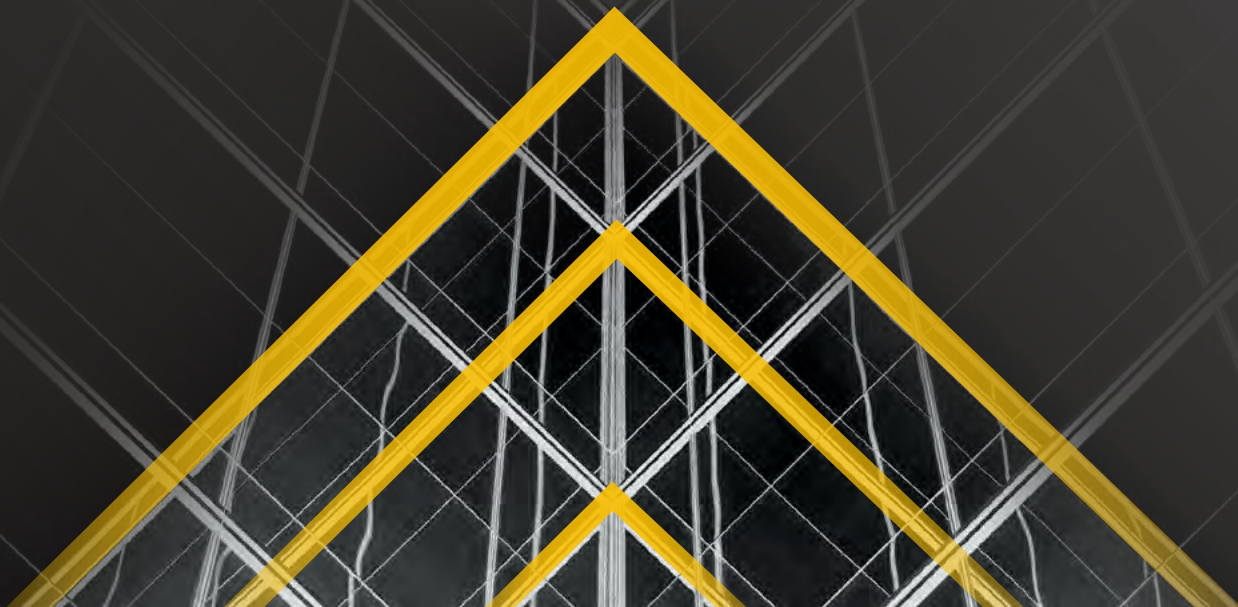




WE DO MORE THAN
STORE POWER
WE MAKE IT **SMART**



OUR VISION

- Become a world-leading green energy storage solution and service provider.
- Make clean energy accessible to 100 million people in 10 years.

01 OUR STORY

02 CORE STRATEGY

03 ALPHA HOME

04 ALPHA C & I

01

OUR

STORY

“Make clean energy
accessible to everyone
in the world.”



Who We Are

AlphaESS is a leading global green energy storage solution and service provider. With expertise in BMS, EMS, system integration, and cloud monitoring, we excel in providing tailored solutions for a wide range of applications, including residential, commercial & industrial, and utility-scale projects.

AlphaESS has 30+ subsidiaries and branches worldwide, including China, Germany, Australia, Italy, the United Kingdom, South Africa, Singapore, Malaysia, and more. With over 200,000 systems operating in more than 130 countries, AlphaESS has established a significant international presence.



100 +

Countries & Regions



150,000 +

Systems Installed Globally



9,525 +

Systems Installed in the UK



15 +

Years of Industry Experience



200 +

Patents in the ESS field



102 MWh +

Capacity in the UK

TOP 1

2022-2023 TOP 1
Australia Market Share
from SunWiz

TOP 5

2023 H1 TOP 5
Residential ESS Provider
in Germany
from EUPD Research

TOP 6

2021 TOP 6 supplier of
global residential storage
systems
from IHS Markit

TOP 10

AlphaESS was listed among
the top 10 home energy
storage manufacturers
globally (2024), recognized
for its integrated systems
with advanced features,
including emergency
backup power.
from life-younger.com



ESG Transparency
Award



iF & Reddot & G-mark
Design Award



TOP BRAND PV
(STORAGE & INVERTERS)

Our History

2012

Established in Nantong, China

2013

1st Generation BMS, EMS, and
AlphaCloud Platform

2014

1st All-in-One Residential ESS



2015

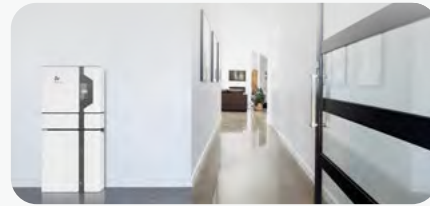
European & Australian
Subsidiaries Established

2016

Commercial Energy Storage Project
Launched

2017

- Large Air-cooled Energy Storage Container System
- Italian Subsidiaries Established
- 3rd Generation Residential ESS



2018

Myanmar Rural Electrification Project *

* Named as a Finalist for the SmarterE
Award in 2020



2019

Top 1 Residential ESS Provider in Australia
(by SunWiz Research)

2020

Overseas Headquarters
Established in Singapore
UK Subsidiary Established

2021

- 4th Generation Residential ESS
- Top 5 Residential ESS Provider in Germany (by EUPD Research)

2022

5th Generation Residential ESS



2023

Overseas Production Center Put into Operation



2024

20ft 5MWh Liquid-cooling Energy Storage

Global Presence



300+

Global Service Network

Key Networks

- Asia: China, Singapore, Malaysia, The Philippines, Myanmar, Indonesia, Uzbekistan, Japan
- Europe: Germany, United Kingdom, Italy, Belgium, Netherlands, France, Czech Republic, Spain
- Oceania: Australia, New Zealand, Fiji, New Caledonia
- Americas: United States, Guam, Hawaii, Colombia
- Africa: South Africa, Kenya, Nigeria



30+

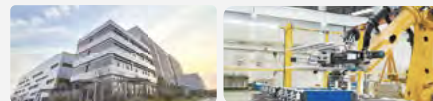
Subsidiaries

4

Production Centers

China: Nantong (Tongzhou & Qidong), Guangde

Malaysia: Kulim



4

R&D Centers

Nantong, Suzhou, Nanjing, Tianjin



Headquarters



Subsidiary



Production Center

*China: Nantong (Tongzhou & Qidong), Suzhou, Nanjing, Guangde, Beijing, Tianjin, Shenzhen, Guangzhou, etc.

Localization

Local Service Experience through a Global Network

We strive to provide our customers with seamless end-to-end services through our comprehensive localized service network, which offers convenient services including demand analysis, customized solutions, spare parts supply, professional training, warehouse management, fault analysis, and efficient maintenance. Our dedication lies in maximizing the utilization of our customers' systems and ensuring an exceptional service experience.



Remote
Maintenance



Troubleshooting



Installation
Training



Technical
Support



Automatic
Updates



Warranty Service

Core Technologies

AlphaESS masters core technologies including BMS, EMS, system integration and the AlphaCloud platform. Its product lines cover micro, residential, commercial and industrial, and utility-scale energy storage, offering ESS solutions ranging from 1 kilowatt to hundreds of megawatts for the global market.

4

Major Technical Areas



Battery Management System (BMS)



Energy Management System (EMS)



AlphaCloud Platform



System Integration

4

Major Product Lines



Utility-scale Energy Storage Systems



Commercial and Industrial Energy Storage Systems



Residential Energy Storage Systems



Micro Energy Storage Systems

02

CORE STRATEGY

01

Smart Energy

CORE

02

Safe and Reliable

03

Service Leading



Smart Energy

Digital Intelligent Management Architecture

Cloud

• Computer Terminal

• Energy & Carbon Trading Platform

• Integrated Energy

• AI

• Building Automation

• Digital Twin

Data Support

• Data Analysis

• Data Preprocessing

• Stream Computing

• Big Data Analytics

EMS

Data Acquisition

Device



Micro ESS



Residential ESS



C&I ESS



Utility-scale ESS



PV

User Layer

- Mobile Terminal
- Digital Dashboard

Cloud Interface

- Dispatch Platform
- Carbon Management Platform

Cloud Platform

- Carbon Management
- Virtual Power Plant
- Corporate Management

Service Layer

- Distributed Storage
- Distributed Scheduling
- Micro-Frontend
- Microservices

IoT Layer

Protocol Parsing

Edge Computing

Device Layer



Command

Response

Safe and Reliable

01

Material Safety

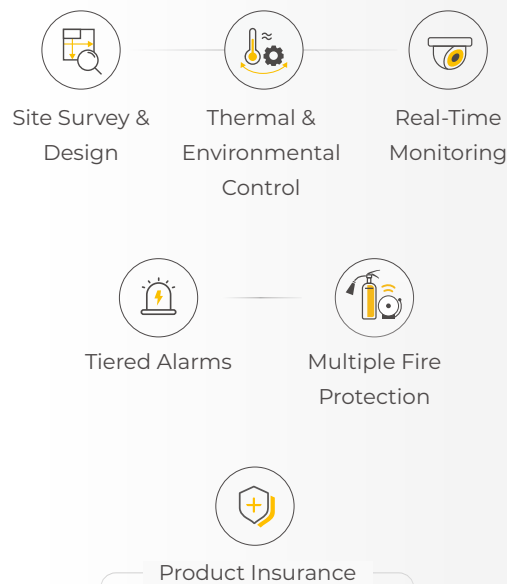
Secure the energy storage

Only first class, reliable
LiFePO₄ cell will be
used

02

System Safety

Secure the quality and performance



PICC
中国人民保險



中国平安
PING AN



Munich RE

03

Workplace Safety

Secure the green, smart, and
sustainable future

- Safer warehouse with more digital and less human operation
- EHS in practice with everyone involved: trainings, accountability, and occupational health
- Less emission with clean and efficient production



04

Testing Safety

Leave no stone unturned

Battery Safety

- Compression Crash Tests
- Overcharge and Overdischarge Tests
- Short-Circuit Tests

EMS Safety

- EMC Tests
- Fault Waveform Recording Tests
- Hardware-in-loop Simulation Tests

Structural Safety

- Structural Strength Verification
- System Structural Simulation
- Structural Design Short/Long-term Testing Verification

Electrical Safety

- Short-Circuit Tests
- Overload Temperature Rise Tests
- Insulation Withstand Voltage Tests

Fire Safety

- Thermal Runaway and Propagation Tests
- Multi-dimensional Perception Detection Tests
- UL9540A Certification Tests

Environmental Reliability

- Low Pressure Tests
- Salt Spray Tests
- Temperature Shock & Humidity Cycling Tests

Service Leading



One-Stop Customer Service

Focusing on products, technology, customer relations, sustainability, and internationalization, we provide personalized and comprehensive one-stop service to ensure customers have an excellent experience throughout the purchase, use, and maintenance of our energy storage systems.



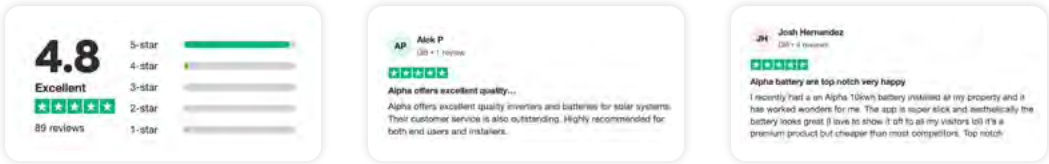
Customer Service Package — AlphaCare

The AlphaCare package is tailored for our end customers and partners, providing comprehensive services in technical support, financing plan, marketing etc..

- **Technical Support:**

Dedicated customer service from start to finish with our OSC (Online Service Center).

- i. UK Helpdesk in Leeds
- ii. UK Field based Engineers based near Bristol
- iii. Rated 4.8 in Trust Pilot



- **Marketing Support:**

Impactful co-branded initiatives to maximize brand exposure and early product upgrade info to stay competitive.

- **AlphaCloud:**

A lifetime-free energy management and monitoring platform for All AlphaESS systems.



*Service items may vary by country/region, please contact your local AlphaESS business manager for further details.



SMILE Product Series

- S**tronger Output
- M**odular Configuration
- I**ntelligent Management
- L**ong Lifespan
- E**fficient Operation

All-in-One Energy Storage System



Easy Installation

- All-in-One Design
- Plug & Play Wiring System
- Built-in SPD



Flexible Expansion

- Modular System
- Bypass for Faulty Battery
- No Need for SOC Calibration



Cutting-Edge VPP

- Tailored API for Dynamic VPP Scheduling
- Fast FCAS
- Global Compatibility*

*Leading the Australian VPP market; compliant with European Commission Regulations (EU) 2017/1485, 2016/631, 2016/1388, 2017/1485 for Frequency Containment Reserves

YOUR ALMIGHTY KNIGHT

SMILE-G3 Series

SMILE-G3-S3.6 / S5 / S8

SMILE-G3-T10 / 20

SMILE-G3 series offers single-phase solutions ranging from 3.68kW to 8kW and three-phase solutions from 10kW to 20kW for home energy storage, catering to both AC and DC coupled scenarios. It covers a comprehensive range of needs including self-consumption for residential homes, peak-valley arbitrage, dual power supply with diesel generators, VPP (Virtual Power Plant) scheduling, solar storage charging, and solar storage heating.



GOOD DESIGN AWARD



red dot design award

SMILE



- G3

HIGHER EFFICIENCY BRINGING MORE PROFITS



SMILE-G3-S3.6 / S5

Single Phase : 3.6 / 5 kW

Capacity : 4 - 60.6kWh

Datasheet



SMILE-G3-S8

8 kW

4 - 38.4kWh



SMILE-G3-T-10 / 20

Three Phase 10 / 20 kW

Capacity 4 - 57.6kWh

Datasheet



More Profits

- 200% PV Input
- MPPT Shadow Scanning
- High Voltage Battery with Higher RTE (Round-Trip-Efficiency)



On/Off-Grid Switching

- Dual Power Supply (Grid & Generator)
- 200% UPS Peak Overloading
- Grid-Forming: Sustained Off-Grid PV Operation



Smart IoT

- VPP-Ready with Very Fast FCAS
- PV-Storage-Charging Solution
- SG Ready for Heat Pumps

Available in: Australia, Germany, UK, Italy, Belgium, Czech, The Philippines, Thailand, China, Middle East, Africa, Latin America, etc.



NON-HEATED BATTERIES

NON-HEATED BATTERIES



SMILE-G3-BAT-4.0S

- 1c Cell
- Capacity : 4kWh
- 40kg
- Single phase :
1~4 in series
- Three phase :
1~6 in series

Datasheet



SMILE-G3-BAT-10.1P

- 0.5c Cell
- Three Phase : 10 kW
- Capacity : 10.1kWh
- 90kg
- Only compatible with
G3-3.5kw & 5kw
inverter
- Single phase : 1~6 in
parallel

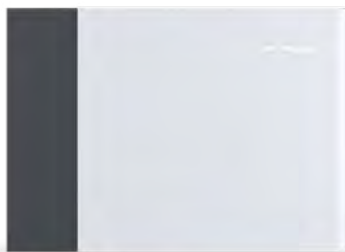
Datasheet



- Fast Charging and Discharging
- PV Shadow Scanning for More Solar Energy Yield

HEATED BATTERIES

HEATED BATTERIES



SMILE-G3-BAT-4.8S

- Capacity : 4.8 kWh
- 53kg
- Single phase :
1~4 in series
- Three phase :
1~6 in series

Datasheet



SMILE-G3-BAT-9.6S

- Capacity : 9.6 kWh
- 81kg
- Single phase :
1~4 in series
- Three phase :
1~6 in series

Datasheet



- PV Shadow Scanning for More Solar Energy Yield • Modular Design for Quick Installation
- Fast Charging and Discharging • Built in Fire Suppression System with Decompression Valve

EV CHARGER PV-Storage-Charging Solution



User-Friendly

- Easy installation
- High compatibility
- Keycard or AlphaCloud launching for proprietary identification
- 7m-long charging cable



Higher Profits

- 100% green energy consumption
- Subsidy available
- Lifetime-free upgrading online



Multiple Charging Modes

- Green mode: EV charged only by solar energy or battery
- Fast mode: First priority for EV charging
- ECO mode: Customized timers and fixed power

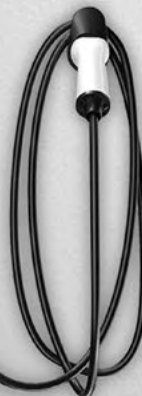
SMILE-G3-EVCT11
Three Phase / 11 kW

Datasheet



SMILE-G3-EVCS7
Single Phase / 7 kW

Datasheet



ALPHACLOUD MONITORING PLATFORM

AlphaCloud is a lifetime-free platform (for App and Web) where you can easily manage every device connected to AlphaESS systems. As soon as a device is plugged in, AlphaCloud reads its information and prepares all the possible configurations for you, so that you can learn about or change your energy plan anytime, anywhere.



Maximize your profit

- Exploit the full potential of your PV system
- Intelligent 24/7 monitoring to increase self-consumption
- Set parameters and join VPP



Remote troubleshooting and upgrades



Enjoy a smart home with IoT compatibility



Data Security



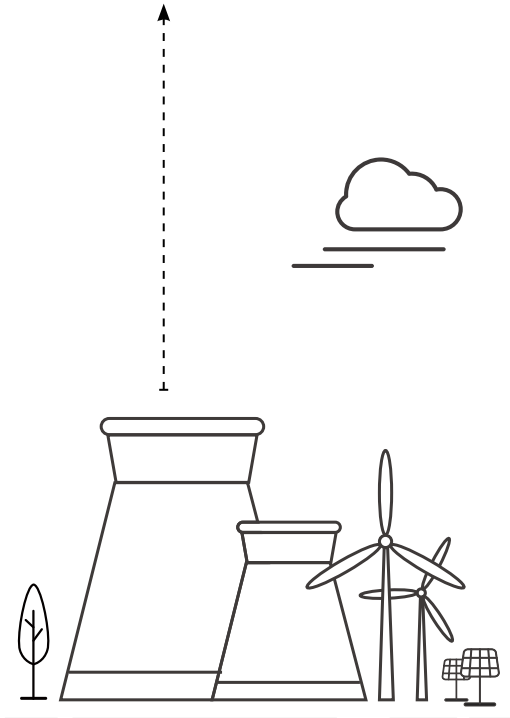
04

ALPHA C&I

EXPERT FOR ALL APPLICATION SCENARIOS

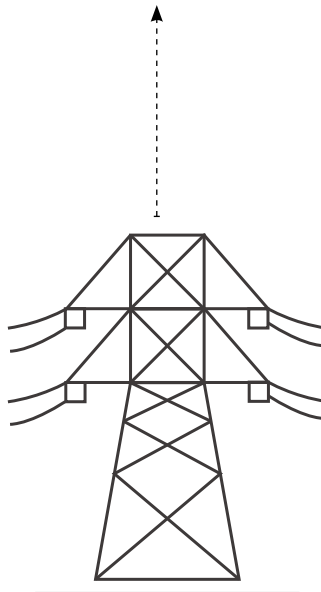
Generation Side

- Smooth Wind & PV Power Output
- Maximizing Wind & PV Utilization
- Thermal Power Storage Frequency Modulation
- Active Power Control and Reactive Power Compensation



Network Side

- Peak Shaving and Frequency Modulation
- Improving Power Quality and System Reliability
- Maintaining Voltage Stability of the Transmission Network
- Extending the Lifespan of Transmission Equipment
- Alleviating Peak Load Demand



Behind-the-Meter

- Peak-Valley Arbitrage
- Backup Power
- Dynamic Expansion
- Virtual Power Plant (VPP)
- Microgrid
- Ancillary Services



ALPHA



Alpha C&I and Utility Solutions

For 30kW+ applications, AlphaESS C&I and utility-scale solutions can work in sync with wind and solar resources, significantly improving the self-consumption rate of clean energy, smoothing out power supply-demand fluctuations. They can also be integrated with advanced technologies such as smart energy management platforms and the Internet of Things (IoT), facilitating the transformation of energy structure and providing crucial support for achieving carbon neutrality goals.

C&I



High Energy Density



Cell-Level Constant
Temperature Control



Enhanced Electrical
Protection



Intelligent Fire Protection



ALPHA STORION-M30/M50

Power : 30 / 50 kW

Capacity : 60.25 - 216.9 kWh

- Quick Installation and Easy Expansion: Plug & Play
- Remote System Monitoring
- Dynamic SOC balancing between battery modules to maximize the energy utilization
- 200% PV input oversizing
- IP66 for tough outdoor environments
- Unique Bypass technology ensures stable system operation



[Datasheet](#)



Air-Cooled All-in-One Cabinet

Model	STORION-G3-H30 / H50
Rated Energy	30 kW / 50 kW Hybrid Inverter
Ingress Protection	IP55
Capacity	<ul style="list-style-type: none">• STORION-H50-G3 120.5 / 241 kWh• STORION-H30-G3 72.3 / 144.6 kWh
Battery Type	LiFePO ₄
Fire Protection	Aerosol+Smoke/Temperature Detect
Battery Module	M77314-S 0.5C



- Easy parameter settings, cloud-based control
- PCS & battery all-in-one system
- Plug & play installation
- Seamless on/off-grid switching within 20ms
- Multiple working modes available
- Support parallel connection of 5 systems (on-grid) or 4 systems (off-grid)



Datasheet



Liquid-Cooling Outdoor Cabinet

Model	STORION-LC-TB125-EX
Rated Energy	261.2kWh
Ingress Protection	IP55
Battery Type	LiFePO ₄
Fire Protection	Aerosol (Pack & Rack)+ Sprinkler + Smoke / Temperature Detection
Battery Module	M166314-S




- All-in-one design for easy installation & transportation
- Three-level Intelligent Fire Suppression System, UL9540A certified
- Active cell balancing, maximizing life cycle and efficiency of system
- Backup Power Available with STS Cabinet (≤ 20ms Switch Time)
- System-wide Temperature Difference ≤ 3°C
- Max 50 units in parallel (On-Grid Mode)



Datasheet



Model	STORION-LC-H125-EX
Rated Energy	261.2kWh
Ingress Protection	IP55
Battery Type	LiFePO ₄
Fire Protection	Aerosol + Sprinkler
Battery Module	M166314-S



- All-in-one design for easy installation & transportation
- Support parallel connection of multiple systems on the DC side
- High IP rating and dehumidification solution
- Liquid cooling, system temperature difference ≤ 3°C
- Compartment-level & pack-level intelligent fire protection systems with explosion relief strategy

Available
Q1 2026



Datasheet



Liquid-Cooled Battery Cabinet

Model	STORION-LC-372
Rated Energy	372.7 kWh
Ingress Protection	IP55
Battery Type	LiFePO ₄
Fire Protection	Aerosol + Water
Battery Module	M166280-S



- All-in-one design for easy installation & transportation
- Support parallel connection of multiple systems on the DC side
- High IP rating and dehumidification solution
- Liquid cooling, system temperature difference $\leq 3^{\circ}\text{C}$
- Compartment-level & pack-level intelligent fire protection systems with explosion relief strategy



Datasheet



Model	STORION-LC235
Rated Energy	235.1kWh
Ingress Protection	IP55
Battery Type	LiFePO ₄
Fire Protection	Aerosol + Sprinkler
Battery Module	M166314-S



- Three-level Intelligent Fire Suppression System, UL9540A certified
- Active cell balancing, maximizing life cycle and efficiency of system
- System-wide Temperature Difference $\leq 3^{\circ}\text{C}$



Datasheet



STORION-TB250/500

250/500 kW | 630 ~ 2090 kWh

- AC-Coupled and DC-Coupled solutions are both available
- Liquid-cooling solution: higher safety and extended lifespan
- On/Off-grid switching times ≤ 20 ms
- Flexible capacity configuration
209 kWh per cabinet, up to 10 cabinets in parallel
Battery capacity ranges: 630 ~ 2090 kWh
- DC-Coupled up to 160% PV oversize
- Various working modes for different application scenarios
- LFP battery cell, high security, long cycle life



AC Container (PCS included)

Liquid-cooling Battery Cabinet

Datasheet



5MWh

Liquid-Cooled Battery Container



Model	AlphaCS-H20-DC-LC 2.0
Rated Energy	5015.9 kWh
Ingress Protection	IP55
Charge/Discharge Rate	0.5 C
Battery Type	LiFePO ₄
Fire Protection	Perfluorohexanone + Water
Battery Module	M166314-S



- Multiple fire protection systems, battery pack-level suppression
- Enhanced electrical protection to mitigate short-circuit risks
- Liquid cooling for uniform temperature, 20% less energy loss
- Compatible with various PCS and EMS
- Cloud-based data management, remote troubleshooting
- 34% increase in energy density, reducing upfront investment

Available in: China

1500V

Liquid-Cooled Battery Container



Model	AlphaCS-H20-DC-LC
Rated Energy	3727.3 kWh
Ingress Protection	IP55
Charge/Discharge Rate	0.5 C
Battery Type	LiFePO ₄
Fire Protection	Aerosol + Water (Optional: Perfluorohexanone)
Battery Module	M166280-S

- High energy density
- Multiple intelligent fire protection systems
- Flexible layout, supporting parallel connection
- Intelligent thermal management strategy
- External maintenance design, efficient and convenient



Datasheet



Industrial Battery Packs

Liquid-Cooled Battery



Battery Module	M166280-S (0.5C)
Rated Voltage	166.4 V
Rated Power / Rated Energy	23.2 kW / 46.5 kWh
Cycle Life	≥ 6000 (@ 25°C)
Operating Temperature Range	-30°C ~ 50°C

140MW / 280MWh + 80MW / 160MWh

Peak Shaving and Frequency Regulation
Ulanqab, Inner Mongolia



80MW / 160MWh + 40MW / 80MWh

Peak Shaving and Frequency Regulation

Kubuqi, Inner Mongolia, China



100MW / 200MWh

Peak Shaving and Frequency Regulation

Anyang, Henan, China





1 **583.2 kWh**
Net-Zero
Skegness



2 **96 kWh**
Renewable Energy Solutions
Walsall



3 **68.4 kWh**
Energy Storage for
Hospitality Sector
Peak District



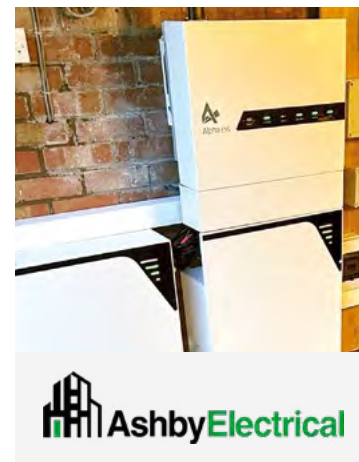
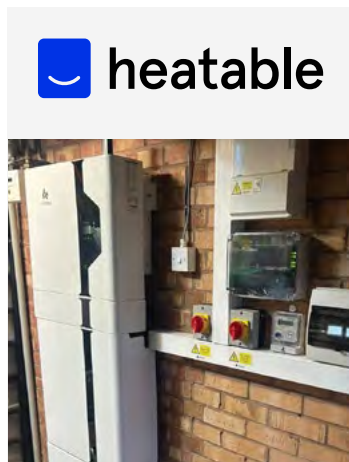
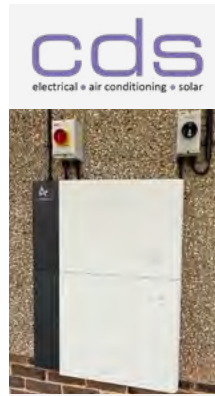
4 **10kW / 41kWh**
Hybrid Solar and
battery system
UK

Scan the QR code
for more details





CITY
PLUMBING







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Dursley, GL11 4HH

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618494 Singapore

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