



Smart Battery, Smarter Living

AlphaESS **SMILE G3**

More Energy. Longer Lifespan. Ultimate Safety.



Energy Storage Manufacturer
by BloombergNEF 2026



SMILE G3

Residential Energy Storage System

Your perfect energy solution

3.6 - 20 kW
Output Power

4.8 - 115.2 kWh
Capacity

10 Years
Warranty

SMILE G3 is a versatile hybrid home energy storage system with 3.6 to 8 kW single-phase and 10 and 20 kW three-phase options. It maximises solar self-consumption, reduces grid reliance, supports dynamic tariffs and imbalance trading. Choose energy independence and maximise your solar returns with AlphaESS.

What Makes SMILE G3 Unique?



AlphaLinX Battery

Smart battery technology combining series and parallel advantages for optimal performance.



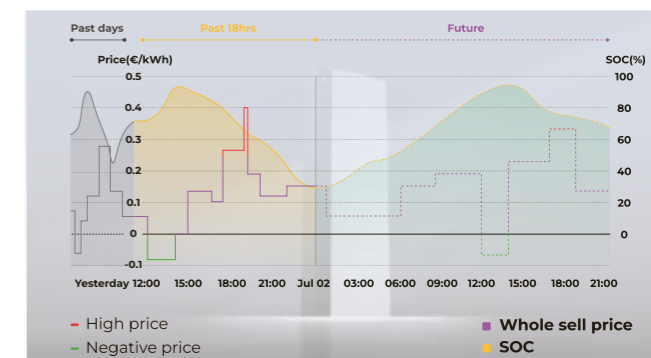
All-in-one Solution

Complete energy system with hybrid inverter, AlphaLinX battery, BMS and EMS.



Multi-Layer Safety Protection

Advanced safety system with cell-level monitoring and built-in fire prevention technology.



Save More Earn More

Reduce bills with dynamic tariffs and earn through energy market participation.



100% Backup Power

Delivers up to **40 kW** output for three-phase systems to power your entire home.

100% back-up viable through our back up gateways
Single phase and 3phase.



Built for Any Environment

Built-in heating & IP65 protection for indoor/outdoor reliability.



More Solar Energy for Your Home

Get every possible watt from your solar panels, our system delivers up to 15% more usable energy to your appliances compared to standard systems.



Every Cell Works at Its Full Potential

Smart balancing gives you 12% more usable capacity and extends battery life by 20% by preventing energy loss in weak cells.



No Interruption When Batteries Fail

Automatically isolates faulty modules without disrupting system operation. Ensures long-term reliability through hardware redundancy.*



Grow Your System Anytime

Start with what you need now and expand later, even mixing older and newer batteries. Scale up to 111.6 kWh for whole-home backup.

AlphaLinX






Always at the best performance.



*The bypass capability of Alpha LinX does not mean disabling protection, but rather strategy-level control within clearly defined safety boundaries. All non-bypassable items represent the system's safety baseline and will not be released under any circumstances.





All-in-one Home Energy Storage Solutions

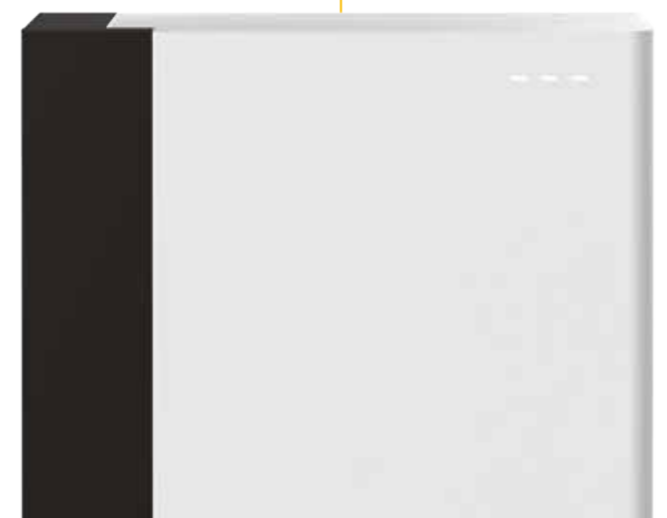
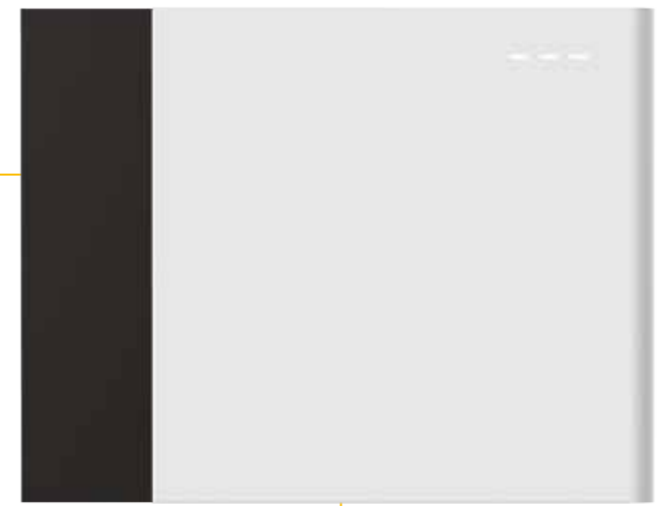
Hybrid Inverter

-  Built-in Smart EMS
-  200% PV Input
-  MPPT Shadow Scanning
-  Dynamic Tariff
-  VPP Ready



AlphaLinX Battery

-  Built-in Smart BMS
-  Aerosol Fire Protection
-  High 1C Charge/Discharge Option
-  LiFePO4 Battery Chemistry



Hybrid Inverter

The SMILE G3 Hybrid Inverter delivers 98% efficiency to maximise solar investment, provides <20ms switchover to backup for seamless power during outages, and supports single or three-phase homes from 3.6 to 20 kW, ensuring reliable energy for everything from small apartments to large houses.

- 3.6 - 20 kW**
Backup Power
- 1 & 3-Phase**
Support
- 98% Max.**
Conversion Efficiency
- <20ms**
EPS Switch











Maximise Your Solar ROI

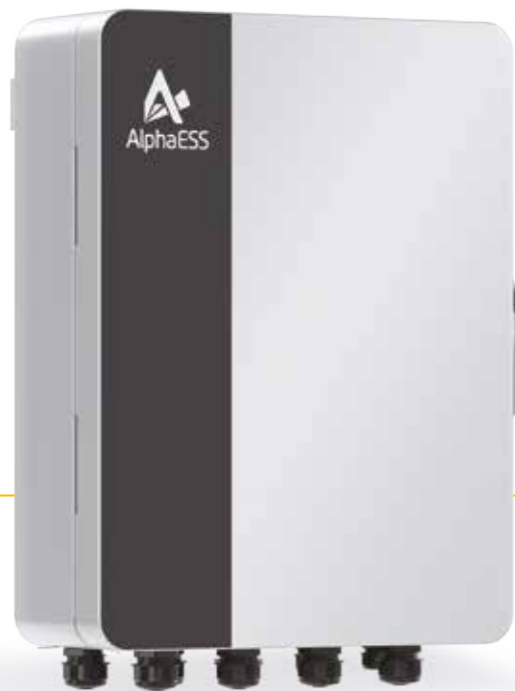
- 2×MPPT Inputs on single phase, 3×MPPT on three-phase - Optimises uneven shading
- Up to 200% PV Oversizing - Doubles solar utilisation
- Auto Shadow Scan - Maintains peak production



All-in-One Home Energy Storage Solutions

Backup Gateway-S

-  100 A Maximum Input Current, Whole-home Backup Solution
-  Seamless Switchover
-  Built-in Bypass Circuit for Stability of System
-  24 / 7 Online Monitoring
-  Up to 2 * Inverter Input, Large System Capacity
-  IP65 Enclosure, Outdoor Installation
-  10-Year Warranty for Long-term Reliability
-  AC Surge Protective Device (SPD) Integrated



SMILE-G3-Backup Gateway

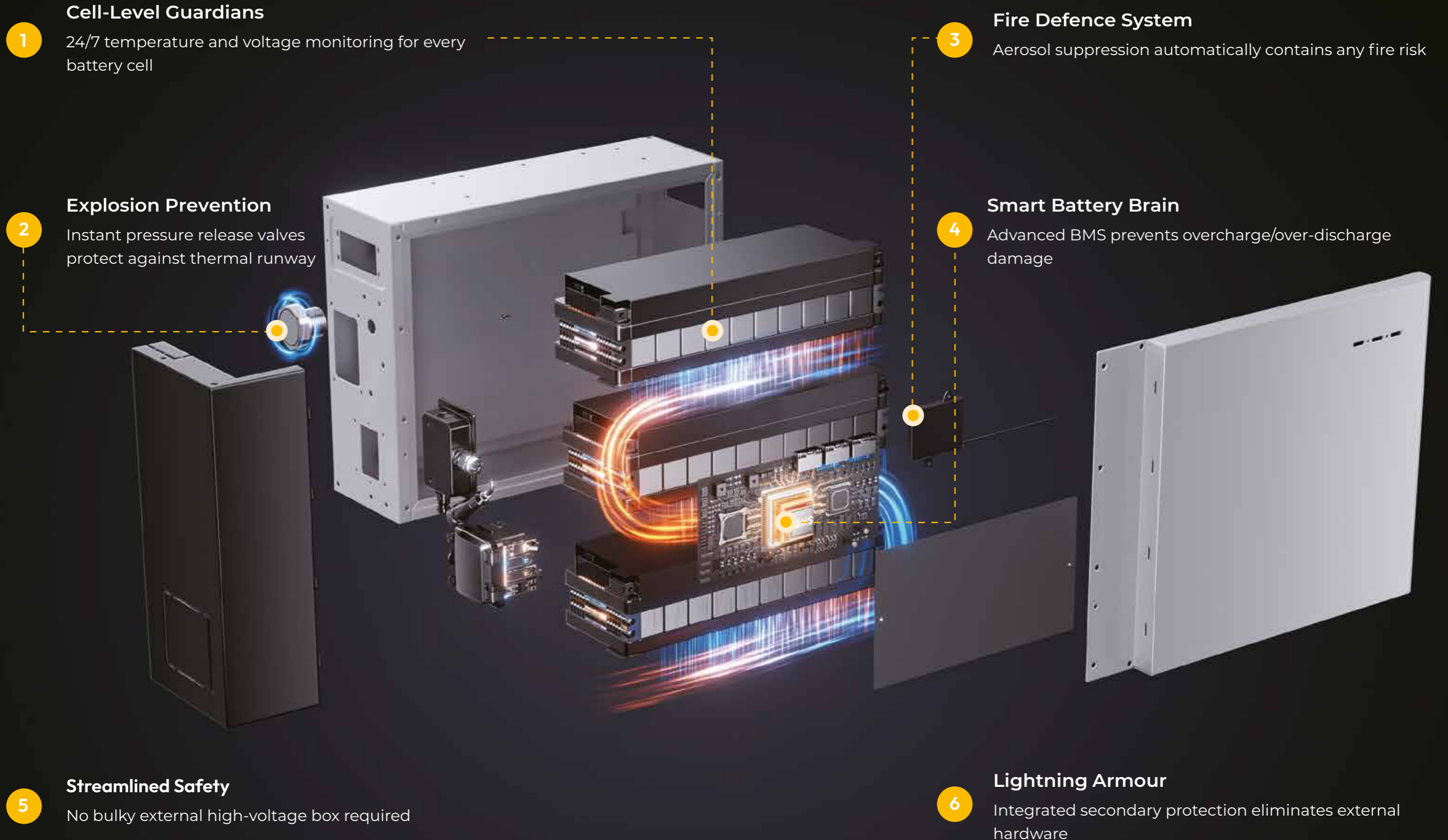
100A | Single-Phase



Model	SMILE-G3-Backup Gateway-S
Grid Connection	
Grid Connection Type	L / N / PE; Single Phase
Nominal AC Voltage	220 / 230 V
Maximum AC Current	100 A
Maximum AC Power	23 kW
Nominal AC Frequency	50 / 60 Hz
Switching Time	< 20ms*
PV Inverter Connection	
Nominal Voltage	220 / 230 V
Maximum Current	32 A
Maximum Power	7.3 kW
Nominal Frequency	50 / 60 Hz
Backup Connection	
Nominal AC Voltage	220 / 230 V
Maximum AC Current	100 A
Maximum AC Power	23 kW
Nominal AC Frequency	50 / 60 Hz
Hybrid Inverter Connection	
Nominal AC Voltage	220 / 230 V
Maximum AC Current	63 A
Maximum AC Power	14.5 kW
General Parameters	
Dimensions (W x D x H)	456 x 172 x 600 mm
Weight	18.8 kg
Communication	RS 485
Cooling	Natural Cooling
Operating Temperature Range	-10 ~ 50°C
Ingress Protection	IP65
Installation	Wall-mounted
Relative Humidity Range	15 ~ 85%
Warranty	10-Year Limited Warranty

*The On / Off grid switching time depends on the inverter installed with

Built-In Battery Protection at Every Level



Blackout? Your Lights Stay On.

When the grid fails during storms, SMILE G3 instantly becomes your home's power hub via the Backup Gateway, providing seamless switching, meaning your fridge stays cold, lights stay on, and Wi-Fi keeps working — no flickers, no restart delays.

100% power
Instant Backup

20ms
Auto-Switch

200%
Overload Boost

Your Energy, At Your Fingertips

Control your SMILE G3 energy storage system anytime, anywhere. Monitor solar production, track energy usage patterns, and optimise savings with intuitive dashboards.



AlphaESS APP



iOS



Android

Commissioning Smarter, Service Faster

Speed up commissioning with one-tap system registration and remote diagnostics. Access real-time troubleshooting tools and client history to deliver faster, smarter support—all from your mobile device.



One-click commissioning wizard



Remote fault diagnosis tools



Complete technical documentation library



Client management portal

Alpha Cloud: Smart Monitoring for All

Alpha Cloud enables real-time monitoring and control for both users and installers through a unified web portal.



AlphaESS Partner APP



iOS



Android



Adaptive Energy

AlphaESS App

Energy that fits your life

How it Works

- Connect in Minutes**
 Pair the app with your AlphaESS system.
- Learns Your Routine**
 The app learns your routine and energy usage.
- Optimises Automatically**
 Maximise savings effortlessly, every day.
- See the Difference**
 Track energy saved, earnings and avoided CO₂ in one place.

Trusted by
300,000
 families



Smarter Energy. More Benefits.

- Intelligent** > Learns usage patterns over time.
- Adaptive** > Adjusts to tariffs, prices and demand.
- Optimised** > Turns every kWh into greater value.
- Effortless** > Works quietly in the background.
- Secure** > Uses Data Centres in your area.

MORE VISIBILITY. MORE CONTROL.

Download AlphaESS App



iOS



Android



Live Flow

Watch the sun work for you.

Home Energy Flow

Solar, home, EV, grid – live, in one screen.



Wide Choice of VPP Plans

Put your battery on payroll.

Partner's VPP Plans

Explore 40+ VPPs, all in one app.



Power Through Storms

Storm coming? You're already charged.

Storm Guard

Reads the forecast.
 Pre-charges before it hits.



Know Where Every kWh Goes

Track every kWh.

Energy Insights

Load, solar, battery, grid – by day, month or year.



Adaptive Running Modes

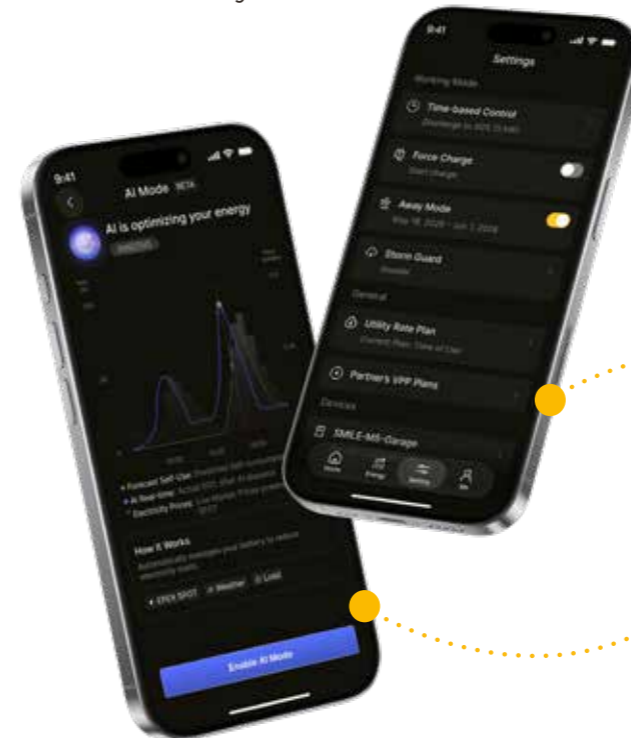
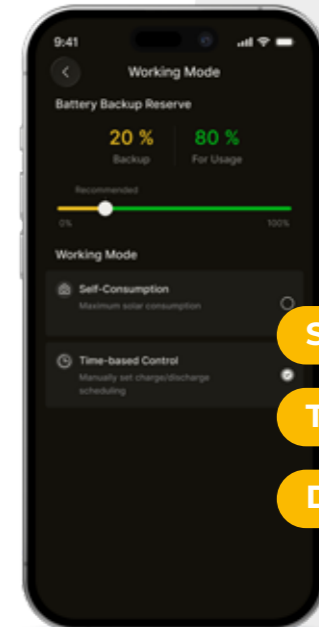
Charge cheap.
 Use at peak.

Self-Consumption

Time-based Control

Dynamic Tariffs

Control your battery based on demand, electricity prices, and time of day.



Upcoming

Away Mode

On holiday? Your battery isn't. Earns, saves and protects while you're away.

AI Mode

Your battery, on autopilot.

AlphaESS SMILE G3 Series

SMILE-G3-S3.6/S5

SMILE-G3-S8

SMILE-G3-T10/T20

Technical Specifications



SMILE-G3-S3.6 / S5

3.6/5 kW | Single-phase



Model	SMILE-G3-S3.6	SMILE-G3-S5
System Specifications		
Nominal Output Power	3.68 kW	5 kW
Capacity Range	4.8 - 38.4 kWh (95% DoD)	
Battery Chemistry	LFP (LiFePO4)	
Warranty	10 Years	
Inverter Technical Specifications		
Model	SMILE-G3-S3.6-INV	SMILE-G3-S5-INV
Coupling	Hybrid	Hybrid
Max. PV Input Power	7.36 kW	10 kW
Max. PV Input Current	15 A / 15 A	
Max. PV Input Voltage	580 V	
MPPT Number / Strings per MPPT	2 / 1	
MPPT Voltage Range	100 - 550 V	
Max. PV Short-Circuit Current	18.75 A / 18.75 A	24 A / 24 A
Max. Charging/Discharging Current	60 A	
Max. Charging/Discharging Power	3.68 kW	5 kW
Rated Frequency	50 / 60 Hz	
Rated Voltage	220 V / 230 V	
Phase	Single Phase	
Rated Output Current (Grid Port)	16 A	21.7 A
Rated Output Current (Backup Port)	16 A	21.7 A
Max. AC Input Power (On-Grid)*	7.36 kW	10 kW
Backup	≤ 20 ms (EPS)	
Communication	Ethernet / WiFi / Modbus / API	
Relative Humidity	0 - 90% (No Condensation)	
Dimensions (W x D x H)	610 x 212x 366 mm	
Weight	19.5 kg	
IP Protection	IP65	
Safety	IEC 62109, IEC62040	
EMC	IEC 61000-6-1/-2/-3/-4	
Overvoltage Category	DC II	
Noise	≤35 dB	
Grid Regulation	VDE 4105, VDE 0126-01-01, EN 50549-1, CEI 0-21, RD 1699, G98/G99, AS 4777.2, NRS 097	
Maximum / European Efficiency	95.94 % / 94.71 %	
Battery Technical Specifications		
Module Model	SMILE-G3-BAT-4.8S	SMILE-G3-BAT-9.6S
Rated Capacity	4.8 kWh	9.6 kWh
Usable Capacity	4.56 kWh	9.3 kWh
Depth of Discharge (DoD)	95 % *	95 % *
Nominal Voltage	96 V	96 V
Max. Charging/Discharging Current	50 A	52.5 A
Operating Temperature Range	-20°C - 50°C **	-20°C - 50°C **
Battery Modules Quantity	1 - 4	1 - 4
IP Protection	IP65	IP65
Dimensions (W x D x H)	610 x 212.5 x 435 mm	610 x 210 x 634 mm
Weight	53 kg	81 kg
Fire-Fighting	Aerosol + Anti-explosion Valve	Aerosol + Anti-explosion Valve

* Test condition: Max. 0.5C charge/discharge at 25±2°C.

** Max. charge/discharge current derating may occur with changes in temperature and SoC.



SMILE-G3-S8

8 kW | Brand new single-phase product exclusive to the UK



Model	SMILE-G3-S8	
System Specification		
Battery Chemistry	LFP (LiFePO4)	
Nominal Output Power	8000 W	
Capacity Range	4.8 - 38.4 kWh	
Warranty	10 Years	
PV Input Technical Specification		
Max PV Input Power	10000 W	
Max PV Input Current	15 A / 15 A	
Max. PV Input Voltage	580 V	
MPPT Number / Strings per MPPT	2 / 1	
MPPT Voltage Range	100 - 550 V	
Max. PV Short-Circuit Current	22.5 A / 22.5 A	
MPPT Efficiency	>99 %	
Inverter Technical Specification		
AC Input & Output Data (Grid Side)		
Rated AC Output Power	8000 W	
Max. AC Input Power	11500 W	
Rated Frequency	50 / 60 Hz	
Rated Voltage	230 V	
Grid Voltage Range	150 - 287 V	
Backup Output Data		
Rated Output Power (Off-grid)	8000 W	
Rated Output Voltage (Off-grid)	230 V ± 10 %	
On/Off Grid Switch Time	≤ 20 ms (EPS)	
Peak Power (Off-grid)	8800 W 60 s; 16000 W 30 s	
Max. Continuous AC Passthrough	50 A	
Rated Output Current (off-grid)	34.8 A	
General Specification		
Dimension (W x D x H)	610 x 212 x 366 mm	
Weight	19.5 kg	
Communication	Ethernet / WiFi	
Relative Humidity	0 - 90% (Non-Condensing)	
Operation Temperature	-25 - 60°C	
Noise	<35 dB	
Over Voltage Category	DC Type III / AC Type II	
Ingress Protection(IP) Rating	IP 65	
Operation Altitude	3000 m	
Safety	IEC62109-1/-2, IEC62477, IEC62040-1	
EMC	IEC61000-6-1/-2/-3/-4	
Grid Regulation	AS 4777.2, NRS 097, VDE 4105, EN 50549, G99	
Battery Technical Specifications		
Module Model	SMILE-G3-BAT-4.8S	SMILE-G3-BAT-9.6S
Rated Capacity	4.8 kWh	9.6 kWh
Usable Capacity	4.56 kWh	9.3 kWh
Depth of Discharge (DoD)	95 % *	95 % *
Nominal Voltage	96 V	96 V
Max. Charging/Discharging Current	50 A	52.5 A
Operating Temperature Range	-20°C - 50°C **	
Battery Modules Quantity	1 - 4	1 - 4
IP Protection	IP65	
Dimensions (W x D x H)	610 x 212.5 x 435 mm	610 x 210 x 634 mm
Weight	53 kg	81 kg
Fire-Fighting	Aerosol + Anti-explosion Valve	

* Test condition: Max. 0.5C charge/discharge at 25±2°C.
 ** Max. charge/discharge current derating may occur with changes in temperature and SoC.
 *** Maximum 6 Batteries for each cluster in series, up to 2 clusters in parallel.



SMILE-G3-T10/T20

10/20 kW | Three-phase



Model	SMILE-G3-T10	SMILE-G3-T20		
System Specifications				
Nominal Output Power	10 kW	20 kW		
Capacity Range	4.8 - 115.2 kWh	9.6 - 115.2 kWh		
Battery Chemistry	LFP (LiFePO4)			
Warranty	10 Years			
Inverter Technical Specifications				
Model	SMILE-G3-T10-INV	SMILE-G3-T20-INV		
Coupling	Hybrid	Hybrid		
Max. PV Input Power	20 kW	40 kW		
Max. PV Input Current	16 A / 16 A / 16 A	18A / 18 A / 18 A		
Max. PV Input Voltage	1000 V	1000 V		
MPPT Number / Strings per MPPT	3 / 1			
MPPT Voltage Range	140 - 950 V	200 - 850 V		
Max. PV Short-Circuit Current	24 A / 24 A / 24 A	22.5 A / 22.5 A / 22.5 A		
Max. Charging/Discharging Current	40 A	60 A		
Max. Charging/Discharging Power	10 kW	20 kW		
Rated Frequency	50 / 60 Hz	50 / 60 Hz		
Rated Voltage	220 V / 380 V, 230 V / 400 V	220 V / 380 V, 230 V / 400 V		
Phase	Three Phase			
Rated Output Power (Grid Port)	10 kW	20 kW		
Rated Output Current (Grid Port)	14.5 A	29 A		
Rated Output Power (Backup Port)	10 kW	20 kW		
Rated Input Power (on-grid)	20 kW	25 kW		
Backup	≤ 20 ms (EPS)			
Communication	Ethernet / WiFi / Modbus / API			
Relative Humidity	0 - 90% (No Condensation)			
Dimensions (W x D x H)	610 x 212.5 x 416 mm	610 x 250 x 610 mm		
Weight	26.7 kg	44 kg		
IP Protection	IP65			
Safety	IEC 62109-1/-2			
EMC	IEC 61000-6-1/-3			
Overvoltage Category	DC II			
Noise	≤ 30 dB	≤ 50 dB		
Grid Regulation	VDE 4105, EN 50549-1, VDE0126-01-01, NC RFG, G99	VDE 4105, EN 50549-1, G99		
Maximum / European Efficiency	97.6 % / 96.8 %	98 % / 97.5 %		
Battery Technical Specifications				
Module Model	SMILE-G3-BAT-4.8S	SMILE-G3-BAT-9.6S	SMILE-G3-BAT-4.8S	SMILE-G3-BAT-9.6S
Rated Capacity	4.8 kWh	9.6 kWh	4.8 kWh	9.6 kWh
Usable Capacity	4.56 kWh	9.3 kWh	4.56 kWh	9.3 kWh
Depth of Discharge (DoD)	95 % *		95 % *	
Nominal Voltage	96 V		96 V	
Max. Charging/Discharging Current	50 A	52.5 A	50 A	52.5 A
Operating Temperature Range	-20°C - 50°C **			
Battery Modules Quantity	1 - 6	1 - 6,8,10,12 ***	2 - 6	2 - 6,8,10,12 ***
IP Protection	IP65		IP65	
Dimensions (W x D x H)	610 x 212.5 x 435 mm	610 x 210 x 634 mm	610 x 212.5 x 435 mm	610 x 210 x 634 mm
Weight	53 kg	81 kg	53 kg	81 kg
Fire-Fighting	Aerosol + Anti-explosion Valve		Aerosol + Anti-explosion Valve	

* Test condition: Max. 0.5C charge/discharge at 25±2°C.
 ** Max. charge/discharge current derating may occur with changes in temperature and SoC.
 *** Maximum 6 Batteries for each cluster in series, up to 2 clusters in parallel.



About AlphaESS

AlphaESS is a leading global provider of green energy storage solutions and services. With expertise in BMS, EMS, system integration, and cloud monitoring, we deliver tailored solutions for residential, commercial & industrial, and utility-scale applications. Our solutions empower millions to access reliable, clean energy while mitigating rising utility costs and reducing global carbon emissions.



130 +

Countries & Regions



300,000 +

Systems Installed Globally



300 +

Global Service Network



13 +

Years of Industry Experience



AlphaESS Cares for Your Energy Freedom



Reliable Local Support

- Local engineer teams in Europe
- Quick on-site response
- Local spare parts for faster repairs

24/7 Protection

- Remote monitoring prevents issues
- Regular check-ups for long-term performance



Easy & Transparent

- Real-time service tracking
- Clear process from start to finish
- Feedback after every service





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