



On Grid Energy Storage System (ESS)
COMPLETE SOLUTION for Residential Applications

SMILE 5

with 13.3P battery

✓ Key Features



Elegant Design
Unified design of the whole unit



Outdoor
IP65 rating can be installed outdoor



UPS
Uninterrupted power supply in 0.01S



VPP Ready
Compatible with Discover Energy VPP function



High Energy Density
44.6Wh per Litres

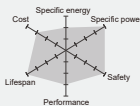


Quick Installation
Plug and play design, significantly reduce installation time



Real-time Monitoring

All systems can be monitored
by **Web and iOS/Android APP.**



Safest Chemistry

AlphaESS uses Li-phosphate for its
excellent safety and long lifespan.



| Battery Specifications | |
|-----------------------------|---|
| Model | SMILE-BAT-13.3P |
| Battery Type | LFP (LiFePO4) |
| System Weight | 120 kg |
| Dimension (W x D x H) | 610 x 236 x 812 mm |
| IP Protection | IP65 |
| Warranty | 5 Year Product Warranty, 10 Year Performance Warranty, ≥ 8000 Cycle Life |
| Electrical | |
| Energy Capacity | 13.34 kWh |
| Usable Capacity | 13.34 kWh |
| Depth of Discharge (DoD) | 100% |
| Nominal Voltage | 48 V |
| Operating Voltage Range | 45 ~ 54 V |
| Internal Resistance | ≤ 20 mΩ |
| Operation | |
| Max. Charging Current | 100 A (0.35C) |
| Max. Discharging Current | 100 A (0.35C) |
| Operating Temperature Range | -10 °C ~ 50 °C* |
| Humidity | 15% ~ 85% |
| BMS | |
| Modules Connection | 1~6 in parallel (with expansion pack) |
| Power Consumption | <1 W (Work), <10 mW (Sleep) |
| Monitoring Parameters | System voltage, current, cell voltage, cell temperature, PCBA temperature measurement |
| Communication | CAN and RS-485 compatible |
| Certificate | |
| Transportation | UN38.3 |
| Safety | IEC 62619 (Cell), IEC 62619 (Pack) |

*When the temperature is below 0 °C or above 40 °C, the performance will be limited.

| Inverter | SMILE5 INV |
|--|---|
| PV String Input Data | |
| Max. DC Input Power [W] | 6660 |
| The maximum DC input power for STC [W] (Small-scale Technology Certificates) | 6600 |
| Max. DC Voltage [V] | 580 |
| MPPT Voltage Range [V] | 125~550 |
| Starting Voltage [V] | 125 |
| Max. DC Current [A] | 12/12 |
| No. of DC Connectors | 2 |
| No. of MPPTs | 2 |
| DC Connector | MC4 |
| Battery Input Data | |
| Nominal Voltage [V] | 51.2 |
| Max. Charging Voltage [V] | 57.6 |
| Max. Charging Current [A] | 100 |
| Max. Discharging Current [A] | 100 |
| AC Output Data (On Grid) | |
| Nominal AC Power [VA] | 5000 |
| Max. AC Power [VA] | 5000 |
| Max. AC Current [A] | 21.7 |
| Nominal Output Voltage [V] | 230 |
| Nominal Output Frequency [Hz] | 50/60 |
| THDi | <3% |
| Power Factor | ~1(Adjustable from 0.8 leading to 0.8 lagging) |
| AC Output Data (Buck-Up) | |
| Nominal AC Power [VA] | 4600 |
| Peak AC Power [VA] | 5200, 2 sec |
| Nominal Output Voltage [V] | 230 |
| Nominal Output Frequency [Hz] | 50/60 |
| Efficiency | |
| Max. Efficiency | 97.60% |
| Europe Efficiency | 97.00% |
| MPPT Adaptation Efficiency | 99.90% |
| Protection | |
| Residual Current Monitoring Unit | Integrated |
| Anti-islanding Protection | Integrated |
| AC Over Current Protection | Integrated |
| Insulation Monitoring | Integrated |
| General Data | |
| Dimensions (WxHxD) [mm] | 1604 x 610 x 236.6 |
| Weight [kg] | 17 |
| Ambient Temperature Range [°C] | -10~50 |
| Relative Humidity | 0-95% |
| Protection Degree | IP65 |
| Topology | High Frequency Isolation |
| Standby Losses [W] | <13 |
| Cooling | Nature Convection |
| Noise Emission [dB] | <25 |
| Monitoring | RS485; CAN; Wi-Fi |
| Standard Warranty [Years] | 5 |
| Certificates & Standards | |
| Grid Regulation | VDE-AR-N 4105, VDE 0126-1-1, AS 4777.2/3, CEI 0-21, G59/3, RD 1699, NRS 097-2-1 |
| EMC | EN 61000-6-1/2/3/4 |
| Safety Regulation | IEC 62109-1&-2, IEC 62477-1, IEC 62040.1.1, IEC 62116 |