



HELLO GREEN FUTURE

Tier 1
BloombergNEF

Stock Code: 874100



ABOUT US

Luxen was founded in Spain in 2005. In 2011, after 6 years of international solar business, Luxen sets up own factory in China. Five years later, the company ranks in the top 50 in global export. In 2017, the production is expanded and modernized with smart technologies according to the 4.0 industry revolution. By 2018, Luxen grows sales activities to over 70 countries and gets listed as one of the top 20 global export companies. In 2023, Luxen has production capacity of 3 GW, growing to 10 GW by 2026 and is recognized Tier 1 manufacturer. It is internationally acknowledged for its supreme quality, reliability and round-the-clock aftersales support. Luxen has Operational HQ for Europe in Vienna, Austria and in Milan, Italy and representative offices across Europe and Asia and own state-of-the-art production facility in China.

LUXEN AT A GLANCE



Tier 1 Solar Module Manufacturer by
BloombergNEF



Current Capacity
3 GW + 7 GW by 2026



6GW
Deliveries Worldwide



90+
Regions



500+
Employees



40+
patents in the
Production technology



ABOUT US - ITALY

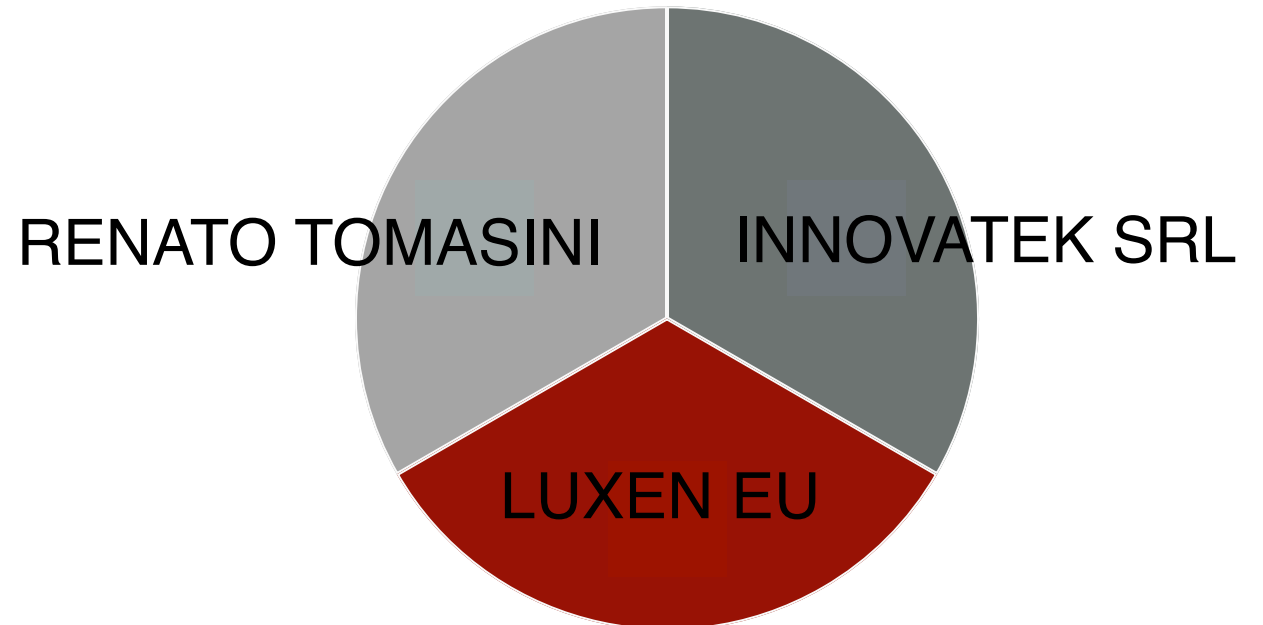
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Dott. Aleix Montraveta
Distribution Channel Manager
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Luxen Solar Energy srl shareholders



OUR MILESTONES

- 2005** Founded in Spain
- 2011** Begin of production in own manufacturing facility in China
- 2015** First automatic production line
- 2016** Luxen Solar gets on the global export top 50 list
- 2017** Two industry 4.0 intelligent production lines
- 2018** Luxen Solar gets on the global export top 20 list
- 2020** Nantong manufacturing base established, annual capacity over 2GW
- 2021** Begin of world class TÜV witness laboratory
- 2022** N-type TOPCon module is introduced; Luxen Solar becomes Tier 1 Solar Module Manufacturer by BloombergNEF
- 2023** Officially listed on the Board
Stock Code: 874100
- 2024** Founded in Italy



2022年

Tier1
BNEF

2023年

STOCK
874100

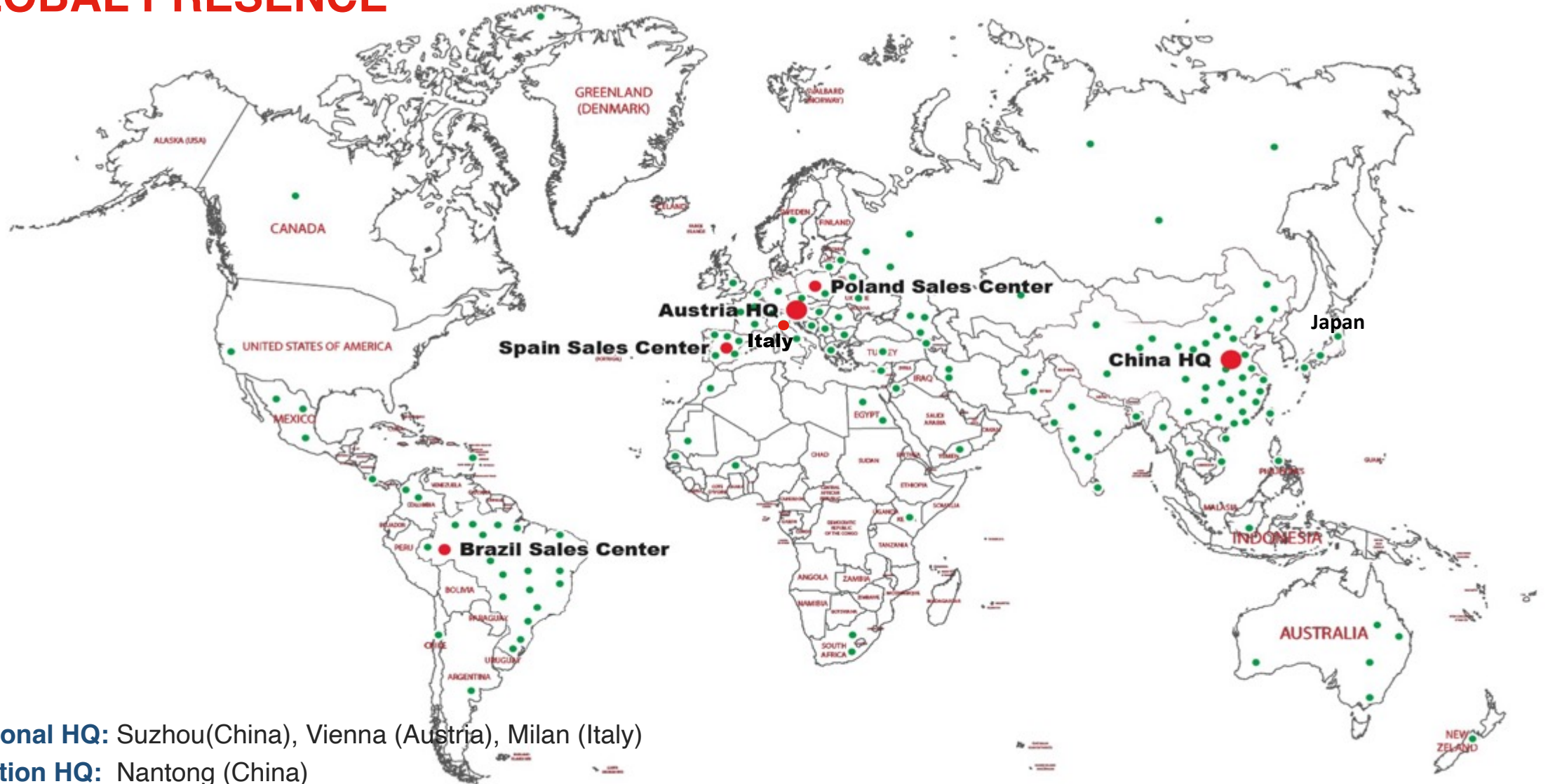
OUR VISION

Our vision is to pave the way towards carbon-free living by developing high-tech products that will contribute greatly to CO2 reduction globally and to guide our clients towards a NET ZERO FUTURE.

OUR MISSION

Our mission is to achieve steady growth by introducing continuously the most innovative technologies with superior quality in a sustainable manner. Our business model is creating long-term relationships with our clients that are built on trust, respect and common vision of a clean future.

GLOBAL PRESENCE



Operational HQ: Suzhou(China), Vienna (Austria), Milan (Italy)

Production HQ: Nantong (China)

Sales Centers: Hyogo (Japan), Murcia (Spain), Kielce (Poland), San Paulo (Brazil)

SMART FACTORY WITH ADVANCED ROBOTICS

- Fully certified manufacturing plant equipped with 4.0 industry revolution machines to eliminate human errors and enables high-end operational efficiency
- Advance intelligent data gathering, and analysis facilitates the decision-making
- AI-powered inspections eliminates product defect

40+

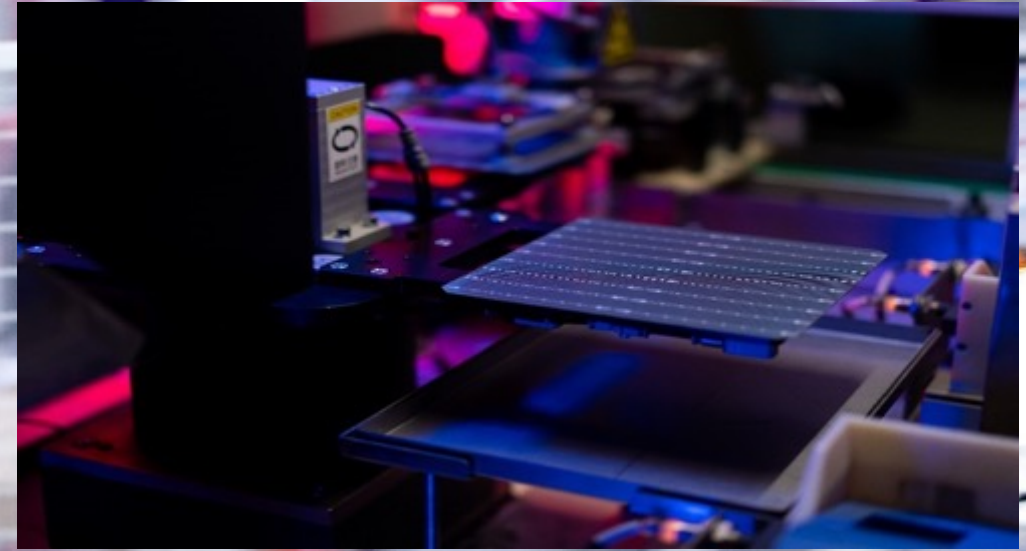
Patents in the
production process

7x24^{hours}

Real time monitoring

RIGOROUS QC AND QA PROCESS

- Advanced testing procedures to ensure high performance all year long & long-life span
- Sophisticated equipment to ensure the most accurate product quality control



CERTIFICATES

Prestigious third-party certifications are the best proof of LUXEN's solar panel quality. Our solar panels have passed the rigorous certification tests led by TUV accreditation agencies and can meet the highest quality requirements from around the world.



CQC



RETIE (Columbia)



TUV SUD



CE



Registration,
Evaluation,
Authorization
Chemicals EU



TUV Rheinland



BIS (India)



Inmetro (Brazil)



Fire Rating (Italy)

RoHS RoHS



CUL Listed



Federal
Communications
Commission



Energy Star



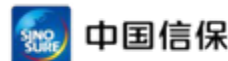
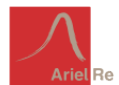
CQC



ISO 9001-2015

INSURANCES

In order to protect the investment of our clients in solar energy and ensure the 25(30)-year use life, our solar panels are strongly backed by the world-class insurance groups such as ArielRe(LLOYD`S) and PICC to give the maximum quality guaranty to our clients.



OUR MAIN BRAND HONORS



2022-2024

Continuously selected into the list of BNEF'S global Tier1 brands



2023-2024

Obtained the European PV TECH Bankability Rating



2022

Top 10 Distributed PV Module Brands in China



CHN ENERGY

2022

Top 10 Influential Brands in China PV Industry



2021

Most influential PV module Enterprise in distributed PV

2020-21

Most innovative PV module Enterprise



2022

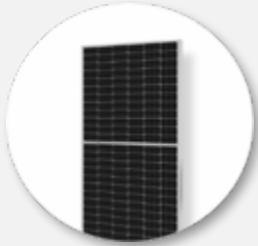
Most Influential PV Module Enterprise

2019

Top 20 South American Shipments (Customs Data and Customer Satisfaction)



LUXEN SERIES



L/LAB SERIES Advanced Customization

The "L/LAB" in the L/LAB series is derived from the "Luxen Laboratory", which represents our spirit of innovation and breakthrough. The L/LAB series represents the highest level of technological innovation, performance excellence and professional services in LUXEN Modules. We are committed to providing the most advanced, reliable and comprehensive product solutions to professional customers in the global PV field. At present, LUXEN has launched L/LAB module products to meet the extreme needs of customers, such as full-scene anti-glare and high-load anti-hail.



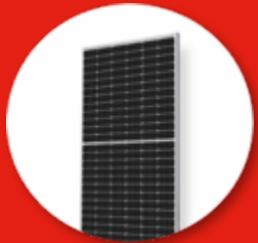
N TYPE LECO Cell Modules

Equipped with N-TYPE LECO cell technology, which has the characteristics of low composite metallization, laminated film passivation, ultra-low composite emitter, high-quality N-type substrate, ultra-low composite heterogeneous back surface field, "zero" light attenuation, etc. , which can make it have the advantages of higher efficiency and bifacial ratio, better power temperature coefficient and lower module operating temperature, better anti-light decay performance and low-light power generation performance.



SERIES 6 210mm Cell Modules

Series 6 solar modules stand out with the breakthrough innovation of M12 size (210mm) solar cells for the highest power generation and the lowest LCOE, which makes Series 6 the optimal choice for large solar power plants. The gallium-doped wafer technology empowers significantly the performance against LID and the latest integrated segmented ribbon technology increases the power output and enhances the module reliability for long-term use.



SERIES 5 182mm Cell Modules

Series 5 solar modules stand out with the breakthrough innovation of M10 size (182mm) solar cells for the highest power generation and the lowest LCOE, which makes Series 5 the optimal choice for large solar power plants. The gallium-doped wafer technology empowers significantly the performance against LID and the latest integrated segmented ribbon technology increases the power output and enhances the module reliability for long-term use.

TOGETHER TOWARDS A BETTER TOMORROW

Our goal → ZERO-CARBON future

LUXEN SOLAR Modules continue to contribute to a clean and healthy environment

8.7 Million Tons
of carbon reduction and counting

Equivalent to planting

462 Million Trees

REFERENCES

80MW
Spain



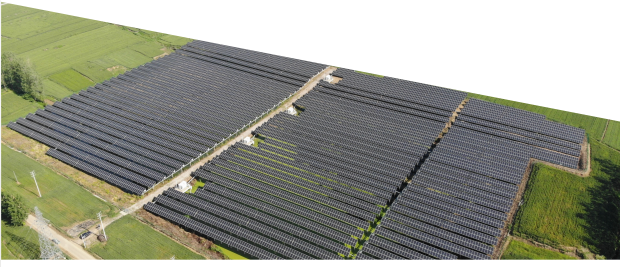
30MW
Serbia



5.4MW
Japan



8MW
China



4.6MW
Sweden



20MW
China



REFERENCES

120MW
China



1MW
Ukraine



2.5MW
Brazil



10MW
Armenia



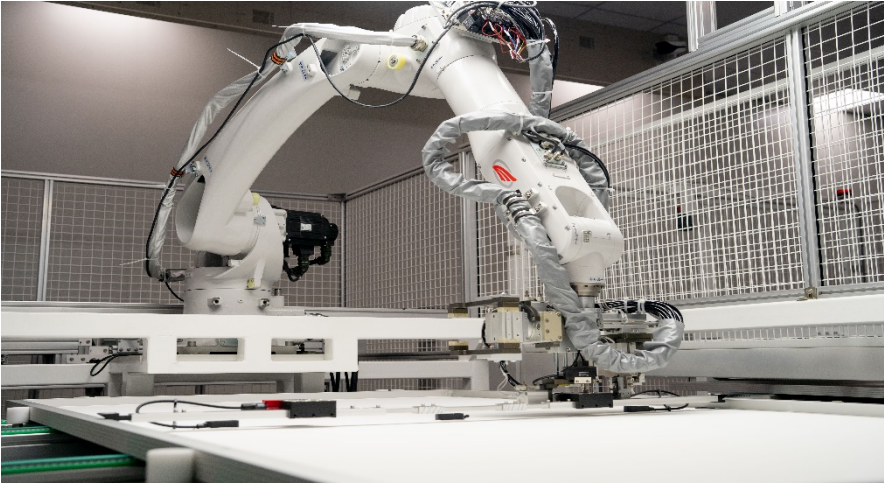
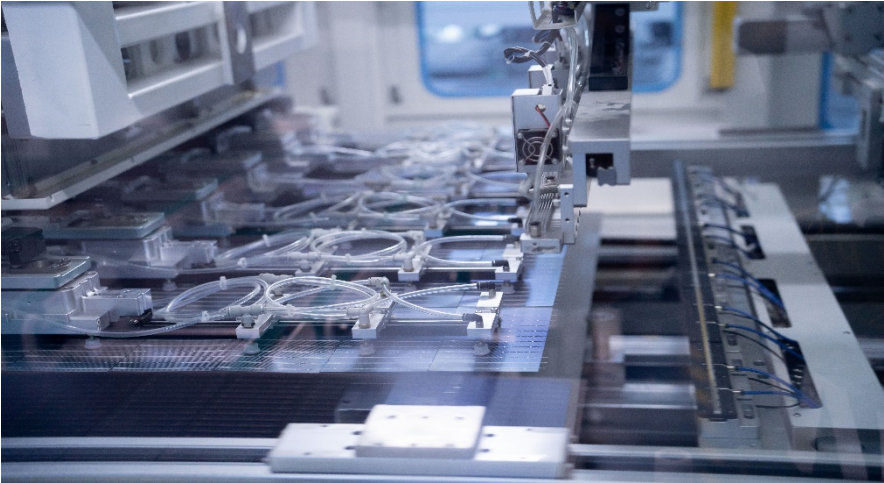
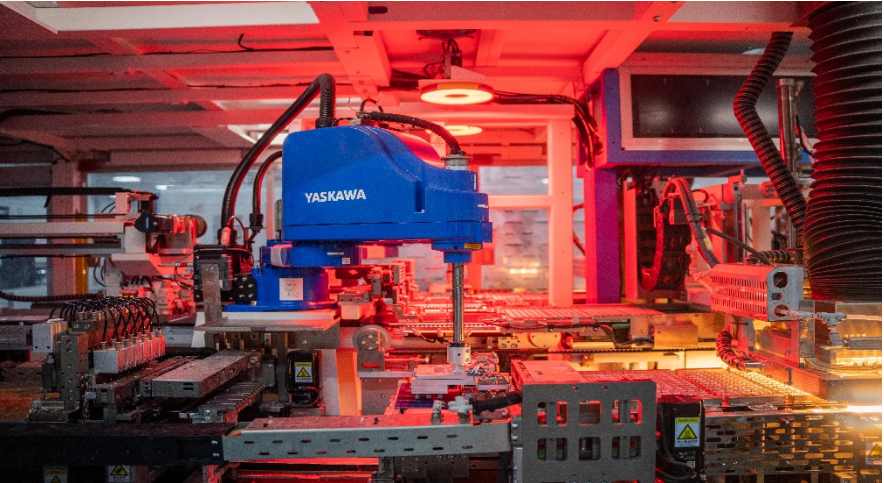
2.3MW
Brazil



22MW
China



MANUFACTURING CENTER



PRODUCTS

EV2 Chargers and PV Systems Products Roadmap and portables Solutions

EV2 CHARGERS

Electric Vehicle Chargers for Home , Business and Public usage



AC CHARGERS

EV Chargers for Home & Business



SO1 - 7/11/22KW

- Home & business charging
- 3.5-inch display (black-white)
- RFID reader / LEDs
- Bluetooth & wifi app
- RS485
- OCPP 1..6J / Smart Charging V1/V2
- Software meter
- 6mA+30mA AC&DC leakage protection
- Integrated PEN
- IP65



SW1 7/11/22 KW

- Home & business charging with Case B & Case C versions
- RFID reader / LEDs
- 4-inch display (colour)
- Software meter
- Premium metal enclosure & glass-front-panel
- OCPP 1..6J
- Ethernet, wifi, 4G
- RS485 / ModBus TCP
- 6mA+30mA AC&DC leakage protection
- IP65



FEATURES+SOFTWARE

- Type 2 cables in various length (5m / 7,5m cables / customizable)
- All chargers as 7 kW (1-phase), 11 kW and 22 kW (3-phase) version available
- based on Bluetooth, Wifi or Ethernet connectivity native WE-E-Charge app functionalities (remote control + transactions / Android + iOS)
- Based on RS485 interface solar charging + load balancer available
- Premium software features (cloud load balancing, detailed user reporting, charging timer, multi-wallbox mgmt. using TCP/IP)
- Enterprise load balancing (>63A) with transducer measurement based ModBus TCP with DIN rail smart meter



Wall-mounted Charging Station



Pole-mounted Charging Station

DC CHARGERS

EV Chargers for Public Areas



AMP1 - SUPERCHARGER

- AVAILABLE: 120KW; 180KW ; 240KW ; 320KW
- 60-320kW output
- 150-1000 VDC
- 5m CCS charging cable
- 42-inch LCS video screen with CMS for Dynamic Advertising
- Modular design with patented PPC, easy installation and easy maintenance
- 7-inch touch display
- MID meter / Eichrecht-compliant
- OCPP 1.6J (Hubject pre-integration for roaming)
- Ethernet / 4G module
- IP54
- LCD Screen with CMS for Dynamic Advertising



OPTIMIZED MAINTENANCE AND CONTROL

Dedicated Power integrated Charger controller

AMP1 is designed highly modular and consist only of 5 components:

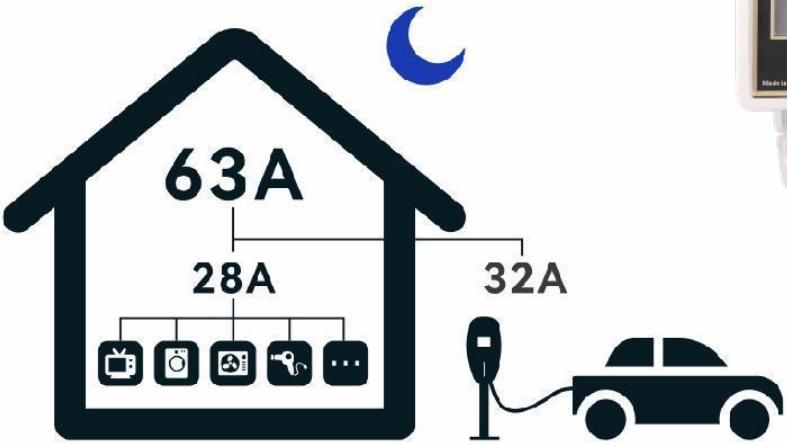
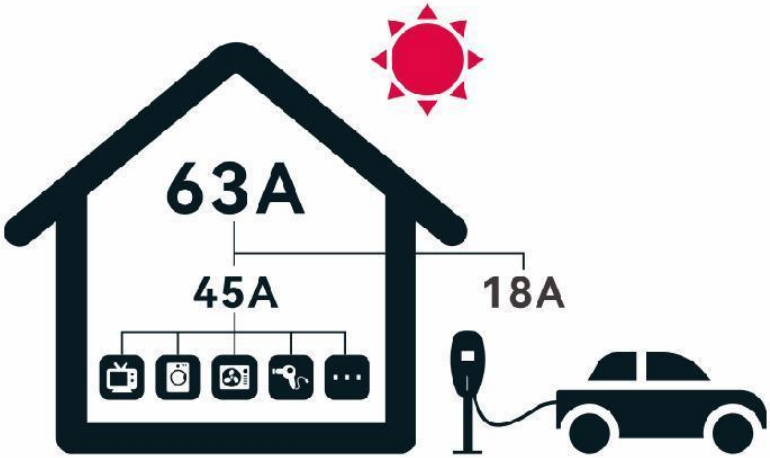
- 1.) Power Controller
- 2.) Energy Measuring Unit
- 3.) Display
- 4.) Power Modules
- 5.) Charging Gun(s)

This design leads to:

- Lower hardware and maintenance costs
- Higher availability: Charging module separated from control system, stable and safe performance, easy maintenance
- High Efficiency: Multiple module output modules in parallel with flexible configuration, Constant power module and smart power allocation with high charging efficiency.

LOAD BALANCING

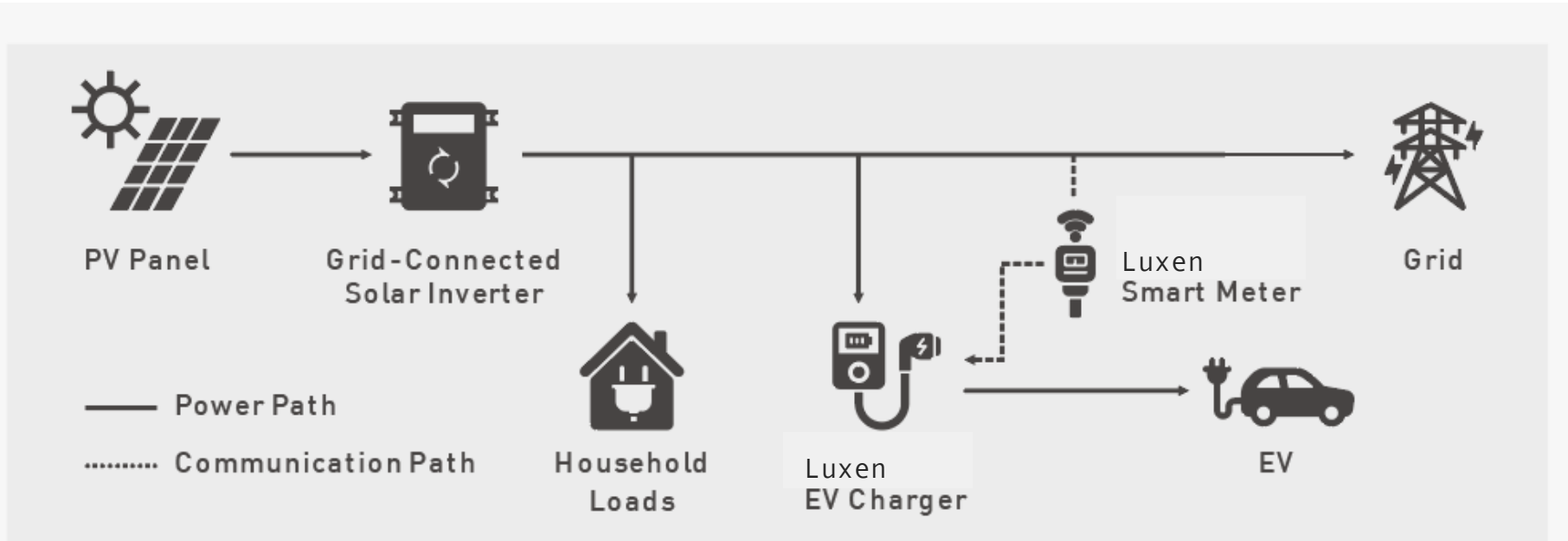
Dynamic load balancing (DLB) system



DLB MODULE



PV SYSTEM INTEGRATION



BOOST Mode
Max. Charging Current
Only Grid
Or only PV system
Or Grid+PV system

ECO+ Mode
Most Economical Charging
Only PV system

ECO Mode
Smart Charging
Only PV system
Or Grid+PV system

SMART FEATURES

Mobile APP

SMART HOME CHARGING SOLUTION

Manage and control charging sessions from the E Charge mobile APP.



Remote Control

Start/Stop the EV Charging



Current Limit

Change the charging current and power freely



Easy Setting

Video and user manual guidance, show you all the sitting process step by step



Select charger

Manage all your chargers

Menu

Schedule / Share / History / Users / Settings / Remove Charger

Charging button

Tap to start or stop charging

Charging current

Real time charging statistics

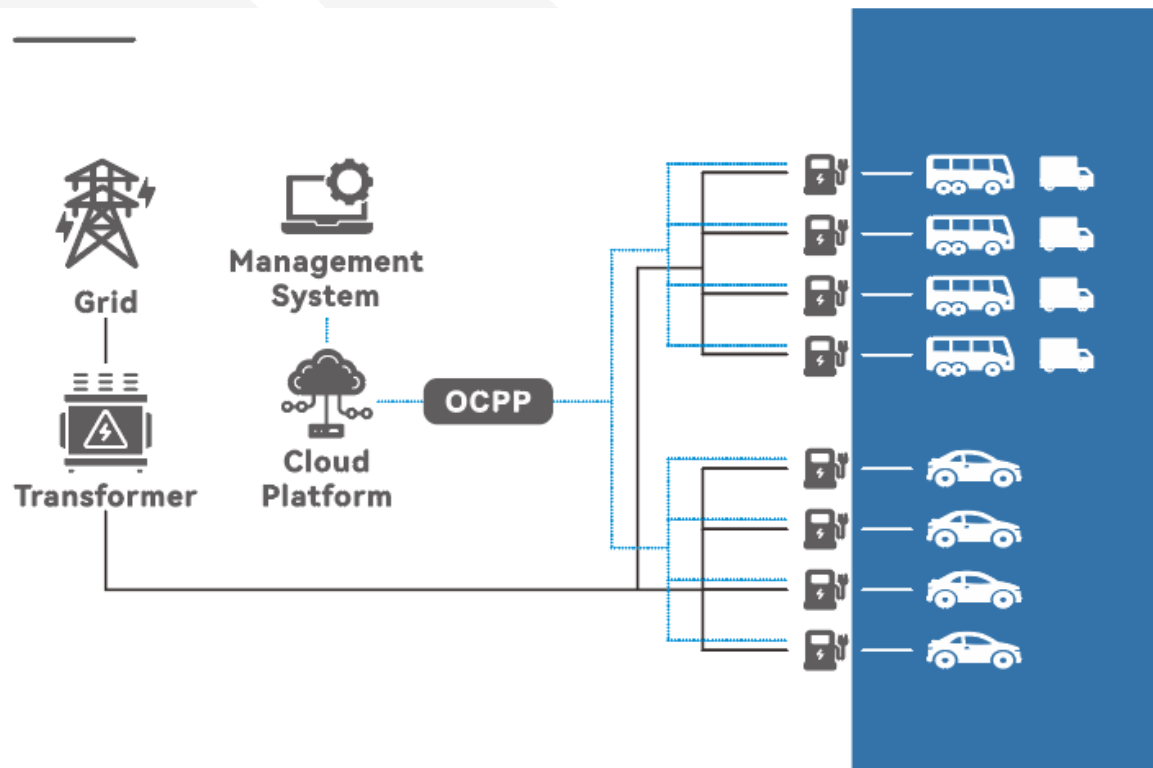
Set current

Freely set to make the charging speed slow or fast.

BACKEND SYSTEM

For Fleets and Public

Management systems for **fully optimize monitor and control fleet charging or public chargers**

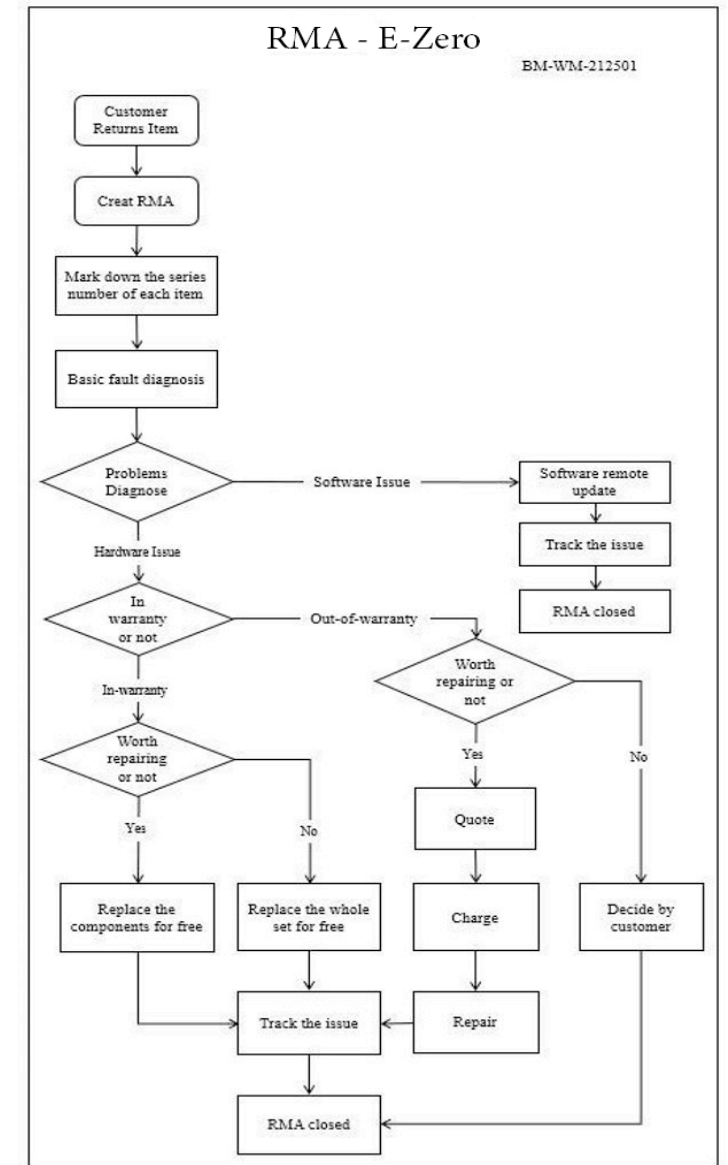


OPTIMIZED AFTER SALE & SERVICE

Cloud Based **Management Backend System** for real-time monitoring of error and fault detection and Optimized **RMA processes**

The screenshot displays a web interface for managing AC piles. A sidebar on the left contains navigation options: knowledge base, Docking, Engineer, Site, AC pile (selected), Upgrade, and User. The main content area shows a table with columns for Nameplate No, Pile No, Version, State, Electricity price, Meter reading, Password Reset, Mark, Delivery Time, and Operation. The table contains 15 rows of data, each with a checkbox and three action buttons (Set, Delete, Log).

Nameplate No	Pile No	Version	State	Electricity price	Meter reading	Password Reset	Mark	Delivery Time	Operation
OCP_P_TEST_0...	test456	AC_BL_1_3_02AM	off-line	0	399.21	816493		30/11/-0001 00:00:00	Set Delete Log
BW16_TEST_0...	3885233375420	AC_BL_1_3_T8AM	off-line	9	0	916493	2	30/11/-0001 00:00:00	Set Delete Log
BW16_TEST_0...	3885233375440	AC_BL_1_3_T8AM	off-line	0	0	916493		30/11/-0001 00:00:00	Set Delete Log
test-1234	test123	AC_GL_1_1_T13	off-line	0	0	623518		30/11/-0001 00:00:00	Set Delete Log
2204WYSC22-0...	BYD32555981	UL_BYD_2_20	off-line	0	0	096825		30/11/-0001 00:00:00	Set Delete Log
1	3885233375351	AC_BL_1_3_T1SG	off-line	0	4.74	816493		30/11/-0001 00:00:00	Set Delete Log
RED_TEST_1234	5384252313415	AC_HN3_1_XX	off-line	0	0	955495		12/01/2023 10:15:05	Set Delete Log
2301YJZZ23-00...	3885233375631	AC_GN1_0_T0	off-line	0	23.4	116493		30/11/-0001 00:00:00	Set Delete Log
2301YJZZ23-00...	3885233375378	AC_GN1_0_T0	off-line	0	11.11	816493		30/11/-0001 00:00:00	Set Delete Log
2201WYSC21-0...	BYD34194381	UL_BYD_2_20	off-line	0	13.78	956825		30/11/-0001 00:00:00	Set Delete Log



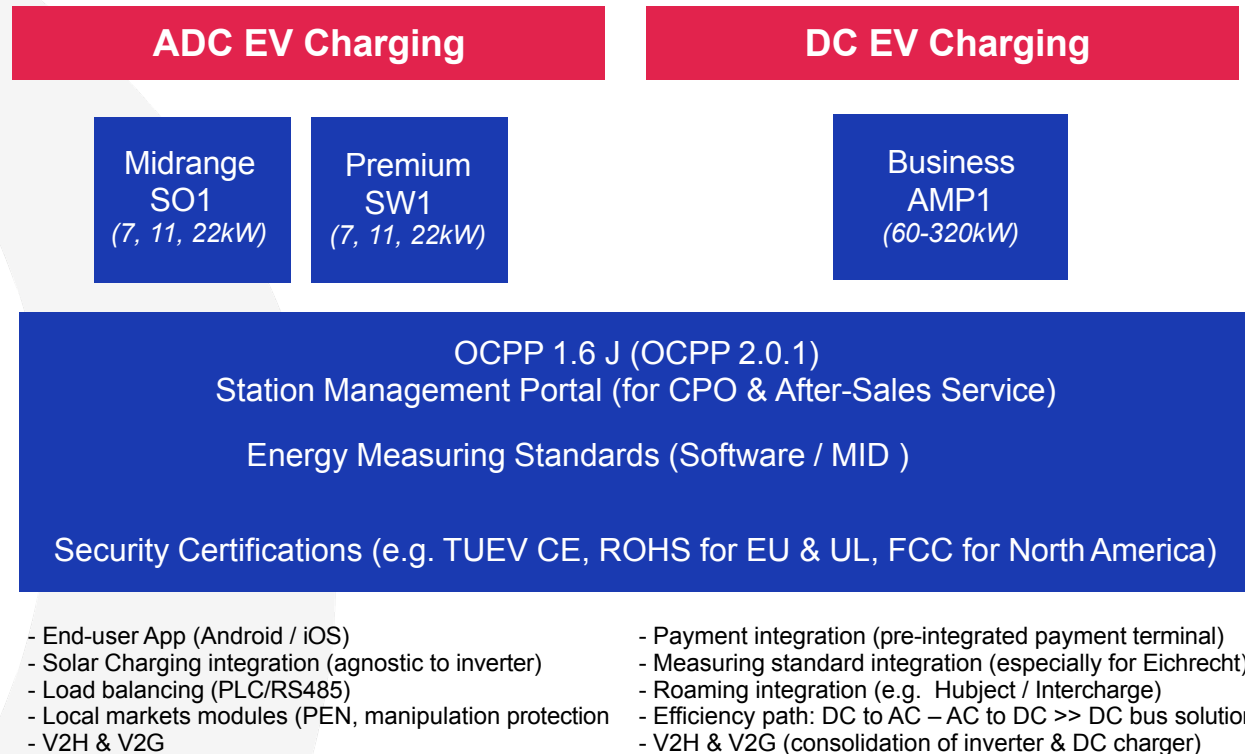
HOME SOLUTIONS

Products comparison

Model	S01	SW1	Waybox Easy	Waybox Pro&Plus	Waybox Pro MID&Plus MID	Waybox Start
Photo						
APP	YES	YES	YES	YES	YES	YES
Bluetooth	NO	NO	NO	NO	NO	NO
Ethernet	NO	YES	NO	NO	NO	NO
WIFI	YES	YES	YES	YES	YES	YES
4 G	NO	Optional	NO	Optional	Optional	YES
Load balancing	Optional	Optional	NO	NO	NO	Optional
Solar charging	Optional	Optional	NO	NO	NO	NO
MID	NO	Optional	NO	NO	YES	NO
Screen	YES-3.5inch	YES-4.3inch	NO	NO	NO	NO
OCPP	YES	YES	NO	YES	NO	NO
Residual current protection	Type A 30mA+DC 6mA	Type A 30mA+DC 6mA	DC 6mA	DC 6mA	DC 6mA	DC 6mA
Mechanics	IP65,IK10	IP65,IK10	IP55,IK08	IP55,IK08	IP55,IK08	IP55,IK08
Material	PC	Tempered glass panel Metal cover	PC	PC	PC	PC
Indicator	Dynamic LEDs	4 LED lights, power, connect charging and fault	Dynamic LEDs	Dynamic LEDs	Dynamic LEDs	Dynamic LEDs
RFID	YES	YES	YES	YES	YES	YES
Certification	SUD TUV CE (LVD, EMC, ROHS) CE RED	CE (LVD, RED) ROHS, REACH	CE mark RED certification	CE mark RED certification	CE mark RED certification	CE mark RED certification
Work Temperature	-30-55°C	-30-55°C	-25-50°C	-25-50°C	-25-50°C	-25-50°C

OTHER DETAILS

Features and Specifications Summary:



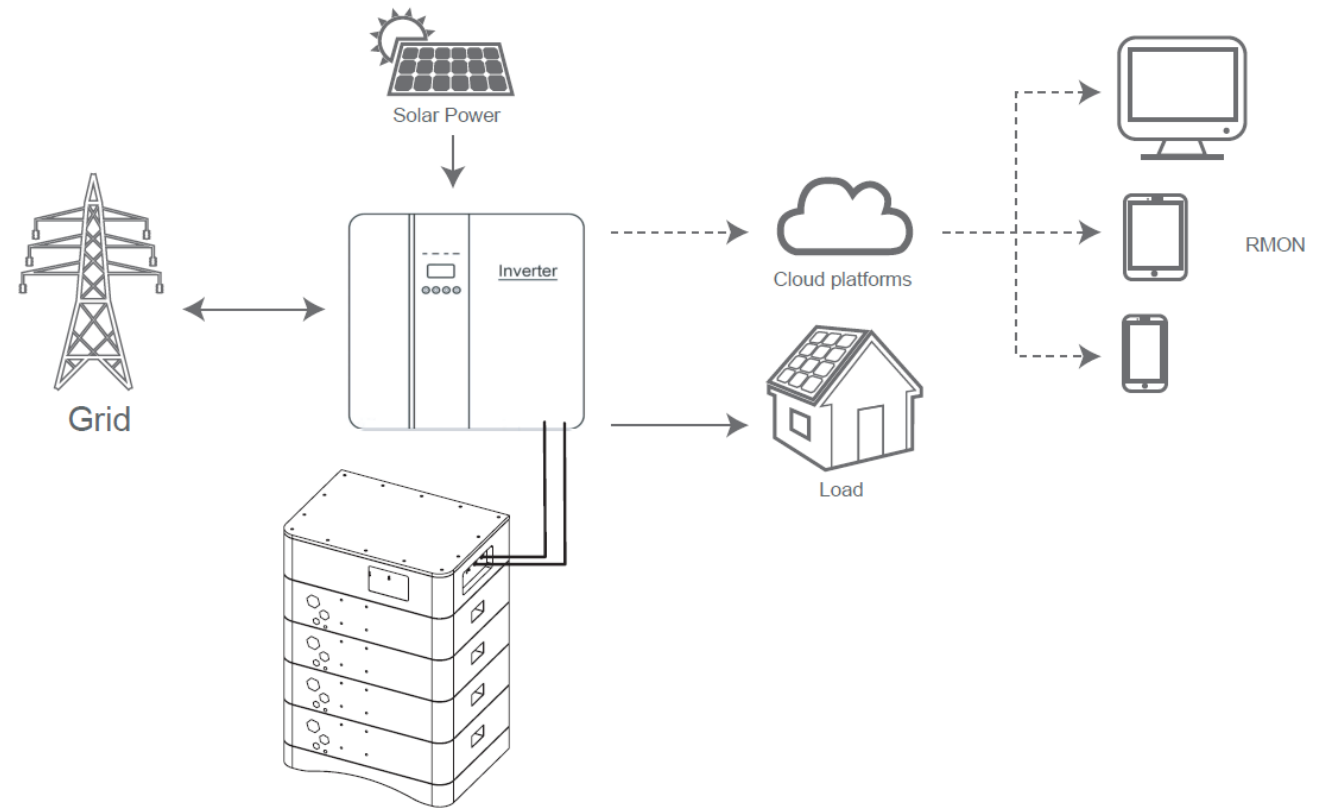
COMPLETE “SOLAR BUNDLE” PV SYSTEM

Our proposal aims to offer a “complete optimized bundle” PV solution:

- **Solar Panels Kit – OSL Series**
- **Inverter – Three Phase**
- **PV Storage Home backup LiFePO4 modular battery**

Add-on:

- **EV2 Charger**

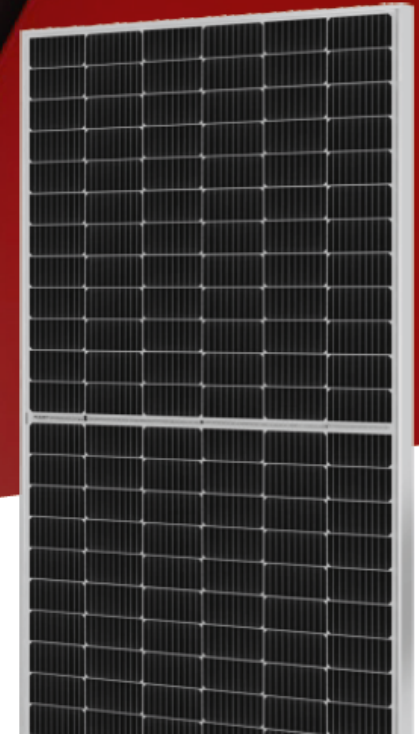


SOLAR PANELS

OSL Series 4 435-455W Mono

M6/166mm Cell . 144 Half-Cell Layout

Assembled with the M6 wafer based high efficiency cells, these modules feature the innovative twin-panel design and the advanced technologies of half-cut cell, 9 busbars and round wire ribbon interconnection, reducing the hot spot risk and shading effect, increasing the power output and resulting in higher reliability and performance than conventional modules.



OSL SERIES 4

Key Features



Half Cut Cell Technology



MBB Technology



Anti-PID
Low LID
Performance



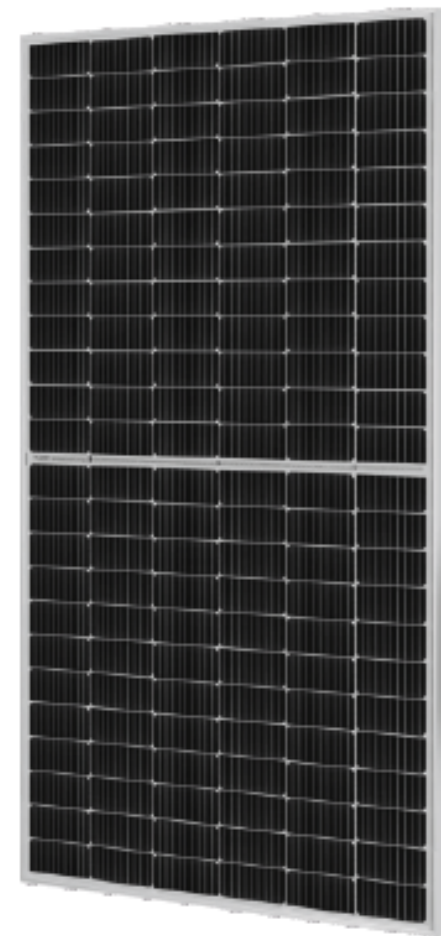
Less Hot Spot
Shading Effects



Low Power
Temperature Coefficient



Lower BOS & LCOE



THREE-PHASE ESS HYBRID INVERTER



Product Features:

Safe & Reliable

- With island protection, PV reverse polarity protection, battery reverse polarity protection, insulation monitoring, residual current monitoring, AC over current protection, AC over power protection, short circuit protection.

Friendly & Flexible

- Less noise due to no external cooling fans;
- Support diesel generator access;
- Support full power discharge, automatic management of battery charge and discharge.

Economical & Practical

- It is more economical to support multiple operating modes;
- Can be as a UPS for the important loads when power off.

THREE-PHASE ESS HYBRID INVERTER

General Data

Model	R6KH3	R8KH3	R10KH3	R12KH3	R15KH3
Ingress Protection	IP65				
Operating Temperature Range	-35~60°C				
Relative Humidity	0~100%				
Operating Altitude	4000m(Derating above 2000 m)				
Cooling	Natural Convection				
Noise Emission	≤25dB				
Installation	Wall Mounted				
EMC	IEC/EN 61000-6-1:2019, IEC/EN 61000-6-2:2019, IEC/EN 61000-6-3:2021, IEN/EN 61000-6-4:2019, IEC/EN 61000-3-2:2019/A1:2021, EN 61000-3-3:2013/A2:2021, IEC/EN 61000-3-11:2019, EN 61000-3-12:2011				
Grid Regulation	Europe: EN 50549-1:2019/AC:2019, Poland:EN50549-1:2019/Rfg:2016/NC Rfg:2018/PTPiREE:2021, Germany:VDE-AR-N 4105:2018 /DIN VDE V 0124-100(VDE V 0124-100):2020, South Africa:NRS 097-2-1:2017 Edition 2.1, UK:G99/1-6:2020, Spain:UNE217001:2020 /UNE217002:2020/NTS V2.1:2021-07, IEC61727:2004/IEC62116:2014/IEC61683:1999, Hungary:EN50549-1:2019/RFG:2016/Hungary				
Safety Regulation	IEC/EN62109-1:2010, IEC/EN62109-2:2011				

THREE-PHASE ESS HYBRID INVERTER

Interface

Model	R6KH3	R8KH3	R10KH3	R12KH3	R15KH3
HMI	LCD;APP				
BMS	RS485,CAN				
EMS	RS485				
Meter	RS485				
Supported Communication Interface	WIFI / GPRS / 4G				






Battery

Model	R6KH3	R8KH3	R10KH3	R12KH3	R15KH3
Max.Charging/Discharging Power	6600W	8800W	11000W	13200W	16500W
Battery Voltage Range	125~600V				
Battery Working Voltage Range	150~550V				
Max.Charging/Discharging Current	50A				
Rated.Charging/Discharging Current	40A				
Battery Type	Lithium and Lead Acid Battery				

PV-HOME BACKUP POWER STATION



Key Features:

-  *All-time monitor*
-  *Safety for home*
-  *Long Lifespan*
-  *Flexible capacity*
-  *Easy Installation*

- >> Small size and light weight save installation space
- >> Good cell consistency and long cycle life
- >> Multiple protection mechanism, high pressure resistance, high reliability
- >> Modular design. Easy to use and maintenance
- >> Strong application compatibility, seamless connection with switching power supply, UPS and other devices
- >> Built-in BMS. With full protection and control functions

PV-HOME BACKUP POWER STATION



Technical specification	10KWH	15KWH	20KWH	25KWH	30KWH
Installation Mode	Racked	Racked	Racked	Racked	Racked
Battery Type	LifePO4(LFP)				
Nominal Voltage(V)	102.4	153.6	204.8	256	307.2
Nominal Capacity(Wh)	10240	15360	20480	25600	30720
Usable Capacity(Wh)	8192	12288	16384	20480	24576
Design Life 25°C	10+ years	10+ years	10+ years	10+ years	10+ years
Dimension (mm)	590*420*545	590*420*695	590*420*845	590*420*995	590*420*1145
Weight (Kg)	120	165	210	255	300
Recommend Charge/Discharge Current (A)	50	50	50	50	50
Max.Charge/Discharge Current(A)	100	100	100	100	100
Communicaiton	RS485/CAN				
Monitoring Parameters	System voltage,Current,cell voltage,cell temperature,module temperature				
SOC	Intelligent algorithm				
Working Temperature	0°C~50°C Charge -10°C ~50°C Discharge				
Shelf Temperature	-20°C~60°C				

POWER STATIONS

Portable and Power Backup Solutions
Perfectly suitable for Home Backups,
Camping, Boats and Outdoor Activities

Example Specs:

Huge Capacity 2000Wh or more, being capable of providing sufficient power in any power outage situations.

•**Constant 2000W Output** Easily powering any high-wattage home appliances and devices (air conditioners, microwave, fridge, electric saw, electric drill and etc), even can surge up to 4000W.

•**Super Fast Recharge** You can charge by standard wall outlet, solar panels, car port or other power generators. Charging from 0 - 100% just takes you 1.5 hours by an input of 1500W power.

•**Solar power storage Solution** is compatible with any solar panels (12-48V, MAX 500W) on the market.

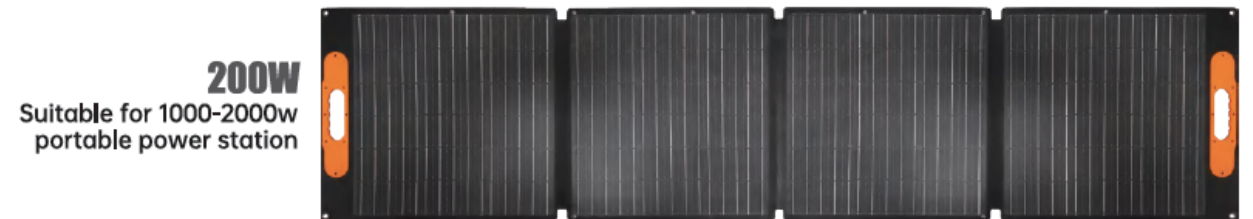
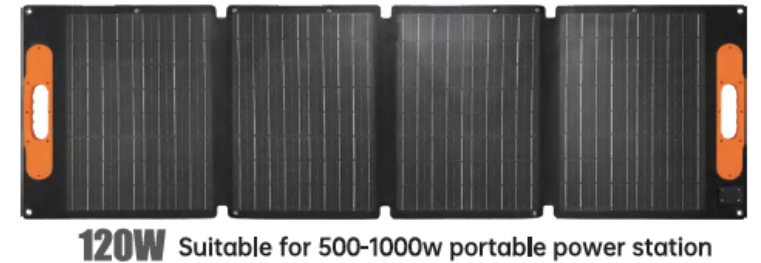
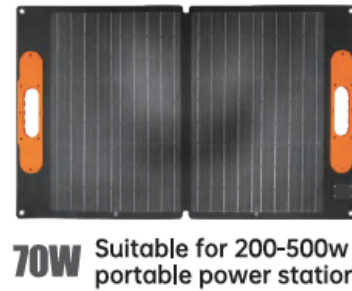
•**UPS** The Uninterruptible Power Supply (UPS) is built to shield your sensitive and valuable electrical devices.



PORTABLE SOLAR PANELS

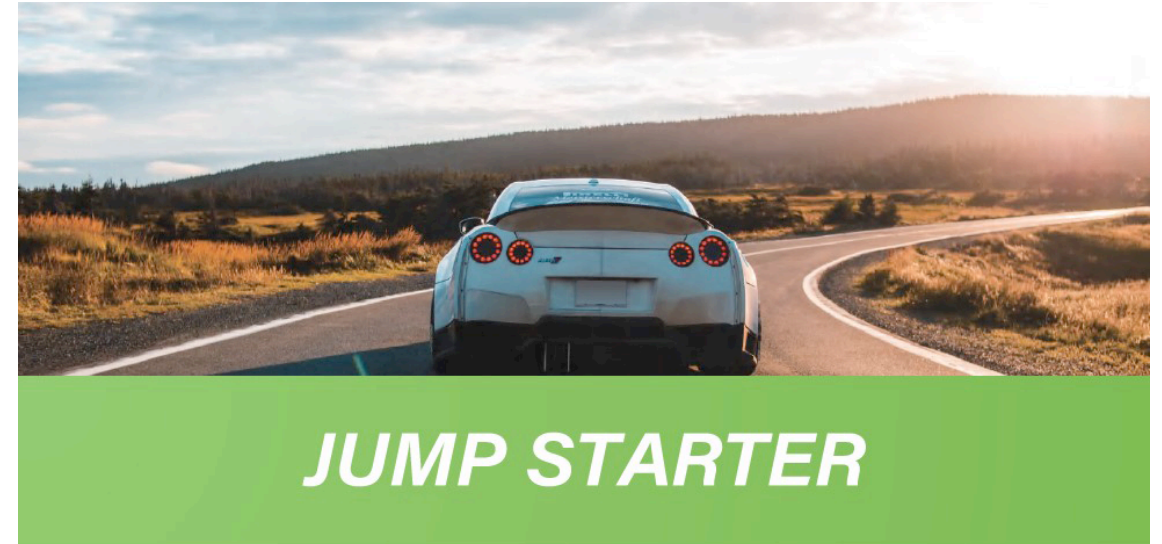
Features:

1. Using polymer composite materials, light weight, small size, anti-drop, trample
2. The product bracket adopts locking screw structure, which is firm and reliable. The bracket adopts a 45° angle design to meet the best outdoor light receiving area.
3. IP65 protection to meet the needs of different scenarios



JUMP STARTERS

Portable lithium battery jump starter packs up to 3,000 amps. Powerful battery booster jump box for jump starting cars, boats, motorcycles and more.





THANK YOU

ITALY

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