

YOUR
SMART
ENERGY



SMILE-G3-S3.6/S5/B5

RESIDENTIAL SERIES

POWER

3.68 / 5 kW

CAPACITY

3.8 kWh Battery Module Expandable to 15.4 kWh

8.2 kWh Battery Module Expandable to 49.2 kWh

10.1 kWh Battery Module Expandable to 60.5 kWh



reddot design award 2022 GOOD DESIGN AWARD



200% PV Input

PV Inverter Works in Off-Grid Operation

Support Multiple VPP Applications

Support Dual Power Supply
(Grid & Diesel Generator)

Parallel Operation

SMILE-G3-S3.6/S5/B5



Model	SMILE-G3-S3.6	SMILE-G3-S5	SMILE-G3-B5
System Specifications			
Nominal Output Power	3680 W	5000 W	5000 W
Capacity Range	3.8 ~ 15.4 kWh / 8.2 ~ 49.2 kWh / 10.1 ~ 60.5 kWh (95% DoD)		
Battery Chemistry	LFP (LiFePO ₄)		
IP Protection	IP65 (Outdoor) / IP21 (Indoor)		
Warranty	5 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	7360 W	10000 W	N/A
Max. PV Input Current	15 A / 15 A		N/A
Max. PV Input Voltage	580 V		N/A
MPPT Number / Max. Input Strings Number 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		N/A
Max. Charging/Discharging Current	60 A		
Max. Charging/Discharging Power	3680 W	5000 W	5000 W
Rated Frequency	50 / 60 Hz		
Rated Voltage	230 V		
Phase	Single Phase		
Rated Output Apparent Power (Grid Port)	3680 VA	5000 VA	5000 VA
Rated Output Apparent Power (Backup Port)	3680 VA	5000 VA	5000 VA
Max. AC Input Power (Grid Port)	7360 W	10000 W	10000 W
Rated Output Current (Grid Port)	16 A	21.7 A	21.7 A
Max. AC Output Current (Grid Port)	16 A	21.7 A	21.7 A
Rated Output Current (Backup Port)	16 A	21.7 A	21.7 A
Max. AC Output Current (Backup Port)	16 A	21.7 A	21.7 A
Max. Inverter Efficiency	97.3%		
Backup	UPS		
Communication	Ethernet / WiFi		
Relative Humidity	0 ~ 90% (No Condensation)		
Dimensions (W x D x H)	610 x 212 x 366 mm		
Weight	19.5 kg		
Safety	IEC 62109, IEC 62040		
EMC	EN 61000-6-1/-2/-3/-4		
Grid Regulations	AS 4777.2, NRS 097, VDE 0126-01-01, VDE 4105, EN 50549, CEI 0-21, RD 1699		

Battery Technical Specifications			
Module Mode	SMILE-G3-BAT-3.8S	SMILE-G3-BAT-8.2P	SMILE-G3-BAT-10.1P
Module Capacity	3.8 kWh	8.2 kWh	10.1 kWh
Usable Capacity	3.6 kWh	7.8 kWh	9.6 kWh
Depth of Discharge (DoD)	95%*	95%*	95%*
Nominal Voltage	96 V	256 V	96 V
Battery Voltage Range	90 V ~ 108 V	240 V ~ 288 V	91.5 V ~ 106.5 V
Max. Charging/Discharging Current	40 A**	32 A***	60 A
Operating Temperature Range	-10 °C ~ 50 °C****	-10 °C ~ 50 °C****	-10 °C ~ 50 °C****
Cycle Life	10000*****	10000*****	10000*****
Battery Modules Connection	1 ~ 4 in Series	1 ~ 6 in Parallel	1 ~ 6 in Parallel

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

** 50A discharging current sustainable for 30 minutes in off-grid operation.

*** 40A discharging current sustainable for 30 minutes in off-grid operation.

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

***** Under specific test conditions.



Alpha ESS Co., Ltd.

+86 513 8060 6891
info@alpha-ess.com
www.alphaess.com

Jiuhua Road 888, Nantong High-Tech Industrial Development Zone, Nantong, Jiangsu Province, China

Alpha ESS Europe GmbH

+49 610 3459 1601
europe@alpha-ess.de
www.alphaess.de

Paul-Ehrlich-Straße 1a, Langen, Hessen D-63225 Germany

Alpha ESS Australia Pty. Ltd.

+61 02 9000 7676
Australia@alpha-ess.com
www.alphaess.com

8/15-21 Gibbes Street, Chatswood, NSW 2067 Australia

Alpha ESS International Pte. Ltd.

+65 6513 1125 / +65 6513 1126
Singapore@alpha-ess.com
2 Corporation Road #01-06A Corporation Place 618494 Singapore

Alpha ESS Italy S.r.l.

+39 339 462 4288
info@alpha-ess.it
www.alphaess.com
Via Don Minzoni, 17, Calenzano Firenze 50041 Italy

Alpha ESS UK Ltd.

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

Alpha ESS USA, Inc.

+1 408 368 7828
usa@alpha-ess.com
Unit 5 2180 S Ivanhoe St, Denver, CO 80222 USA

Alpha ESS Korea Co., Ltd.

info@alpha-ess.com
2F, 19-4, Nohyeong 11-gil, Jeju-si, Jeju-do, Republic of Korea