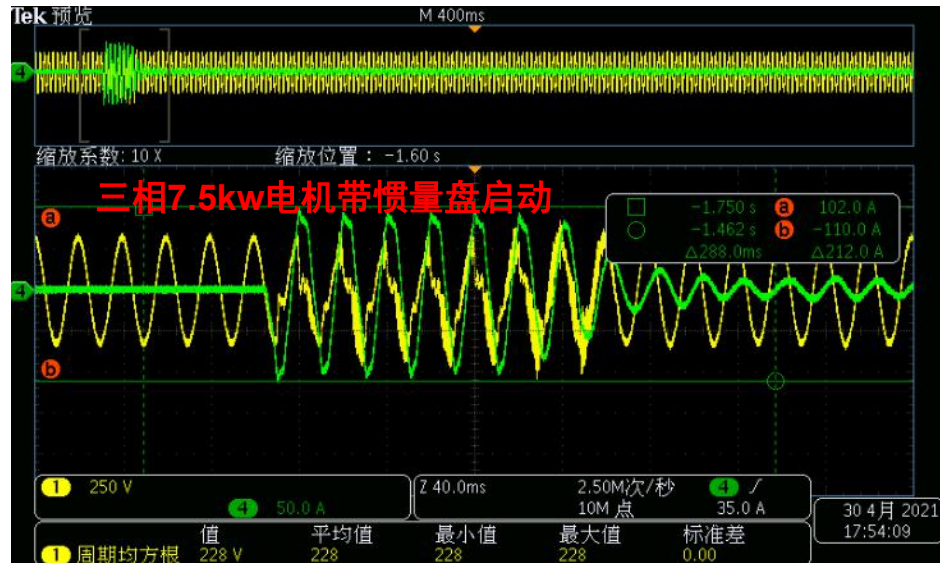
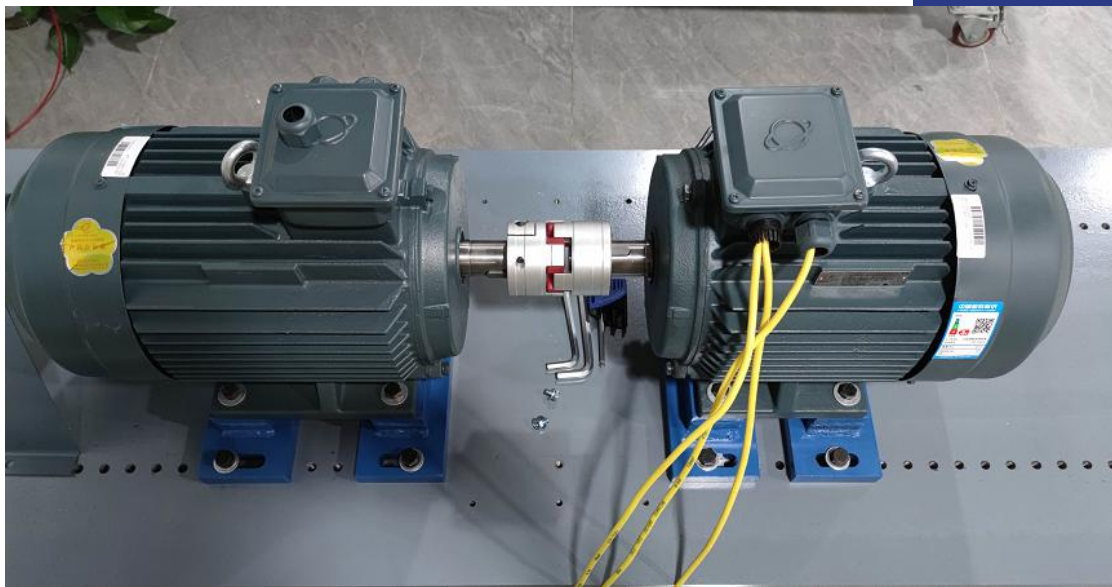


1和2: 电压, 3单个模块电流、4是三台模块输出总电流  
三模块直流和交流分别并联, 1.3倍过载, 过载均流误差<1A

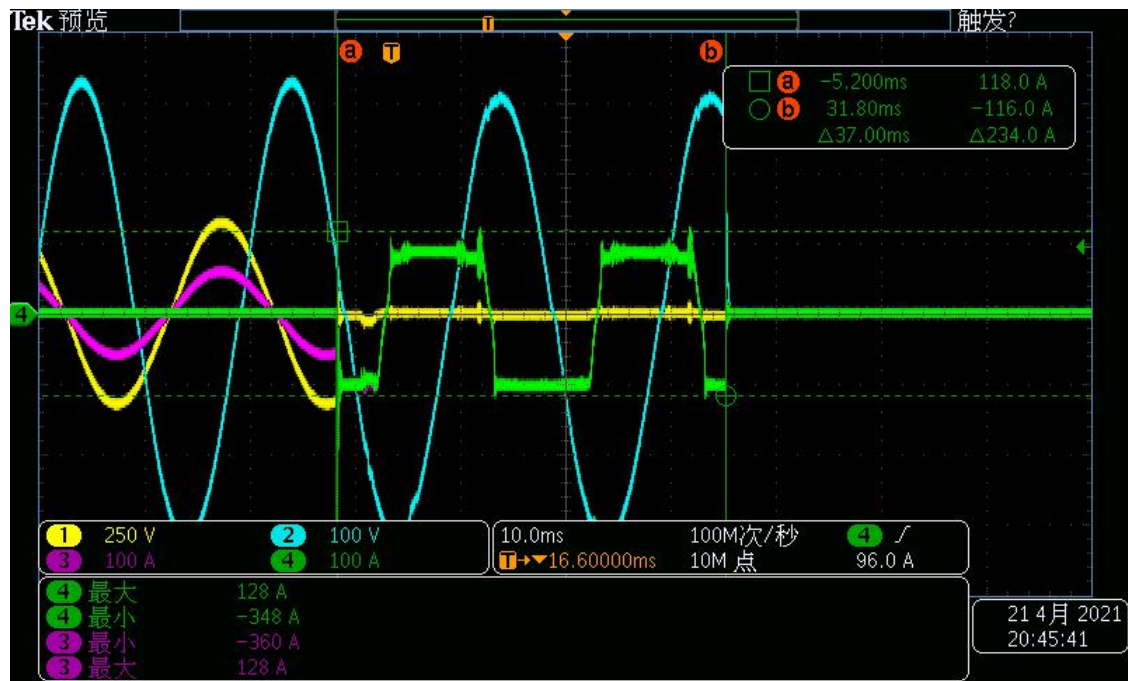
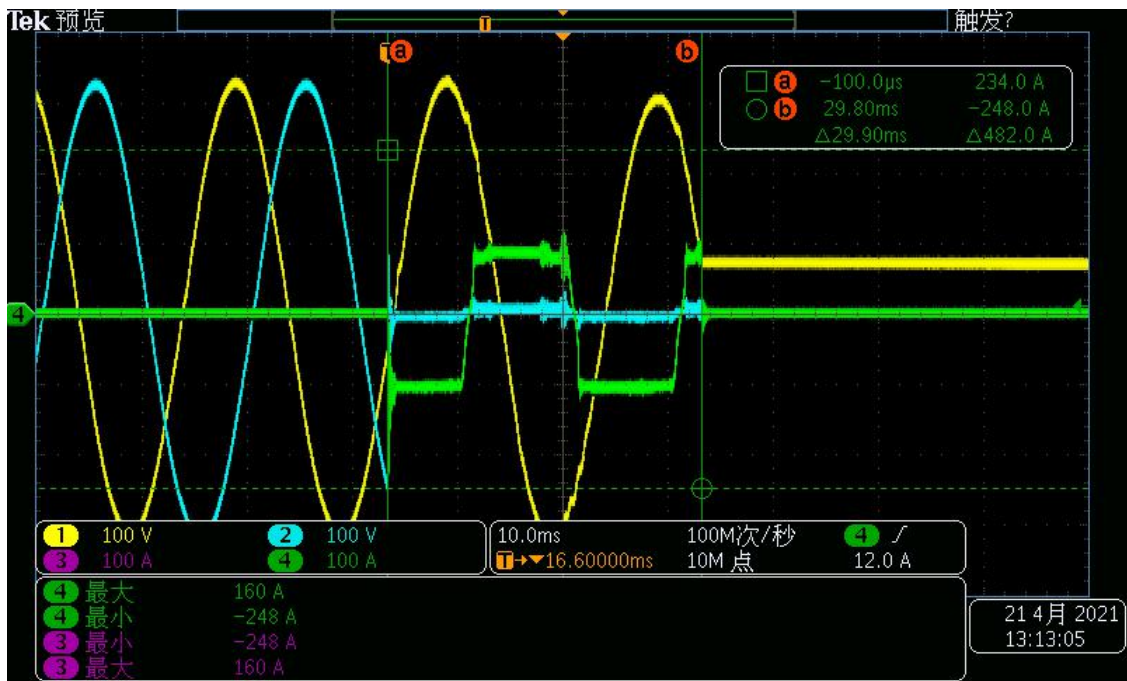
并机过载测试, 3和4分别为两台模块输出电流

# 产品介绍

过载和抗冲击能力--1.5倍过载30秒、三相不平衡带载（短时可达150%）



持续达到100A峰值的驱动能力。  
三相不平衡带载冲击能力（150%）



单相空载短路测试：CH1：A相电压；CH2：B相电压；  
CH3：机器端B相输出电流，CH4：短路电流；

单相满载短路；CH1：A相电压；CH2：B相电压；  
CH3：机器端A相输出电流，CH4：短路电流；

# 产品介绍

内置EMS,可实现光柴储微电网平稳运行及并离网控制

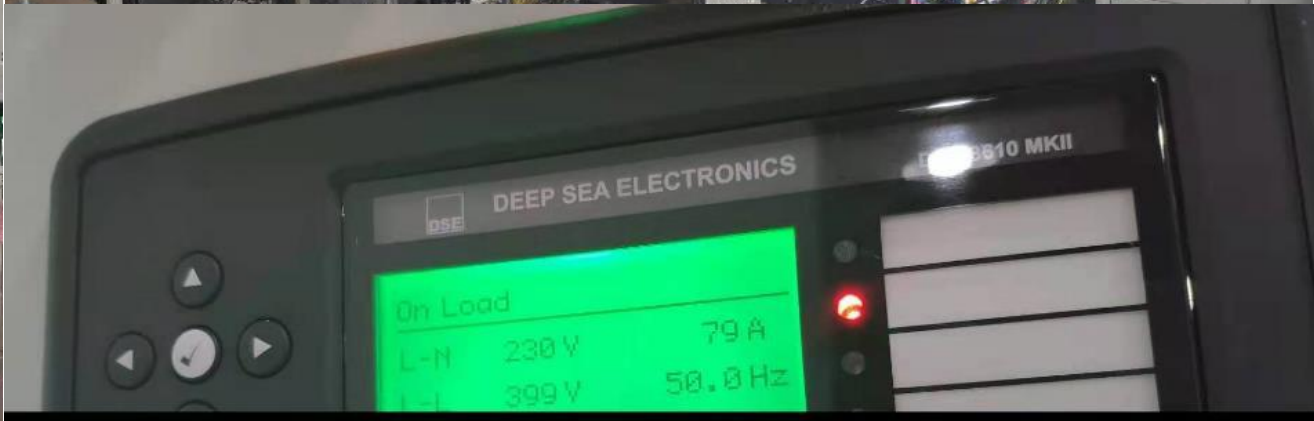


共交流光储柴系统测试

(10台PCS共直流源

40KW光伏逆变器

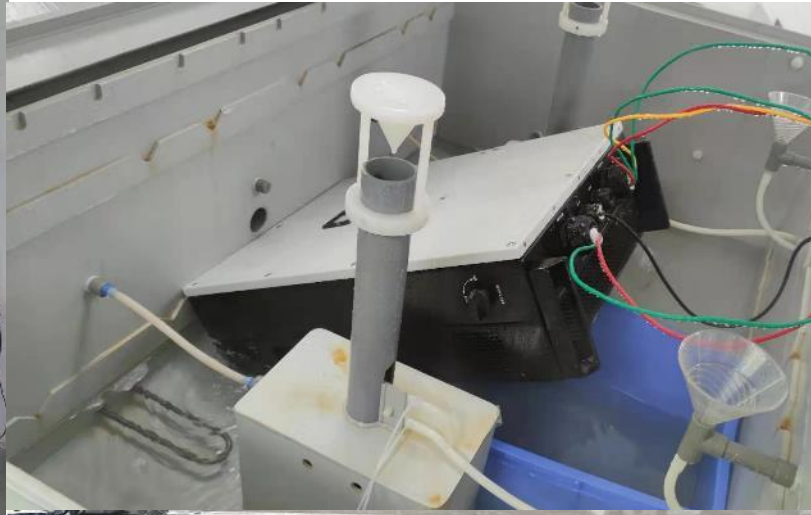
150KW柴油发电机)



测试台架

# 产品介绍

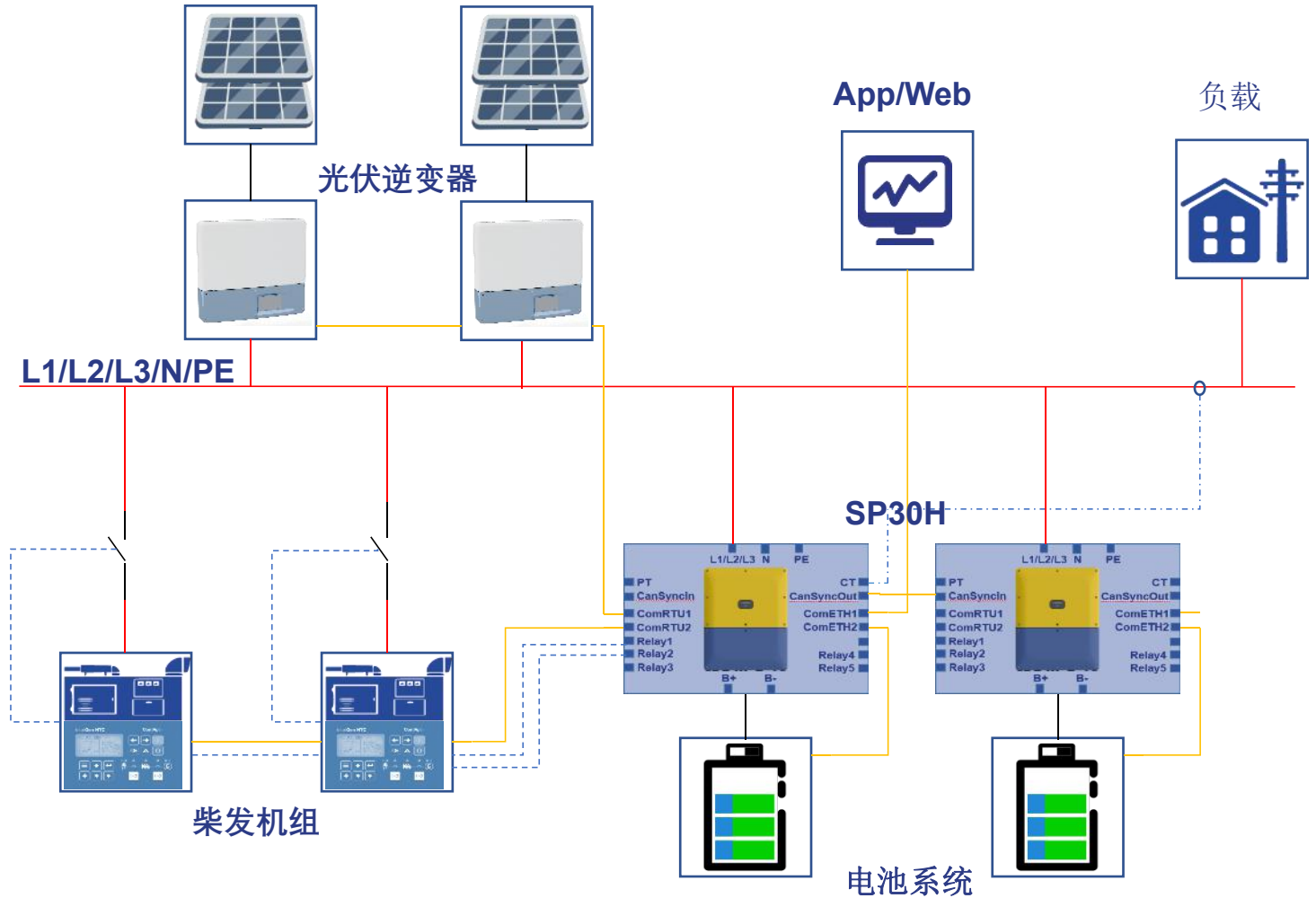
IP65防护等级，加速老化测（30年盐雾加速老化）



# 无电地区微电网解决方案

优势:

- 1、3P4L实现高效光储（柴）供电
- 2、支持单相100%不平衡负载
- 3、支持1.5倍30S过载冲击
- 4、内置BMS，兼容锂电和铅酸
- 5、内嵌微EMS功能，满足绝大部分光储柴微电网应用
- 6、储能和光伏配比可以达到1:1.3，支持10台以上并机
- 7、光伏储能柴发配置灵活、升级成本低



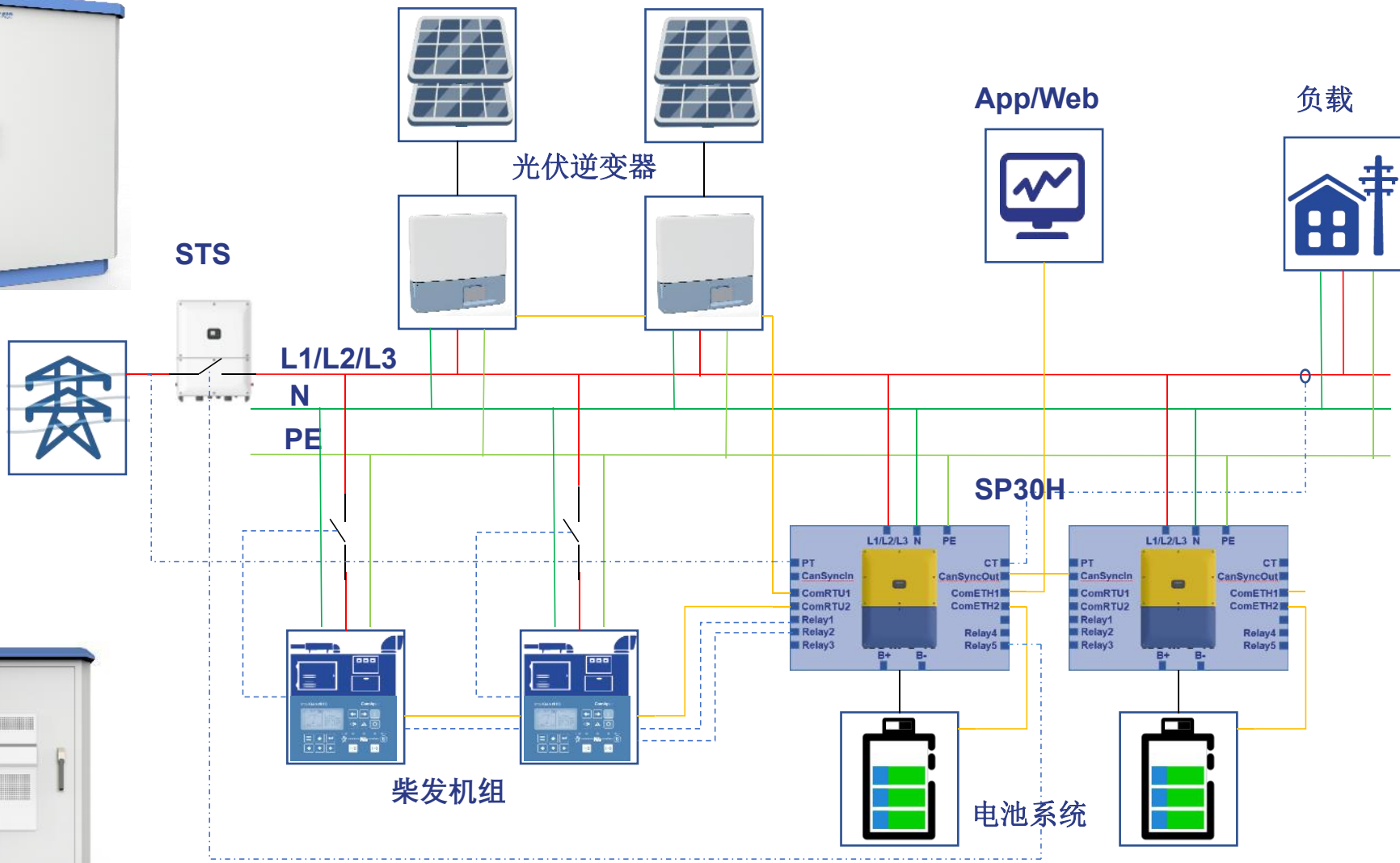
应用场景:

村庄、海岛、野外工地、石油开采、酒店、游艇、海洋养殖、海洋勘探、沙漠绿洲等

# 电网不稳定微电网解决方案

优势:

- 1、3P4L实现高效光储（柴）供电综合能效最高可以达到98%以上
- 2、支持单相100%不平衡负载
- 3、支持1.5倍30S过载冲击
- 4、光伏储能柴发配置灵活、扩容简单、成本低
- 5、内嵌微EMS功能，满足绝大部分光储柴微电网应用
- 6、储能和光伏配比可以达到1: 1.3
- 7、支持无缝切换



应用场景:

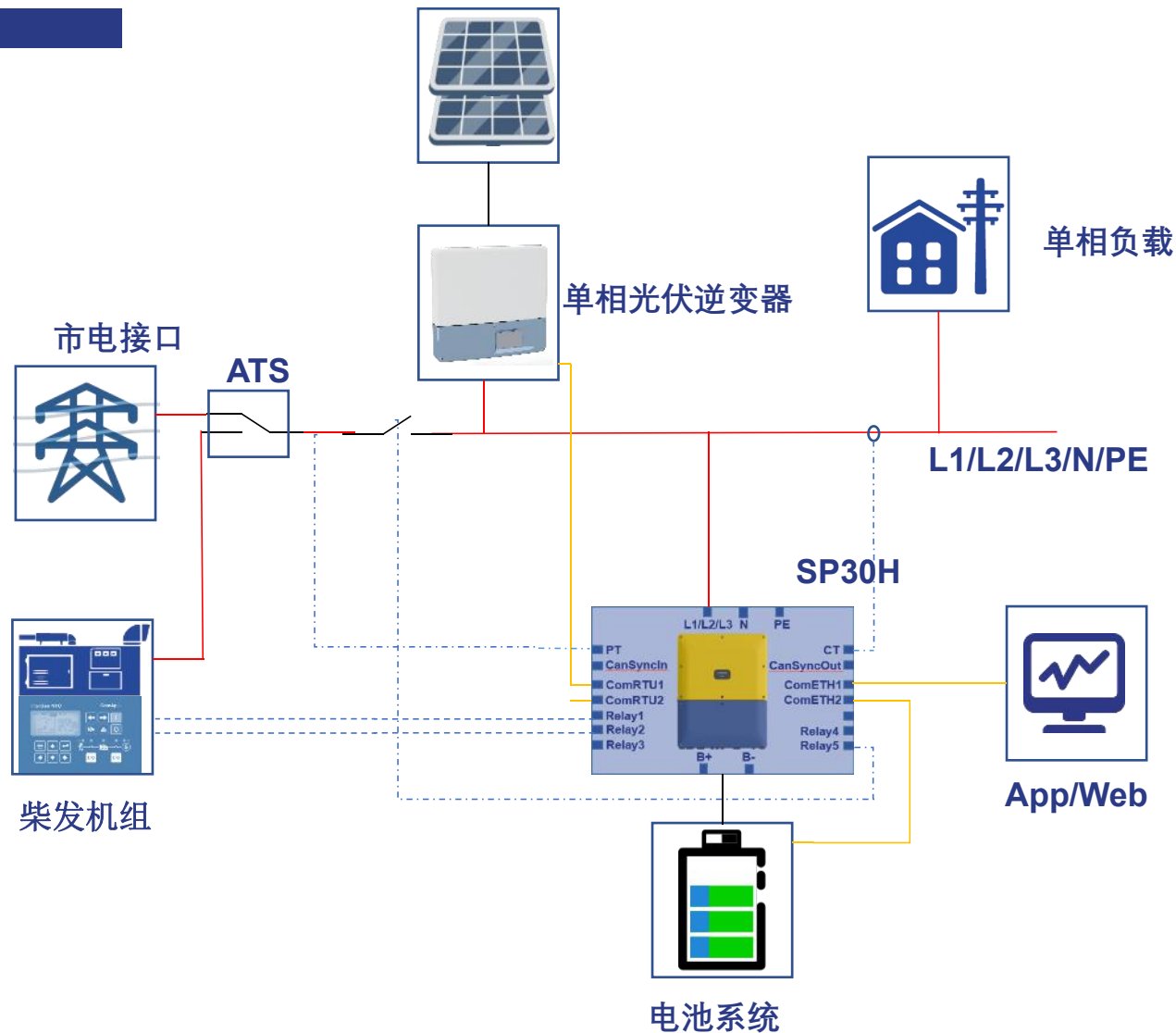
工厂、别墅、酒店、应急备电、农网改造等



# 海上游艇混合供电方案

优势:

- 1、停泊期间无噪音，混动节油、省成本
- 2、支持岸上大功率快充
- 3、支持1.5倍30S过载冲击、满足一些电机启动要求
- 4、光伏扩容灵活、简单、成本低
- 5、一体化方案集成监控和ATS控制等
- 6、IP65+C5防护等级满足海边防腐要求。
- 7、智能化能量管理，自动化控制、系统故障率低、维护成本低。



应用场景：  
游艇、大型渔船等

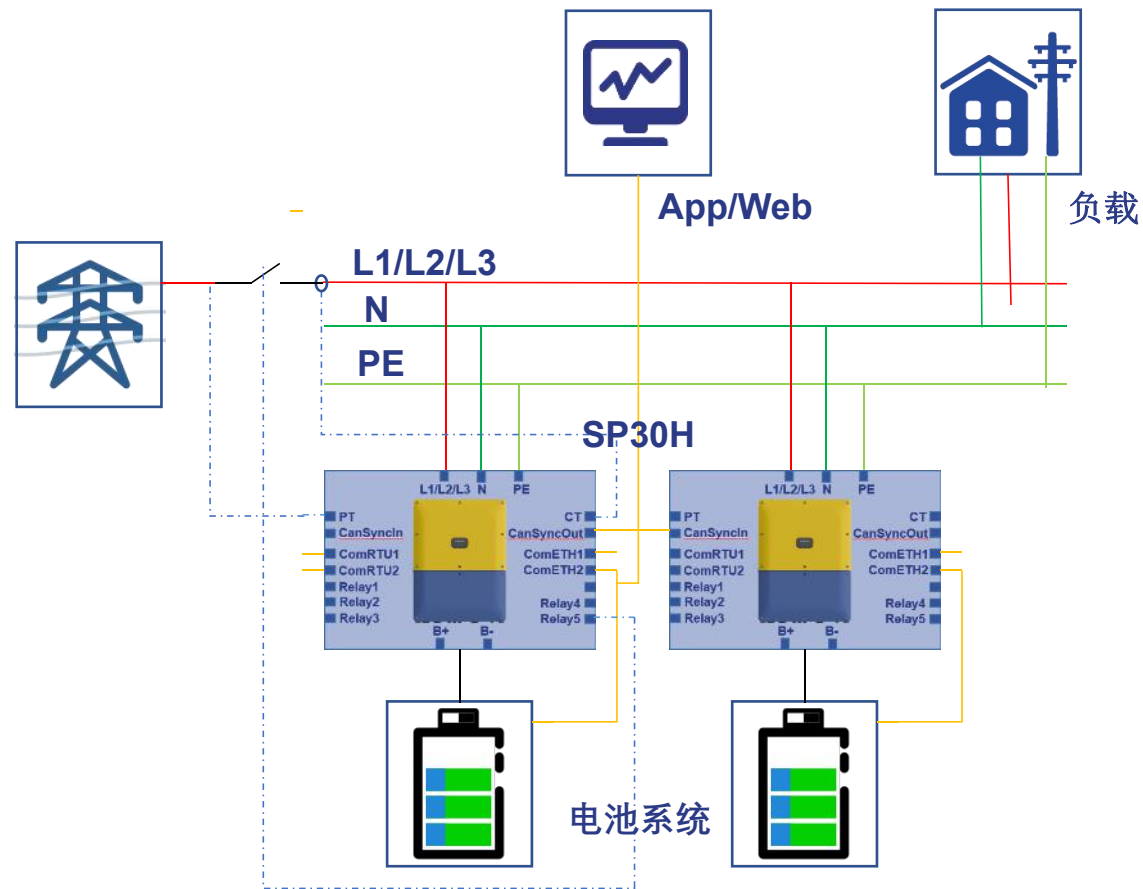
# 农网改造解决方案

优势：

- 1、实现削峰填谷，保证变压器安全运行
- 2、负荷较高或者出现尖峰负荷时储能系统及时放电补充
- 3、支持1.5倍30S过载冲击、满足一些电机启动要求
- 4、有效降低变压器扩容成本，缩短供电改造时间
- 4、智能化能量管理，自动化控制、系统故障率低、维护成本低。

应用场景：

农网改造、变压器扩容困难等



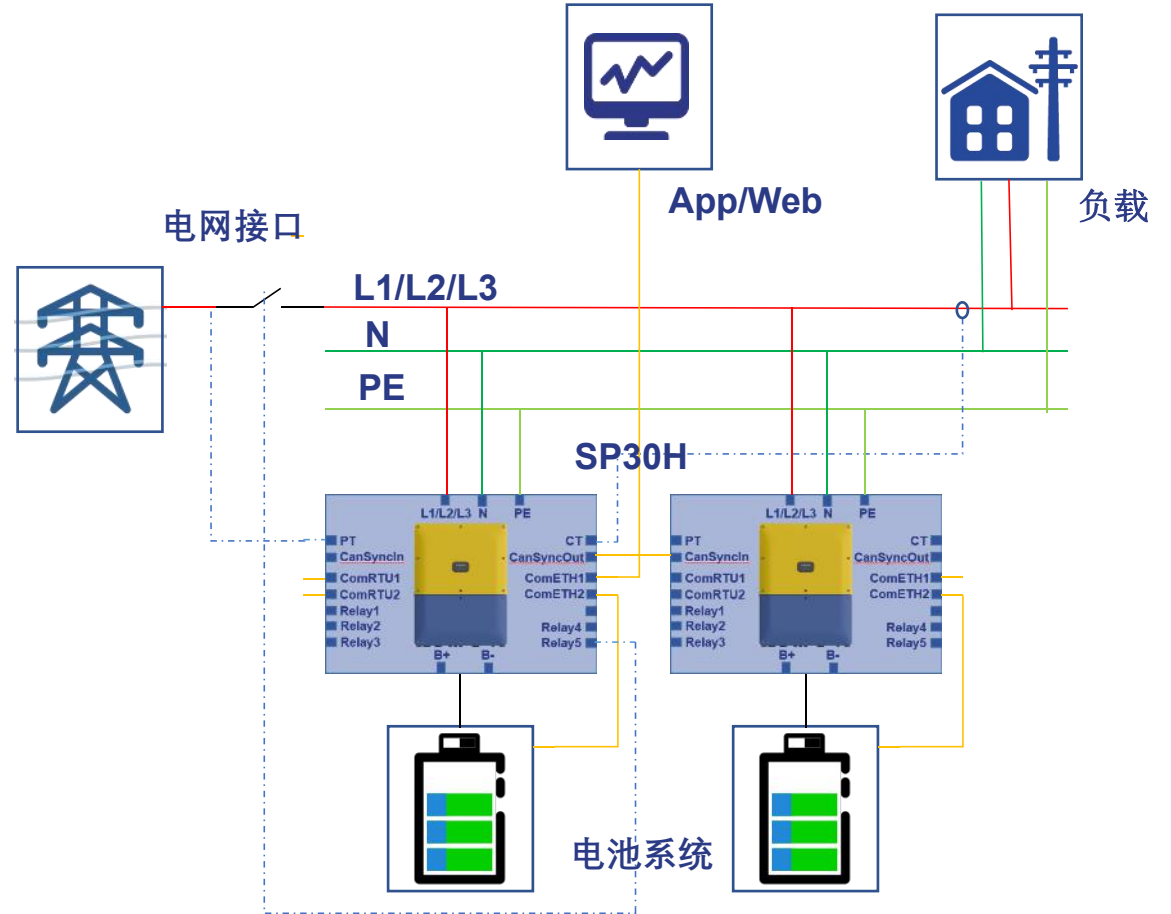
# 移动式临电解决方案

## 优势:

- 1、支持1.5倍30S过载冲击、满足一些电机启动要求
- 2、随车移动，可快速部署；
- 3、无噪音，不扰民；
- 4、连接简单，使用方便；
- 5、支持大功率快充；
- 6、智能化能量管理，自动化控制、系统故障率低、维护成本低。

## 应用场景:

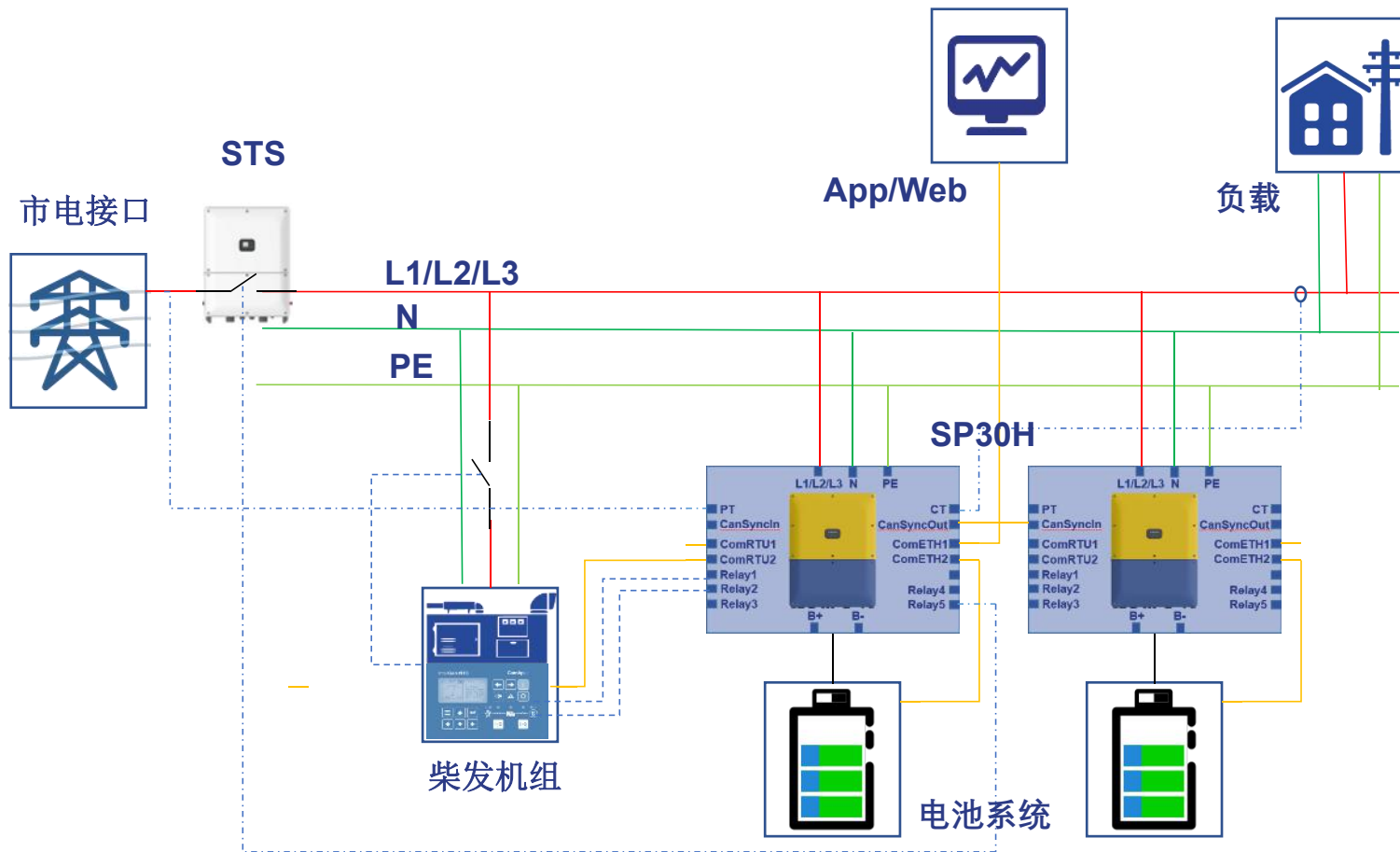
游艇、大型渔船等



# 临电微电网解决方案

优势：

- 1、3P4L实现高效光储（柴）供电综合能效最高可以达到98%以上
- 2、支持单相100%不平衡负载
- 3、支持1.5倍30S过载冲击
- 4、储能柴发双电源供电
- 5、内嵌微EMS功能，保证供电同时保证柴发经济运行
- 6、车载安装，使用方便
- 7、支持无缝切换（切换时间不大于20ms）



应用场景：

临时通信基站、应急备电、市政抢修等

# 我们的项目

## Successful Projects



**Location : Maldives**

Signing Date : Dec, 2017

PV : 2.86MWp

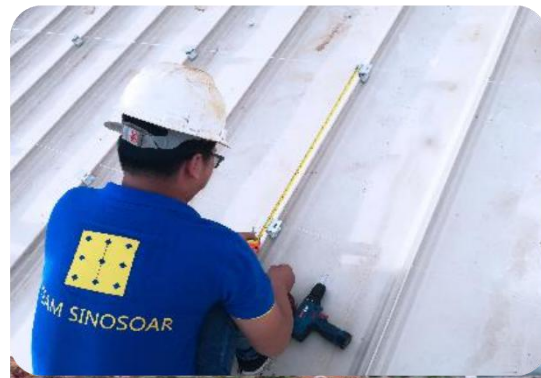
BESS : 3.23MWh

Genset : 6.72MW

Fund : World Bank

# 我们的项目

## Successful Projects



**Location : Uganda**  
Signing Date : Apr, 2019  
PV : 518.4kWp  
BESS : 650kWh  
Genset : 500kW  
Fund : World Bank



# 我们的项目

## Successful Projects



**Location : Mongolia**

Signing Date : 0rc, 2017

PV : 80kWp

BESS : 96kWh

Genset : 100kW

Fund : Government

# 我们的项目

## Successful Projects



**Location : Myanmar**

Signing Date : Jan, 2017

PV : 583.2kWp

BESS : 476KWh

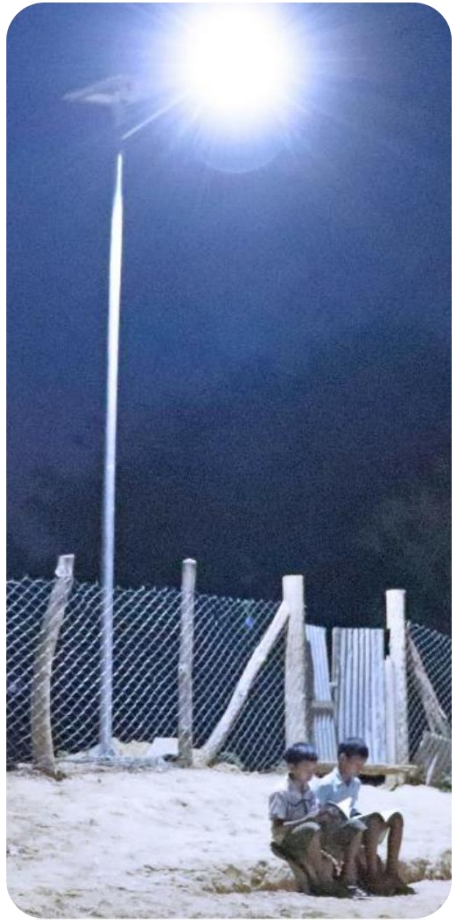
Genset : 500kW

Fund : Private



# 我们的项目

## Successful Projects



Location : Myanmar

Signing Date : Nov, 2016

System Quantity: 362802 Sets

Capacity : 24.88MWp

Fund : World Bank

# 我们的项目

## Successful Projects



Location :  
Philippines Nov, 2017  
System Quantity : 10000 Sets  
Capacity : 500kWp  
Fund : World Bank

# 我们的项目

## Successful Projects



Location : Suriname

Signing Date : Nov, 2019

PV : 2.3MWp

BESS : 1.14MWh

Fund : CDB



# 我们的项目 Successful Projects



**Location :**  
**Mashall Islands**

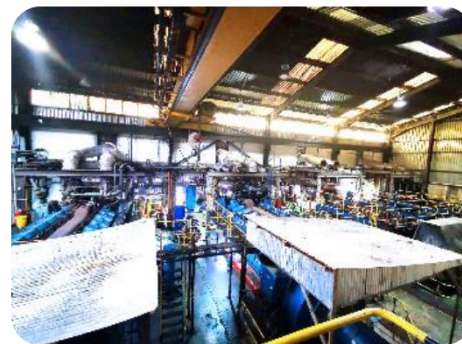
Signing Date : Oct, 2020

PV : 4MW<sub>p</sub>

BESS : 2MW/1MWh

Diesel generators : 8.6MW

Fund : World Bank



# 我们的项目

## Successful Projects



Location : Sri Lanka

Signing Date : Mar, 2021

PV : 1.7MWp

Wind Turbine : 530kWp

BESS : 2.35MWh

Diesel generators : 2.05MW

Fund : ADB

# 我们的项目

## Successful Projects



**Location : Niger**

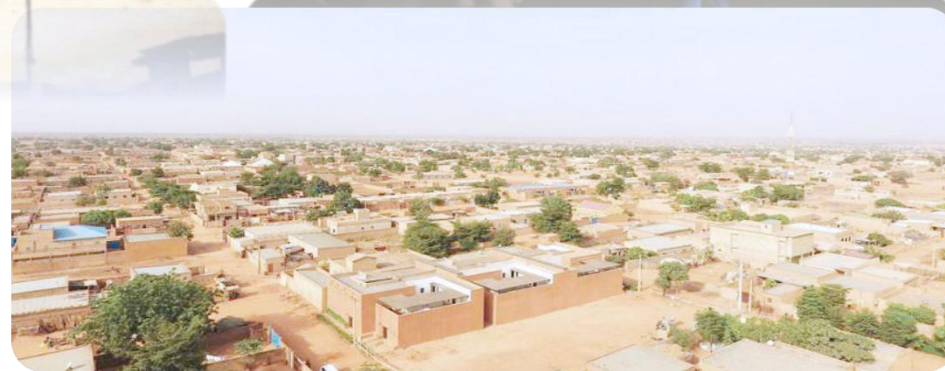
Signing Date : Jul, 2020

PV : 2.9MWp

BESS : 4.35MWh

Diesel generators : 1.48MW

Fund : World Bank





## Contact Us

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W: [www.jindee.cn](http://www.jindee.cn)

# 如何落实？