



Smart Battery, Smarter Living

AlphaESS **SMILE G3**

More Energy. Longer Lifespan. Ultimate Safety.



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SMILE G3

Residential Energy Storage System

Your perfect energy solution

3.6 - 20 kW
Output Power

3.8 - 111.6 kWh
Capacity

10 Years
Warranty

SMILE G3 is a versatile hybrid home energy storage system with 3.6 to 5 kW single-phase and 4 to 20 kW three-phase options. It maximizes solar self-consumption, reduces grid reliance, supports dynamic tariffs and imbalance trading. Choose energy independence and maximize your solar returns with AlphaESS.

What Makes SMILE G3 Unique?



AlphaLinX Battery

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



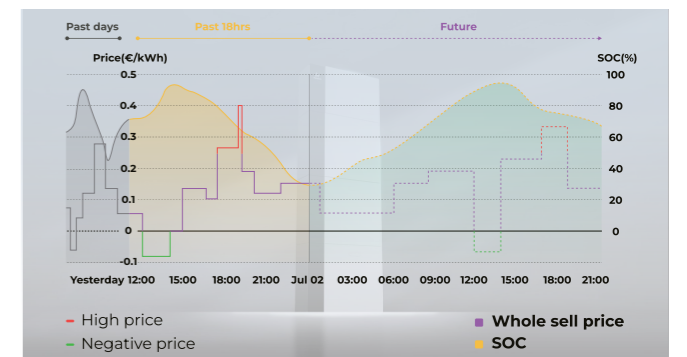
All-in-one Solution

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 **20 kW** output for three-phase systems to power your entire home.



Built for Any Environment

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

Power Starts with the Battery Storage Starts with AlphaESS

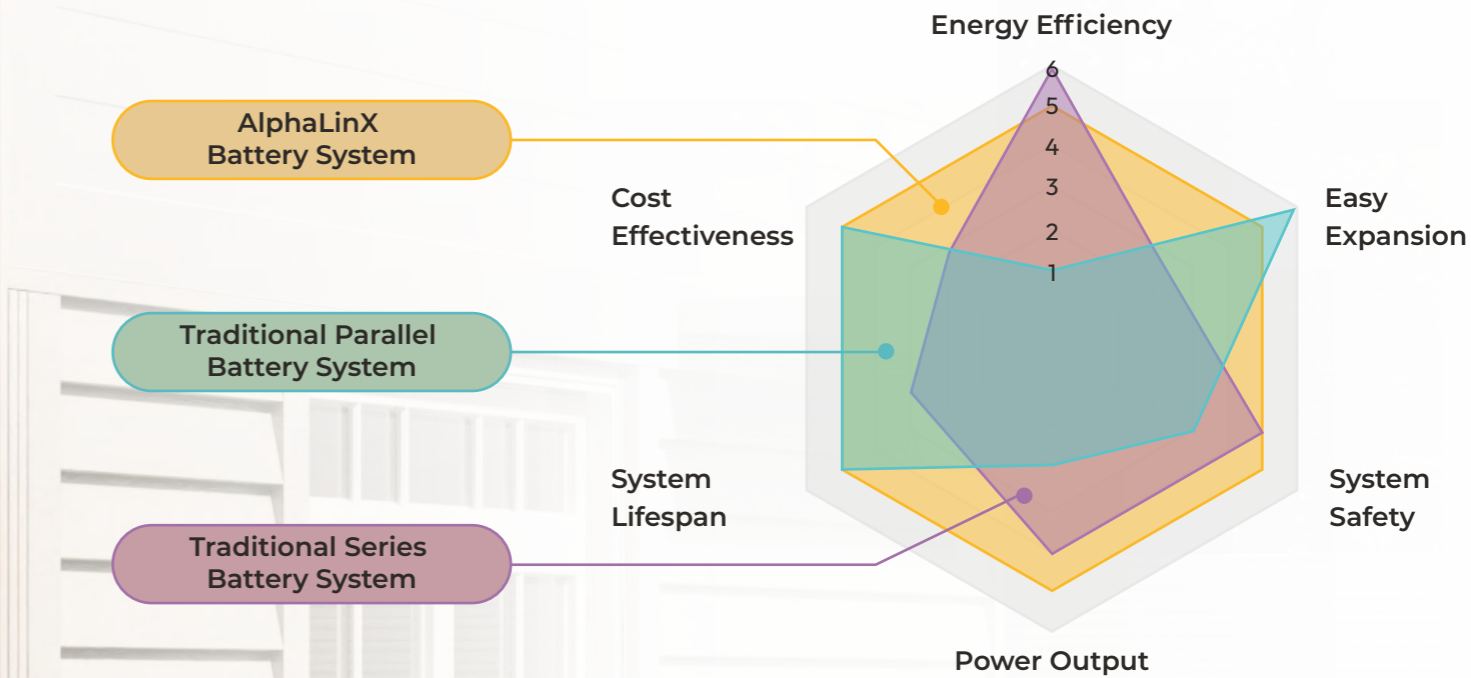
Great home energy storage begins with a great battery. That's why the SMILE G3 features unique AlphaLinX Battery, delivering superior efficiency, safety, and longevity. Smarter storage means greater savings and true energy independence.



AlphaLinX™ The Ultimate Battery That Does It All

When you can have both, why choose?

Traditional battery systems make you choose between high efficiency (series) and balanced capacity (parallel). AlphaESS AlphaLinX Technology changes the game by delivering both advantages together.



Feature	AlphaLinX Battery System	Traditional Series Battery System	Traditional Parallel Battery System
Increases system voltage, reduces losses	✓	✓	✗
Intelligently balances capacity between batteries	✓	✗	✓
Simplifies current management, reduces current load pressure, lowers overheating risk	✓	✓	✗
Small failure impact scope, strong redundancy	✓	✗	✓
Allows selection of higher inverter power	✓	✓	✗
High expansion flexibility	✓	✗	✓



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

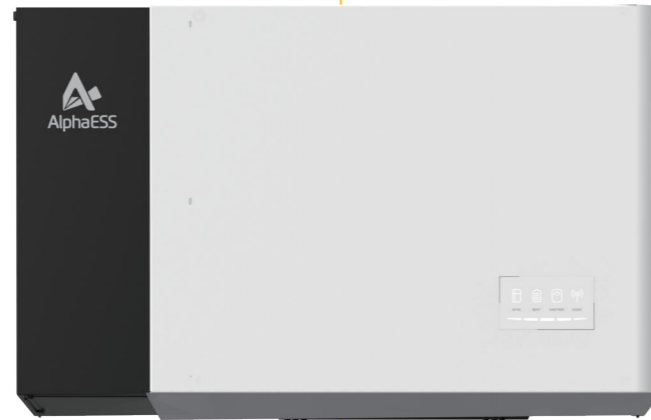
Always at the best performance.








All-in-one Home Energy Storage Solutions

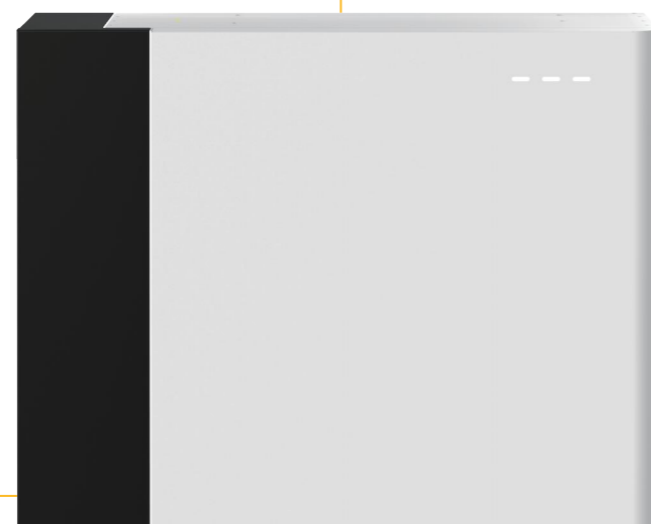
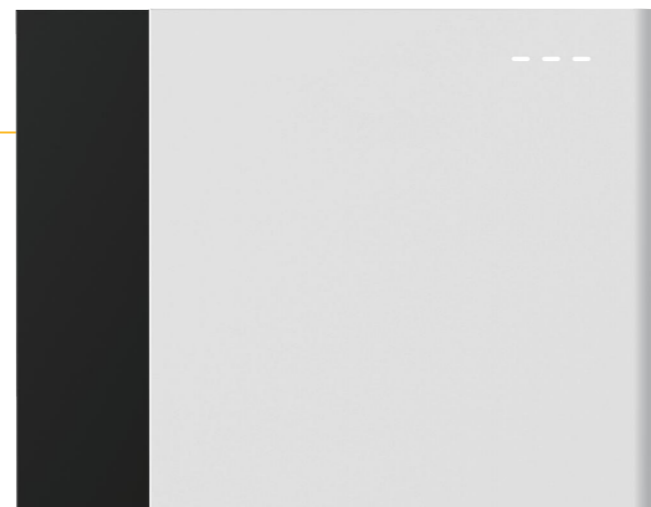
Hybrid Inverter

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



AlphaLinX Battery

-  Built-in Smart BMS
-  Aerosol Fireproof
-  High 1C Charge/Discharge
-  LiFePO4 Battery Chemistry
-  10,000 Life Cycles



Hybrid Inverter

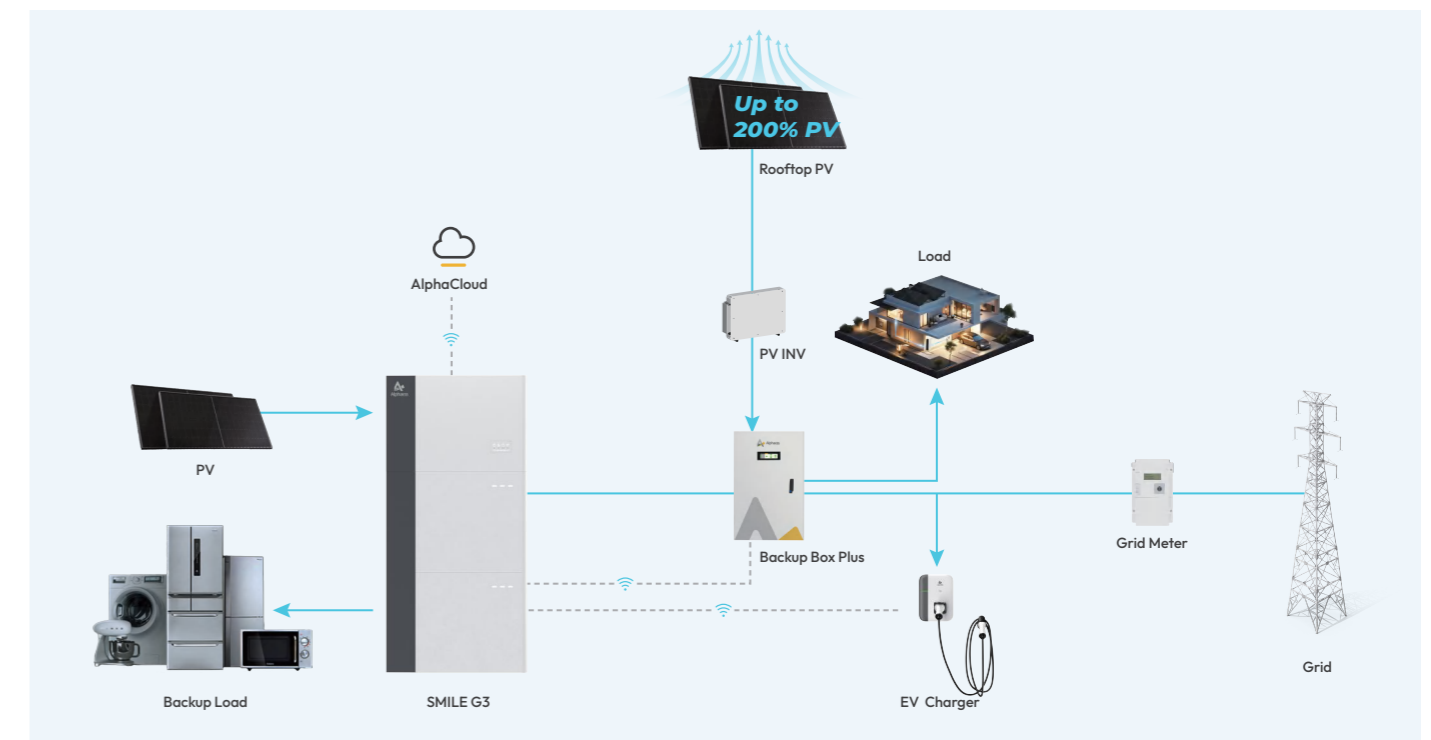
The SMILE G3 Hybrid Inverter delivers 98% efficiency to maximize solar investment, provides 10 ms backup for seamless power during outages, and supports single or three-phase homes from 3.6 to 20 kW, ensuring reliable energy for everything from small apartments to large houses.

3.6 - 20 kW
Backup Power

1 & 3-Phase
Support

98% Max.
Conversion Efficiency

<10ms
UPS Switch

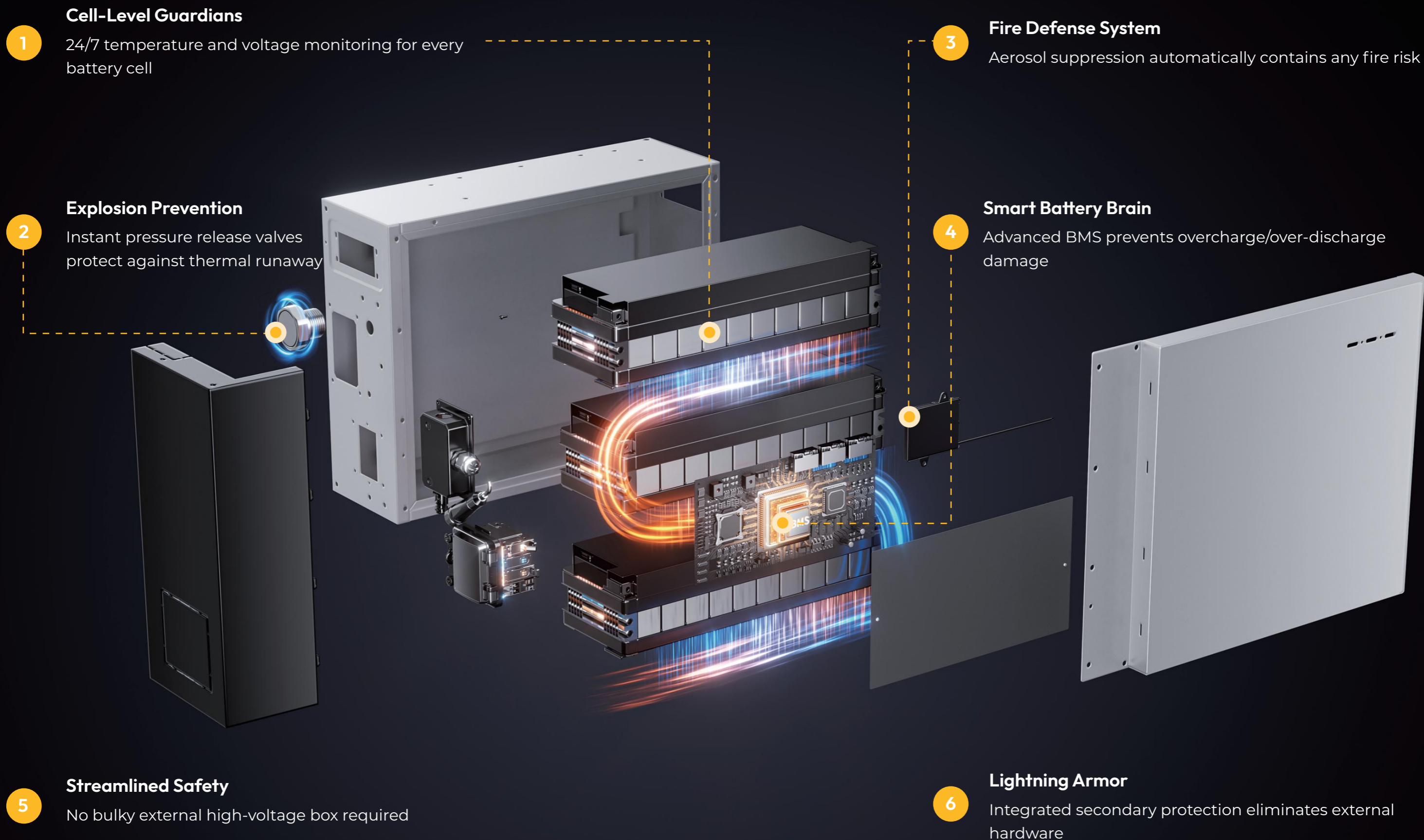


Maximize Your Solar ROI

- 3×MPPT Inputs - Optimizes uneven shading
- 200% PV Over-Sizing - Doubles solar utilization
- Auto Shadow Scan - Maintains peak production



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. With 20kW backup power and seamless switching, your fridge stays cold, lights stay on, and wifi keeps working — no flickers, no restart delays. Even heavy appliances like well pumps keep running with smart overload protection.

20 kW
Instant Backup

10 ms
Auto-Switch

200%
OverLoad Boost

Smart Savings with Dynamic Tariffs

SMILE G3 automatically charges when electricity is cheap and powers your home during peak rates, reducing bills by up to 40%.



Smart Price Tracking

Syncs with real-time EPEX market data



Day/Night Optimization

Prioritizes free PV energy before grid power



Negative Price Shield

Stops feeding energy when prices turn negative

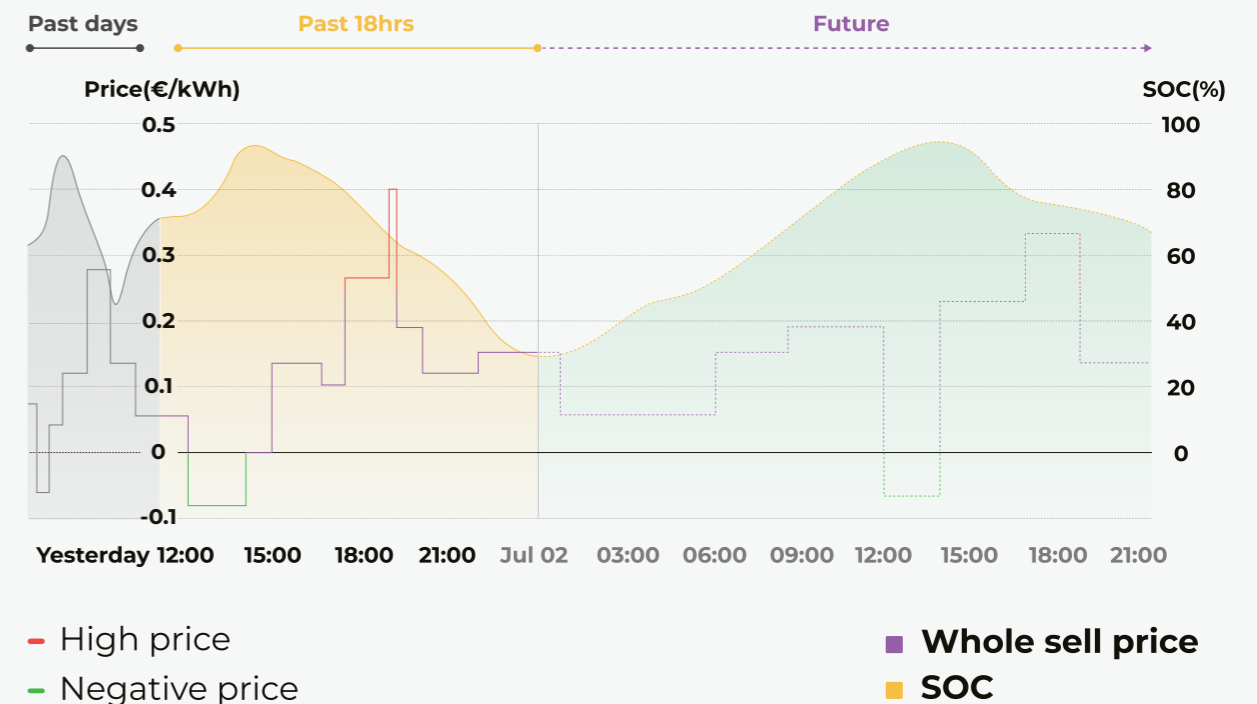


App Control

Set preferences via smartphone

Turn Your Battery Into a Money Maker

The SMILE G3 helps you profit from energy markets by automatically selling stored energy when prices peak. As a VPP-ready energy storage system, it connects directly with local energy aggregators, generating income while stabilizing the grid, all automatically with zero effort from you.



frank
energie

HEGG

Jabba

Next
Energy

octopus
energy

ostrom

Your Energy, At Your Fingertips

Control your SMILE G3 energy storage system anytime, anywhere. Monitor solar production, track energy usage patterns, and optimize 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.



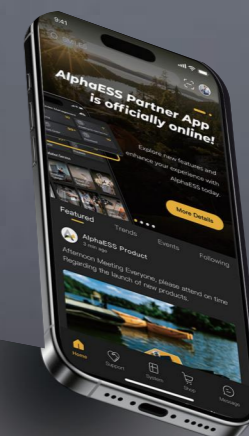
AlphaESS Partner APP



iOS



Android



AlphaESS SMILE G3 Series

SMILE-G3-S3.6/S5/B5

SMILE-G3-T4/T5/T6/T8/T10

SMILE-G3-T12/T15/T20

Technical Specifications



SMILE-G3-S3.6 / S5 / B5

3.6/5 kW | Single-phase



Model	SMILE-G3-S3.6	SMILE-G3-S5	SMILE-G3-B5
System Specifications			
Nominal Output Power	3.68 kW	5 kW	5 kW
Usabe Capacity Range	3.65 - 14.6 kWh / 3.8 - 15.2 kWh / 4.5 - 18 kWh / 9.3 - 37.2 kWh		
Battery Chemistry	LFP (LiFePO4)		
Warranty	10 Years Product Warranty, 10 Years Battery Performance Warranty		
Inverter Technical Specifications			
Model	SMILE-G3-S3.6-INV	SMILE-G3-S5-INV	SMILE-G3-B5-INV
Coupling	Hybrid	Hybrid	AC
Max.PV Input Power	7.36 kW	10 kW	N/A
Max.PV Input Current	15 A / 15 A		N/A
Max.PV Input Voltage	580 V		N/A
MPPT Number / Strings per MPPT	2 / 1		N/A
MPPT Voltage Range	100 ~ 550 V		N/A
Max.PV Short-Circuit Current	18.75 A / 18.75 A	24 A / 24 A	N/A
Max.Charging/Discharging Current	60 A		
Max.Charging/Discharging Power	3.68 kW	5 kW	5 kW
Nominal Frequency	50 / 60 Hz		
Nominal Voltage	220 V / 230 V		
Phase	Single Phase / 3-Phase Compensation		
Nominal Output Current (Grid Port)	16 A	21.7 A	21.7 A
Nominal Output Current (Backup Port)	16 A	21.7 A	21.7 A
Nominal Input Power(on-grid)	7.36 kW	10 kW	10 kW
Backup	UPS		
Communication	Ethernet / WiFi / Modbus / API		
Relative Humidity	0~90% (No Condensation)		
Dimensions (W×D×H)	610 × 212 × 366 mm		
Weight	19.5 kg		
Ingress Protection	IP65		
Safety	IEC 62109-1/-2,IEC 62040		
EMC	IEC 61000-6-1/-2/-3/-4		
Grid Regulation	VDE 4105, VDE 0126-1-1, EN 50549-1, CEI O-21, RD1699, G98/G99, AS 4777.2, NRS 097, C10/11		
Overvoltage Category	DC Type II according to EN / IEC 61643		
Cooling	Natural Convection		
Noise	≤ 35 dB		
Maximum/European Efficiency	97 % / 96.2 %		
Battery Technical Specifications			
Model	SMILE-G3-BAT-3.8S	SMILE-G3-BAT-4.5S	SMILE-G3-BAT-9.3S
Nominal Capacity	3.8 kWh	4.56 kWh	9.3 kWh
Usable Capacity	3.65 kWh	4.56 kWh	9.3 kWh
Depth of Discharge (DoD)	95 % *	100% *	100% *
Nominal Voltage	96 V	96 V	96 V
Max. Charging/Discharging Current	40 A	50 A	52.5 A
Operating Temperature Range	-10℃ ~ 50 ℃ **	-20 ℃ ~ 50 ℃ **	-20 ℃ ~ 50 ℃ **
Cycle Life	10,000 ***	10,000 ***	10,000 ***
Modular Connection	1 ~ 4	1 ~ 4	1 ~ 4
IP Protection	IP21	IP65	IP65
Dimensions (W x D x H)	610 × 212.5 × 435 mm	610 × 212.5 × 435 mm	610 × 210 × 634 mm
Weight	39.2 kg	53 kg	81 kg
Noise	≤ 35 dB	≤ 35 dB	≤ 35 dB
Fire-Fighting	Aerosol	Aerosol	Aerosol

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

** Performance reduction may occur depending on the state of charge and temperature. Optimal operating temperature 15°C ~ 30°C.

*** Under specific test conditions.



SMILE-G3-T4/T5/T6/T8/T10

4/5/6/8/10 kW | Three-phase

Model	SMILE-G3-T4	SMILE-G3-T5	SMILE-G3-T6	SMILE-G3-T8	SMILE-G3-T10
System Specifications					
Nominal Output Power	4 kW	5 kW	6 kW	8 kW	10 kW
Usabe Capacity Range	3.65 - 43.8 kWh / 3.8 - 22.8 kWh / 4.56 - 27.36 kWh / 9.3 - 111.6 kWh				
Battery Chemistry	LFP (LiFePO4)				
Warranty	10 Years Product Warranty, 10 Years Battery Performance Warranty				
Inverter Technical Specifications					
Model	SMILE-G3-T4-INV	SMILE-G3-T5-INV	SMILE-G3-T6-INV	SMILE-G3-T8-INV	SMILE-G3-T10-INV
Coupling	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid
Max.PV Input Power	8 kW	10 kW	12 kW	16 kW	20 kW
Max.PV Input Current	16 A / 16 A / 16 A				
Max.PV Input Voltage	1,000 V				
MPPT Number / Strings per MPPT	3 / 1				
MPPT Voltage Range	140 ~ 950 V				
Max.PV Short-Circuit Current	24 A / 24 A / 24 A				
Max.Charging/Discharging Current	40 A				
Max.Charging/Discharging Power	4 kW	5 kW	6 kW	8 kW	10 kW
Nominal Frequency	50 / 60 Hz				
Nominal Voltage	220 V / 380 V, 230 V / 400 V				
Phase	Three Phase				
Nominal Output Power (Grid Port)	4 kW	5 kW	6 kW	8 kW	10kW
Nominal Output Power (Backup Port)	4 kW	5 kW	6 kW	8 kW	10 kW
Nominal Input Power(on-grid)	8 kW	10 kW	12 kW	16 kW	20 kW
Backup	UPS				
Communication	Ethernet / WiFi / Modbus / API				
Relative Humidity	0 ~ 90% (No Condensation)				
Dimensions(WxDxH)	610 × 212.5 × 416 mm				
Weight	26.7 kg				
Ingress Protection	IP65				
Safety	IEC 62109-1/-2				
EMC	IEC 61000-6-1/-2/-3/-4, IEC 61000-3-11, EN 61000-3-12				
Grid Regulation	VDE 4105, EN 50549-1, VDE 0126-1-1, NC RFG, Tor Erzeuger, CEI 0-21, C10/11				
Overvoltage Category	DC Type II according to EN / IEC 61643				
Cooling	Controlled Ventilator				
Noise	≤ 39 dB				
Maximum/European Efficiency	97.6 % / 96.8 %				
Battery Technical Specifications					
Model	SMILE-G3-BAT-3.8S		SMILE-G3-BAT-4.5S		SMILE-G3-BAT-9.3S
Nominal Capacity	3.8 kWh		4.56 kWh		9.3 kWh
Usable Capacity	3.65 kWh		4.56 kWh		9.3 kWh
Depth of Discharge (DoD)	95 % *		100 % *		100 % *
Nominal Voltage	96 V		96 V		96 V
Max. Charging/Discharging Current	40 A		50 A		52.5 A
Operating Temperature Range	-10°C ~ 50 °C **		-20 °C ~ 50 °C **		-20 °C ~ 50 °C **
Cycle Life	10,000 ***		10,000 ***		10,000 ***
Modular Connection	1 ~ 6,8,10,12 ****		1 ~ 6		1 ~ 6,8,10,12 ****
IP Protection	IP21		IP65		IP65
Dimensions (W x D x H)	610 × 212.5 × 435 mm		610 × 212.5 × 435 mm		610 × 210 × 634 mm
Weight	39.2 kg		53 kg		81 kg
Noise	≤ 35 dB		≤ 35 dB		≤ 35 dB
Fire-Fighting	Aerosol		Aerosol		Aerosol

* Test condition: Max. 0.5C charge/discharge at 25±2°C.
** Performance reduction may occur depending on the state of charge and temperature. Optimal operating temperature 15°C ~ 30°C.
*** Under specific test conditions.
**** Maximum 6 Batteries for each cluster in series, up to 2 clusters in parallel.



SMILE-G3-T12/T15/T20

12/15/20 kW | Three-phase

Model	SMILE-G3-T12	SMILE-G3-T15	SMILE-G3-T20
System Specifications			
Nominal Output Power	12 kW	15 kW	20 kW
Usabe Capacity Range	7.3 - 43.8 kWh / 7.6 - 22.8 kWh / 9.12 - 27.36 kWh / 18.6 - 111.6 kWh		
Battery Chemistry	LFP (LiFePO4)		
Warranty	10 Years Product Warranty, 10 Years Battery Performance Warranty		
Inverter Technical Specifications			
Model	SMILE-G3-T12-INV	SMILE-G3-T15-INV	SMILE-G3-T20-INV
Coupling	Hybrid	Hybrid	Hybrid
Max.PV Input Power	24 kW	30 kW	40 kW
Max.PV Input Current	18 A / 18 A / 18 A		
Max.PV Input Voltage	1,000 V		
MPPT Number / Strings per MPPT	3 / 1		
MPPT Voltage Range	200 ~ 850 V		
Max.PV Short-Circuit Current	22.5 A / 22.5 A / 22.5 A		
Max.Charging/Discharging Current	60 A		
Max.Charging/Discharging Power	12 kW	15 kW	20 kW
Nominal Frequency	50 / 60 Hz		
Nominal Voltage	220 V / 380 V, 230 V / 400 V		
Phase	Three Phase		
Nominal Output Power(Grid Port)	12 kW	15 kW	20 kW
Nominal Output Power(Backup Port)	12 kW	15 kW	20 kW
Nominal Input Power(on-grid)	17 kW	20 kW	25 kW
Backup	UPS		
Communication	Ethernet / WiFi / Modbus / API		
Relative Humidity	0 ~ 90% (No Condensation)		
Dimensions (W×D×H)	610 × 250 × 610 mm		
Weight	44 kg		
Ingress Protection	IP65		
Safety	IEC 62109-1/-2		
EMC	IEC 61000-6-1/-2/-3/-4		
Grid Regulation	VDE 4105, EN 50549-1, Tor Erzeuger, NRS 097, C10/11		
Overvoltage Category	DC Type II according to EN / IEC 61643		
Cooling	Controlled Ventilator		
Noise	≤ 50 dB		
Maximum/European Efficiency	98 % / 97.5 %		
Battery Technical Specifications			
Model	SMILE-G3-BAT-3.8S	SMILE-G3-BAT-4.5S	SMILE-G3-BAT-9.3S
Nominal Capacity	3.8 kWh	4.56 kWh	9.3 kWh
Usable Capacity	3.65 kWh	4.56 kWh	9.3 kWh
Depth of Discharge (DoD)	95 % *	100 % *	100 % *
Nominal Voltage	96 V	96 V	96 V
Max. Charging/Discharging Current	40 A	50 A	52.5 A
Operating Temperature Range	-10℃ ~ 50 ℃ **	-20 ℃ ~ 50 ℃ **	-20 ℃ ~ 50 ℃ **
Cycle Life	10,000 ***	10,000 ***	10,000 ***
Modular Connection	2 ~ 6,8,10,12 ****	2 ~ 6	2 ~ 6,8,10,12 ****
IP Protection	IP21	IP65	IP65
Dimensions (W x D x H)	610 × 212.5 × 435 mm	610 × 212.5 × 435 mm	610 × 210 × 634 mm
Weight	39.2 kg	53 kg	81 kg
Noise	≤ 35 dB	≤ 35 dB	≤ 35 dB
Fire-Fighting	Aerosol	Aerosol	Aerosol

* Test condition: Max. 0.5C charge/discharge at 25±2°C.
** Performance reduction may occur depending on the state of charge and temperature. Optimal operating temperature 15°C ~ 30°C.
*** Under specific test conditions.
**** 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



200,000 +
Systems Installed Globally



300 +
Global Service Network



13 +
Years of Industry Experience



AlphaESS Cares for Your Energy Freedom

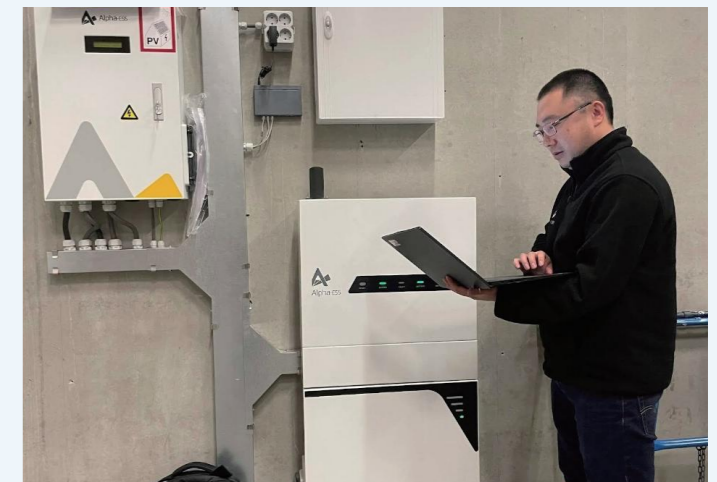


Reliable Local Support

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

24/7 Protection

- Remote monitoring prevents issues
- Emergency support in your language
- Regular check-ups for long-term performance



Easy & Transparent

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