AlphaESS

AN ENERGY STORAGE SOLUTION PROVIDER COVERING THE FULL POWER RANGE





YOUR SMART ENERGY

Make clean energy accessible to everyone in the world.



AlphaESS is one of the world-leading green energy storage solution and service providers. The company specializes in residential and commercial applications, delivering pre-eminent products and fitfor-purpose solutions. With 30+ corporate establishments worldwide in the globe, AlphaESS provides local services and supports 100,000+ systems actively running in over 90+ countries, enabling millions of people to enjoy reliable, accessible and clean energy.





90+ Countries & Regions

Product Development Units

Patents in ESS Field

Corporate Establishments Worldwide





GLOBAL PRESENCE / AWARDS AND CERTIFICATION

OUR EXPERTISE





ESG Transparency Award & GlocalIN Top50



2023 TOP 1 Australia Market Share



2021 TOP 6 supplier of global residential storage systems



iF & Reddot & G-mark Design Award



2021 Top 3 overseas shipments ESS integrator



ees & THE smarterE award finalist



TOP BRAND PV (STORAGE)



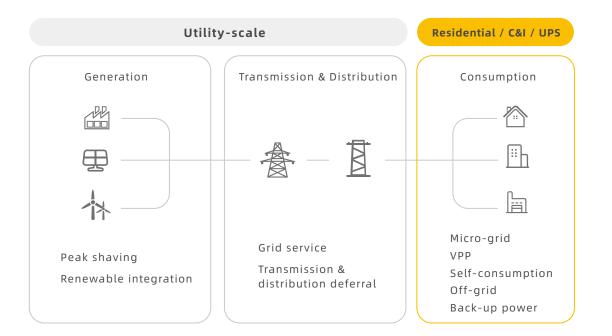
2023 H1 TOP5 Residential ESS Provider in Germany



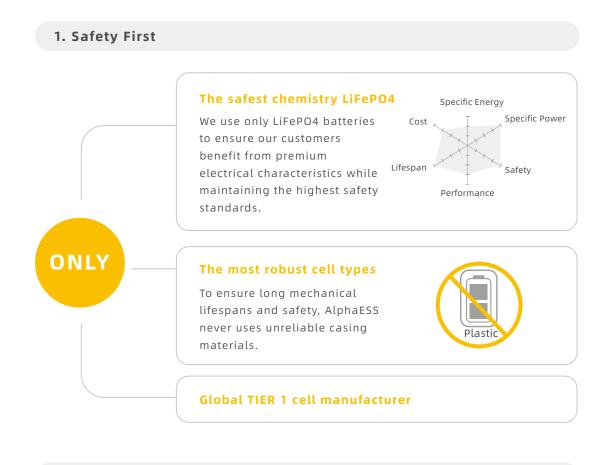
Global Warranty



MAJOR APPLICATIONS

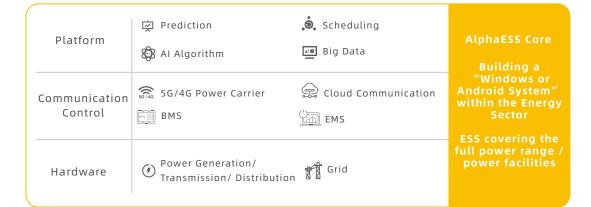


WHY ALPHAESS



2. Core Technology

Application	Energy Transformation	⊛ ⊌ீø Energy Conservation	Secondary Development
Application	💁 Smart Home	霩 Capitalization	from Our Partners



3. Smart Energy

AlphaCloud

Connects all the AlphaESS systems and enables monitoring, smart control, trading and energy service.

- 🛞 Make maximum use of your PV system
- Intelligently control your system to maximize self-consumption
- Set parameters control and build VPP
- Monitor your system 24/7 and upgrade it remotely
- Series International Series International Series International International International International Series International In



Battery Management System

Functional Safety

50+ BMS R&D veteran researchers with 10+ year ESS BMS

High SOC Accuracy Our SOC algorithm is 97% accurate

Alpha BMS Research Institute

Comprehensive Protection

3-level software protection Redundant hardware level protection ASIL (Automotive Safety Integrity Level)

hardware (Level D), software and system architecture IEC61508 testing, the highest level (D) Comprehensive and optimized protection including multiple monitoring items, POST, hardwired alarm system, multiple protection during operation



Energy Management System _

Multifunctional and Powerful

Local absorption, reducing PV power abandonment

Peak and frequency regulation PV power self-consumption Load shifting Backup power supply, UPS/EPS Peak shaving Micro/Off-grid control Demand charge management

Highly Compatible

Enabling external control through SCADA, MODBUS, ETHERNET, etc.

Safety

Safety control designs Industry-leading cloud computing Financial-grade security





- SMILE-G3-S3.6/S5/B5
- SMILE-G3-T4~10
- SMILE-G3-T12~20
- SMILE-S6-HV
- SMILE-T10-HV
- SMILE-B3

Residential

3kW - 30kW

- SMILE-B3-PLUS
- SMILE-S5
- SMILE5
- SMILE-G3-EVCT11



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







UPS Ability

24/7 Online Monitor

Safe and Reliable (LFP ONLY)









Modular Design

High Compatibility

Easy Installation and Expansion



SMILE Series

SMILE-G3-S3.6/S5/B5









SMILE-B3 SMILE-B3-PLUS





SMILE-S5 SMILE5

SMILE-G3-S3.6/S5/B5: 3.68kW / 5kW Expandable to 60.5kWh

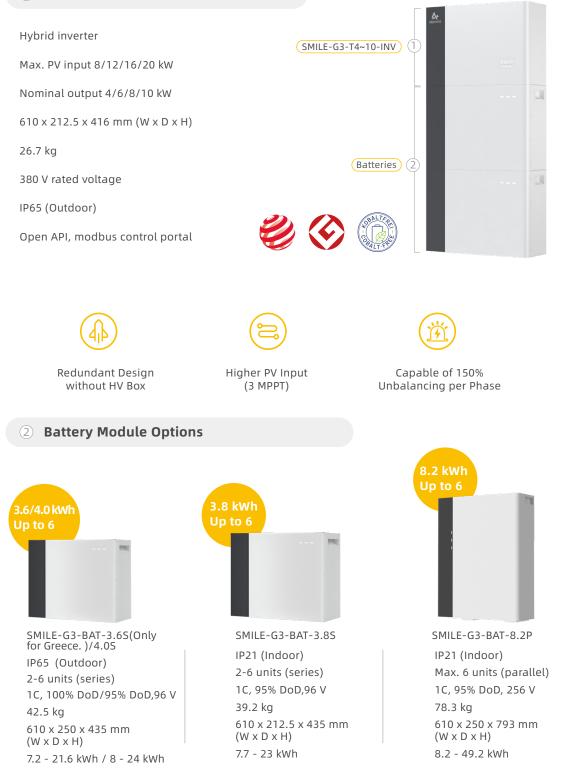
1 SMILE-G3-S3.6/S5/B5-INV

3.6 - 14.4 kWh / 4 - 16 kWh

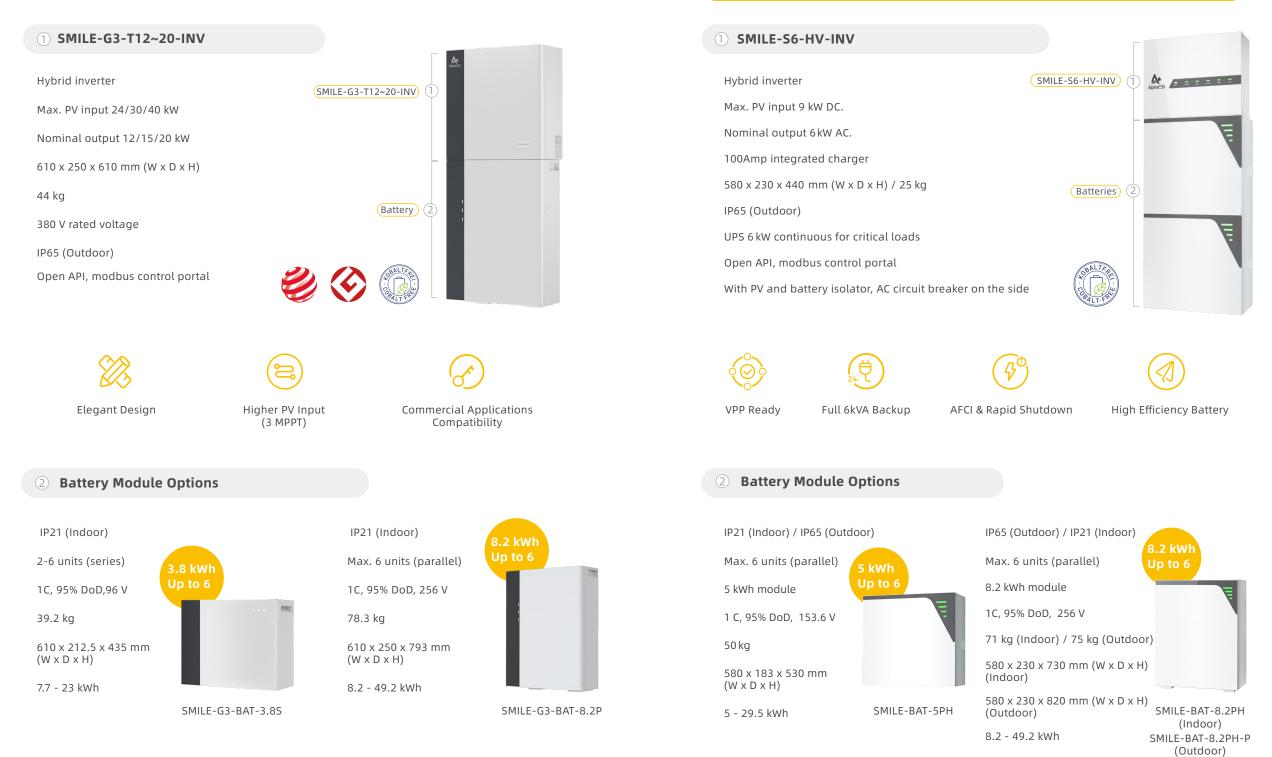
Hybrid inverter SMILE-G3-S3.6 SMILE-G3-S5 SMILE-G3-INV Max. PV input 10 kW Max. PV input 7.36 kW Nominal output 5 kW Nominal output 3.68 kW **AC-Coupling** Battery (2) Nominal output 5 kW SMILE-G3-B5 610 x 212 x 366 mm (W x D x H) / 20 kg 230 V rated voltage IP65 (Outdoor) Open API, modbus control portal Ř ë **VPP** Ready Grid-Forming Smart High Max. High PV Input Better Backup Off-Grid PV Input **Overload Capability** Current 2 Battery Module Options 10.1 kWh 8.2 kWh Up to 6 Up to 6 3.6/4.0 kWh 3.8 kWh Up to 6 Up to 4 SMILE-G3-BAT-3.6S(Only SMILE-G3-BAT-3.8S SMILE-G3-BAT-8.2P SMILE-G3-BAT-10.1P for Greece.)/4.0S IP65 (Outdoor) IP21 (Indoor) IP21 (Indoor) IP65 (Outdoor) 1-4 units (series) Max. 6 units (parallel) Max. 6 units (parallel) 1-4 units (series) 1C, 95% DoD,96 V 1C, 95% DoD, 256 V 0.5C, 95% DoD, 96 V 1C, 100% DoD/95% DoD,96 V 39.2 ka 78.3 ka 90 kg 42.5 kg 610 x 212.5 x 435 mm 610 x 250 x 793 mm 610 x 212 x 793 mm 610 x 250 x 435 mm $(W \times D \times H)$ 3.8 - 15.4 kWh 8.2 - 49.2 kWh 10.1 - 60.5 kWh

SMILE-G3-T4~10: 4 / 6 / 8 / 10kW Expandable to 49.2kWh

① SMILE-G3-T4~10-INV



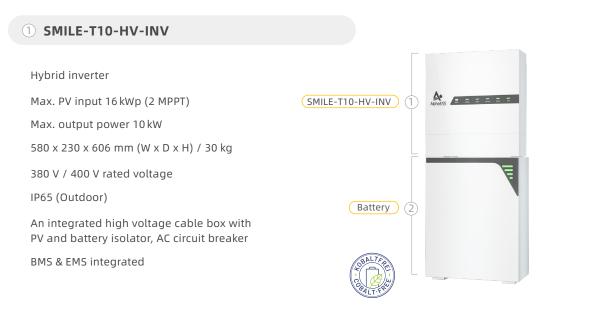
SMILE-G3-T12~20: 12 / 15 / 20kW Expandable to 49.2kWh



SMILE-S6-HV: 6kW Expandal

Expandable to 49.2kWh

SMILE-T10-HV: 10kW Expandable to 49.2kWh





160% PV Input

Three Phase Output



High Voltage & High Efficiency

(2) Expandable Battery Module

IP65 (Outdoor) / IP21 (Indoor)

Max. 6 units (parallel)

8.2 kWh module

1C, 95% DoD, 256 V

71 kg (Indoor) / 75 kg (Outdoor)

580 x 230 x 730 mm (W x D x H) (Indoor)

580 x 230 x 820 mm (W x D x H) (Outdoor)

8.2 - 49.2 kWh



SMILE-BAT-8.2PH (Indoor) SMILE-BAT-8.2PH-P (Outdoor)

SMILE-B3: 3kW / 2.9kWh Expandable to 17.2kWh

All-in-one Module



Nominal output 3 kW AC.

Built-in 2.9 kWh battery module

610 x 219 x 650 mm (W x D x H)

50 kg

IP65 (Outdoor) / IP21 (Indoor)

Open API, modbuscontrol portal









Retrofit

AC-Coupling

Built-in Battery

Expandable Battery Module

IP65 (Outdoor) / IP21 (Indoor) Max. 5 units (parallel) 1C, 96% DoD, 51.2 V

39 kg

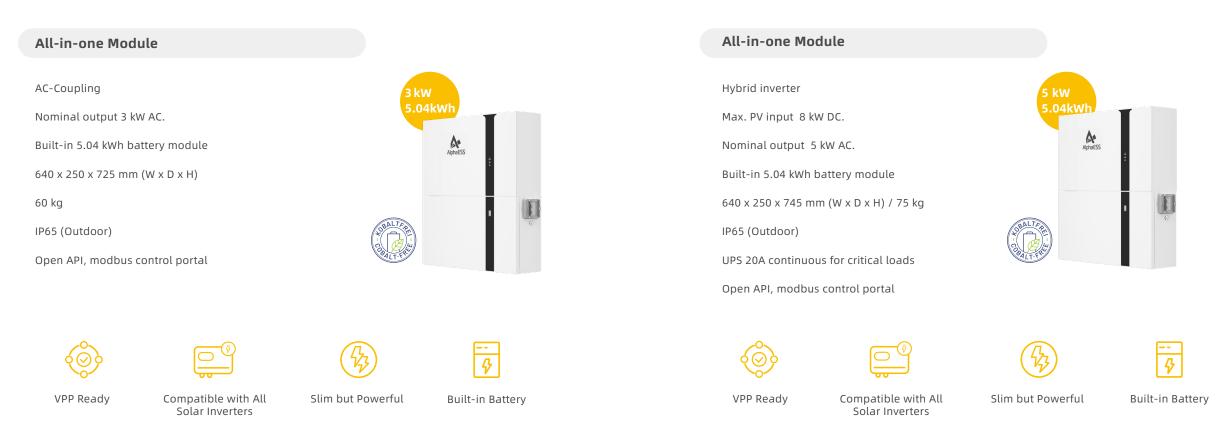
610 x 220 x 305 mm (W x D x H)

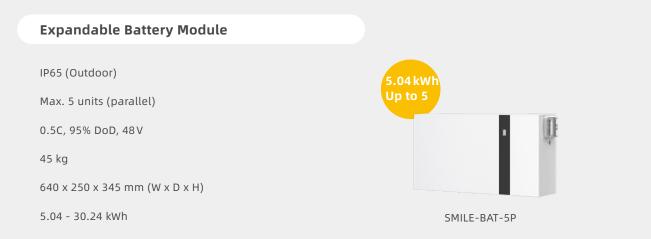
2.9 - 17.2 kWh



M4856-P

SMILE-B3-PLUS: 3kW / 5.04kWh Expandable to 30.24kWh







SMILE-S5: 5kW / 5.04kWh Expandable to 30.24kWh

SMILE5: 5kW Expandable to 80kWh

SMILE5-INV

Hybrid inverter

Max. PV input 7.5 kW DC.

Nominal output 5 kW AC.

100Amp integrated charger

610 x 210 x 627 mm (W x D x H) / 30 kg

IP65 (Outdoor)

2.9 - 17.2 kWh

UPS 4 kW continuous for critical loads

Open API, modbus control portal

An integrated cable box with PV and battery isolator, AC circuit breaker

☆

VPP Ready

SMILE5-INV (1)Battery (2)

Alphaess

Best Seller

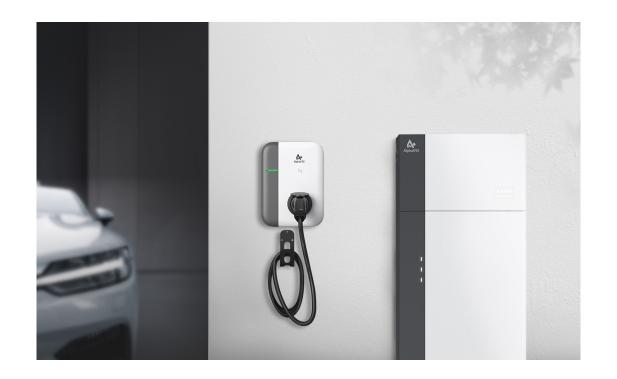
10.1 - 60.6 kWh

Classic Design

2 Battery Module Options Up to 6 5.7 kWh Up to 6 Up to 6 Up to 6 SMILE-BAT-13.3P SMILE5-BAT SMILE-BAT-10.1P M4856-P IP65 (Outdoor) / IP65 (Outdoor) / IP65 (Outdoor) / IP65 (Outdoor) IP21 (Indoor) IP21 (Indoor) IP21 (Indoor) Max. 6 units (parallel) Max. 6 units (parallel) Max. 6 units (parallel) Max. 6 units (parallel) 0.35C, 100% DoD, 48 V 1C, 96% DoD, 51.2 V 0.5C, 96% DoD, 51.2 V 0.5C, 96% DoD, 48 V 121 kg 39 kg 73 kg 95 kg 610 x 236 x 816 mm 610 x 220 x 305 mm 610 x 207 x 629 mm 610 x 236 x 678 mm $(W \times D \times H)$ $(W \times D \times H)$ $(W \times D \times H)$ (W x D x H) 13.3 - 80 kWh

5.7 - 34.4 kWh

EV CHARGER



SMILE-G3-EVCT11

- Weight: 3 kg
- Cable Length: 7 m
- Related Humidity: 15 ~ 90%
- Operating Altitude: < 2000 m
- Operating Temperature: -30 ~ 50 ° C
- Dimensions (H x W x D): 340 x 250 x 109.5 mm

KEY FEATURES

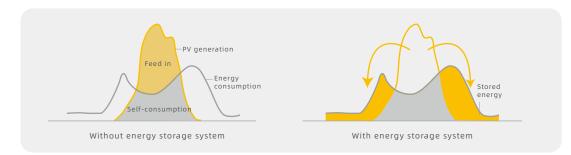
- 4 Charging Modes
- I PV / Battery Rechargeable
- ▲ Long Charging Cable (7m)
- Subsidy Available (Depends on local Policy)

- AC Rated Voltage: 400 V, 3P+N+PE
- Rated Current: 16 A
- Frequency: 50/60 Hz
- AC Output Voltage: 400 V
- Max. Current: 16 A
- Rated Power: 11000 W
- APP Smart Control
- Key Card Identifiable



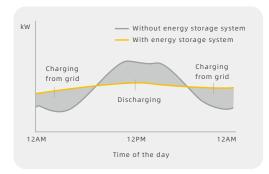
MAXIMISING YOUR RETURNS

1.Self-Consumption Optimization



The energy storage system can help you cut down the electricity bill by storing surplus PV generation and discharging later to meet your demand of electricity.

2. Load Shifting



User-end: Load Shifting

Save money by avoiding peak electricity rates, storing electricity during offpeak times and discharging stored energy during peak times.

Transmission & Distribution: Peak Shaving

Avoid substation and power line upgrades by providing a fast and responsive emission free solution to variable load peaks.

Ancillary Services

The combination of several flexible production and consumption units, controlled by a central intelligent system, is the core behind a VPP, which can stabilize the grid by balancing energy supply and demand.

Electricity Arbitrage

Optimize trading strategies to maximize returns. VPP can utilize the aggregated power to react to changes in electricity pricing by adapting to the existing supply of power on the grid.

3. VPP Revenue



Li-ion Battery

PORTABLE POWER STATION

MAY THE POWER BE WITH YOU







Portable power for adventures

RENEWABLES Fast solar recharging with MPPT







*There are 4 AC plug standards available. (NOT mixable in one device)

Output Power	1000 W	Type-C Output	2
Capacity	1036.8 Wh	USB Output	2
AC Output	3	Wireless Charging Output	2
DC Output	3	Weight	10.2 kg

🖂 Big Capacity in Small Box

🗹 3- Level Brightness

🖂 Equipped with 2 Wireless Charging Pads

🗸 SOS Function

Capable to Charge 12 Devices Simultaneously



• US • DE • AU • JP • CN

*There are 5 AC plug standards available. (NOT mixable in one device)

Output Power	2200 W	USB-A Output	4
Capacity	2203.2 Wh	USB-C Output	2
AC Output	4	Wireless Charging Output	2
DC Output	2	Weight	23 kg
95% Inverter Effici	ency	🥑 95% of DoD (Depth of	Discharge
-	ency Tireless Charging Pads	 ✓ 95% of DoD (Depth of ✓ Fully Charged in 1.5 F 	



 $\overline{\checkmark}$ Portable and Foldable Higher Efficiency



SP200

Max. Power: 200 W Max. Power Voltage: 19.8 V Max. Power Current: 10.1 A Open Circuit Voltage: 23.7 V Cell Type: Monocrystalline Folded Dimensions: 518 x 689 x 50 mm Unfolded Dimensions: 2300 x 689 x 15 mm



SP300

Max. Power: 300 W Max. Power Voltage: 33 V Max. Power Current: 9.69 A Open Circuit Voltage: 38.94 V Cell Type: Monocrystalline Folded Dimensions: 895 x 610 x 40 mm

Unfolded Dimensions: 895 x 2375 x 20 mm



SP100

Max. Power: 100 W

Max. Power Voltage: 19.8 V

Max. Power Current: 5 A

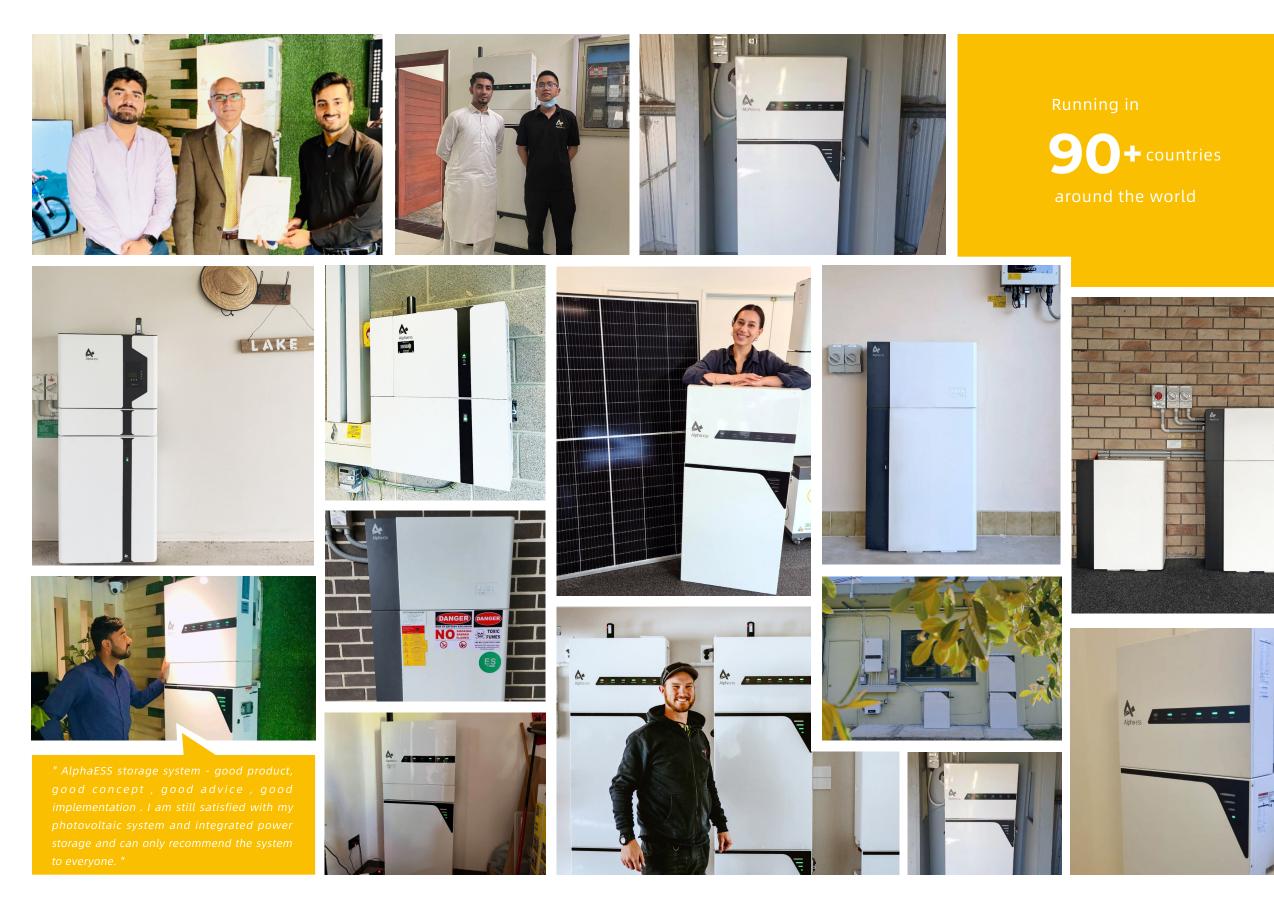
Open Circuit Voltage: 23.76 V

Cell Type: Monocrystalline

Folded Dimensions: 520 x 591 x 37 mm

Unfolded Dimensions: 520 x 1192 x 25 mm







Commercial & Industrial

30 kW - 10 MW+

Back-up power



Off-grid



Self-consumption

ion Demand charge management

142

Micro-grid

A **WIDE RANGE** of hybrid and battery PCS solutions for all your C&I projects with various requirements

ORION-H30 30 kW hybrid PCS

A small commercial and industrial solution for on/off-grid with hybrid inverter •45 kW Max. PV input •Battery DC voltage range: 150-750 V •On/off-grid switching •Built-in isolation transformer

• Battery Module: M38210-SC, M7790-S

STORION-T30 30 kW battery PCS

Flexible power modular design 24/7 Monitoring with local interface

- 30 kW nominal output power
- AC-coupled solution
- Transformer integrated
- Battery DC voltage range: 200-750V
- •Battery Module: M48112-S

STORION-T50 / 100 50 / 100 kW hybrid PCS

A double inverter capacity PV input for off-grid Flexible power modular design

- •100 / 200kW Max. PV input
- •1 MPPT
- Optional STS integrated transformer module
- Battery DC voltage range: 250-520 V
- •Battery Module: M48112-S, M38180-S, M38210-S

STORION-TB250/ 500 250 / 500 kW battery PCS

Heavy-duty industrial application

- AC-coupled solution
- •With Max. 10 x 50 kW PV string inverter
- 250 kW transformer integrated
- 500kW no built-in transformer
- Separate STS / cabinet required
- •Battery Module: M48112-S, M38180-S, M38210-S





A **FLEXIBLE** battery pack solution to meet all your C&I energy storage capacity needs

7790-S The 1C battery solution

High Energy Density with High C-Rating Back-Plug Battery, No Wiring Required

Energy Capacity: 6.9 kWh
Nominal Voltage: 76.8 V
Max. charge and discharge: 90 A (1 hour)
Weight: 64 kg

M48112-S The 1C battery solution

Small volume, modular and flexible High C-rating battery solution

•Energy capacity: 5.7 kWh •Depth of discharge: 90% •Nominal voltage: 51.2 V

Operating voltage range: 48-56.3 V
Max. charge and discharge: 112 A (1 hour)
weight: 65 kg

M38180-S The 1C battery solution

High security-high efficiency heat management design

- •Energy capacity: 6.9 kWh •Depth of discharge: 90% •Nominal voltage: 38.4 V
- Operating voltage range: 36-43.2 V
- Max. charge and discharge current: 180 A (1 hour)
- •Weight: 66 kg

M38210-S The 0.5C battery solution

High energy density solution Cost effective solution

Energy capacity: 8.1 kWh
Depth of discharge: 90%
Nominal voltage: 38.4 V
Operating voltage range: 36-43.2 V

• Max. charging and discharging current: 105 A (2 hours) • Weight: 62 kg

M38210-SC The 0.5C battery solution

High Energy Density Solution Cost Effective Solution Back-Plug Battery, No Wiring Required

- Energy capacity: 8.1 kWh Depth of discharge: 90%
- Nominal voltage: 38.4 V
- Operating voltage range: 36-43.2 V
- Max. charge and discharge: 105 A (2 hour)
- weight: 64 kg





A **LARGE VARIETY** of battery storage racks or container solutions for different scenarios in C&I installations

Battery Racks

Max. 161.3 kWh each rack

Perfect for installation in rooms

34.4-51.6 kWh (M48112-S) 64.512-161.28 kWh (M38210-S) 55.30-138.24kWh (M38180-S) Easy to parallel to MWh



20 ESS Containe Infinitely Scalable

A truly turn-key ESS solution

20feet: Max3354.6 kWh (0.5C)



10/20/40 ESS Container Infinitely Scalable

A truly turn-key ESS solution 10feet: Max645.12kWh (0.5C) Max552.96kWh (1C) 20feet: Max1290.24kWh (0.5C) Max1105.92kWh (1C) 40feet: Max2903.04kWh (0.5C) Max2488.32kWh (1C)



GLOBAL PROJECTS



Project: 1 MW / 2 MWh

Application: Energy Self-sufficient Shopping Mall

Location: Accra, Ghana

Project: 100 kW / 670 kWh 50 x SMILE5 5 kW

Application: Energy Self-sufficient Community

Location: Australia



Project: 500 kW / 1.26 MWh

Application: UPS + Load Management for Pharmaceutical Factor

Location: Cambodia





Project: 150 kW / 612 kWh Application: PV + Storage + Genset Location: Tangerang, Indonesia



Project: 500 kW / 1 MWh

Application: Energy Independence for Hospital

Location: Accra, Ghana **Project:** 50 kW / 103 kWh

Application: Solar + Storage + Off Grid

Location: NSW, Australia





Project: 50 kW/100 kW & 100 kWh-300 kWh Application: Solar-battery-diesel Microgrid

System
Location:

DeeDoke village, Myanmar

Project: 6 MW / 12 MWh Application: PV + Storage Location: Hubei, China





Application: PV + Storage+ Genset

Location: Borno State, Nigeria





Project: 100 kW / 160 kWh Application: PV + Storage Location: Jiangsu, China



Project: 50 kW/102 kWh Application: PV + Storage Location: Wolfsberg, Austria

Project: 250 kW / 517.5 kWh Application:

PV + Storage **Location:** Guangdong, China





Project: 10 MW / 20 MWh Application: PV + Storage Location: Hubei, China Project: 2.5 MW / 10 MWh Application: Storage + Peak Shaving Location: Nanjing, China





Application:

PV + Storage

Location: Jiuquan, Gansu, China





Project: 2 MW / 8 MWh Application: Storage + UPS + Peak Shaving Location: Changshu, China



Project: 5 MW / 10 MWh Application: Wind Power + Storage

Location: Xinjiang, China

Project: 500kW / 1.1MWh Application: UPS + Load shifting + Selfconsumption, Renewable Demonstration Park

Location: Yangzhong, China





Exclusive for Europe

f @AlphaEnergyStorageSystem



@alpha_ess





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