

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

4.0 kWh Battery Module Expandable to 16.0 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 / 4.0 ~ 16.0 kWh / 8.2 ~ 49.2 kWh / 10.1 ~ 60.5 kWh (95% DoD)		
Battery Chemistry	LFP (LiFePO4)		
IP Protection	IP65 (Outdoor) / IP21 (Indoor)		
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	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	220 V / 230 V		
Phase	Single Phase		
Rated 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 Input Power (On-Grid)	7360 W	10000 W	10000 W
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	VDE 4105, VDE 0126-01-01, EN 50549, CEI 0-21, RD 1699, G98/G99, AS 4777.2, NRS 097		

Battery Technical Specifications				
Module Mode	SMILE-G3-BAT-3.8S	SMILE-G3-BAT-4.0S	SMILE-G3-BAT-8.2P	SMILE-G3-BAT-10.1P
Module Capacity	3.8 kWh	4.0 kWh	8.2 kWh	10.1 kWh
Usable Capacity	3.6 kWh	3.8 kWh	7.8 kWh	9.6 kWh
Depth of Discharge (DoD)	95%*	95%*	95%*	95%*
Nominal Voltage	96 V	96 V	256 V	96 V
Battery Voltage Range	90 ~ 108 V	90 ~ 108 V	240 ~ 288 V	90 ~ 108 V
Max. Charging/Discharging Current	40 A**	42 A	32 A***	60 A
Operating Temperature Range	-10 °C ~ 50 °C****	-10 °C ~ 60 °C****	-10 °C ~ 55 °C****	-10 °C ~ 50 °C****
Cycle Life	10000****	10000****	10000****	10000****
Battery Modules Connection	1 ~ 4 in Series	1 ~ 4 in Series	1 ~ 6 in Parallel	1 ~ 6 in Parallel
IP Protection	IP21	IP65	IP21	IP65
Dimensions (W x D x H)	610 x 212.5 x 435 mm	610 x 212.5 x 435 mm	610 x 212 x 793 mm	610 x 212 x 793 mm
Weight	39.2 kg	42.5 kg	78.3 kg	90 kg

* 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
 No. 1096, Bihua Road, 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 0330 043 2610
 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