

YOUR
SMART
ENERGY



SMILE-G3-S8

RESIDENTIAL SERIES

POWER

8 kW Hybrid Inverter
Single Phase

CAPACITY

4 ~ 16 kWh with
4 kWh Battery Module

4.8 ~ 19.2 kWh with
4.8 kWh Battery Module

9.6 ~ 38.4 kWh with
9.6 kWh Battery Module



All-in-one Design

UPS Seamless Switch

Off-grid Max. 200% Overload, 30s

Max. 28 Configurable Time Periods*

Self-heating Batteries, Better Performance under Low Temperature

*Up to 6 time periods daily or 4 time periods*7 days weekly for charging and discharging can be set.

SMILE-G3-S8



Model	SMILE-G3-S8
System Specification	
Battery Chemistry	LFP (LiFePO ₄)
Nominal Output Power	8000 W
Capacity Range	4.0 ~ 37.2 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 / Max. Input Strings Number 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	≤20ms
Peak Power (Off-grid)	8800 W 60s; 16000 W 30s
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-4.0S	SMILE-G3-BAT-4.8S	SMILE-G3-BAT-9.6S
Rated Capacity	4.0 kWh	4.8 kWh	9.6 kWh
Usable Capacity	3.8 kWh	4.56 kWh	9.3 kWh
Depth of Discharge (DoD)	95 % *	95 % *	95 % *
Nominal Voltage	96 V	96 V	96 V
Max. Charging/Discharging Current	42 A	50 A	52.5 A
Operating Temperature Range	-10°C ~ 60 °C ***	-20°C ~ 50°C ***	-20°C ~ 50°C ***
Battery Modules Quantity	1 ~ 4	1 ~ 4	1 ~ 4
IP Protection	IP65	IP65	IP65
Dimensions (W x D x H)	610 x 212.5 x 435 mm	610 x 212.5 x 435 mm	610 x 210 x 634 mm
Weight	42.5 kg	53 kg	81 kg
Fire-Fighting	N/A	Aerosol + Anti-explosion Valve	Aerosol + Anti-explosion Valve

* Test Condition: Max 0.5 C charge&discharge at 25±2 C

** Support 32 A long-term work, support 40 A work for 30min

*** Max. charge/discharge current derating will occur related to temperature and SOC..

ALPHA ESS SOUTH AFRICA (PTY) LTD

✉ SA.Sales@alpha-ess.com
☎ +27 10 745 5653
📍 Bryanston, Johannesburg, 2191

Alpha ESS Co., Ltd.

✉ info@alpha-ess.com
☎ +86 513 8060 6891
🌐 www.alphaess.com
📍 No. 1086, Bihua Road, Nantong
Hi-Tech Zone, Jiangsu Province, China

Alpha ESS Europe GmbH

✉ europe@alpha-ess.de
☎ +49 6196 7863485
🌐 www.alphaess.de
📍 Horizon Tower 17.OG Alfred-Herrhausen-Allee
3-5 65760 Eschborn, Germany

Alpha ESS UK Ltd.

✉ info@alpha-ess.com
☎ +44 145 354 5222
📍 Drake house, Long street,
Dursley, gl11 4hh UK

