









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

# SMILE 5

with 13.3P battery

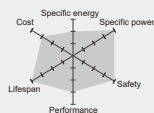
## ✓ Key Features

-  **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
<b>PV String Input Data</b>		
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
<b>Battery Input Data</b>		
Nominal Voltage [V]		51.2
Max. Charging Voltage [V]		57.6
Max. Charging Current [A]		100
Max. Discharging Current [A]		100
<b>AC Output Data (On Grid)</b>		
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)
<b>AC Output Data (Buck-Up)</b>		
Nominal AC Power [VA]		4600
Peak AC Power [VA]		5200, 2 sec
Nominal Output Voltage [V]		230
Nominal Output Frequency [Hz]		50 / 60
<b>Efficiency</b>		
Max. Efficiency		97.60%
Europe Efficiency		97.00%
MPPT Adaptation Efficiency		99.90%
<b>Protection</b>		
Residual Current Monitoring Unit		Integrated
Anti-islanding Protection		Integrated
AC Over Current Protection		Integrated
Insulation Monitoring		Integrated
<b>General Data</b>		
Dimensions (WxHxD) [mm]		1604 x 610 x 236.6
Weight [kg]		155
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
<b>Certificates &amp; Standards</b>		
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

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