

• YOUR
• SMART
• ENERGY



SMILE-G3-S3.6/S5/B5

RESIDENTIAL SERIES

POWER

3.68 / 5 kW

CAPACITY

- 3.8 kWh Battery Module
Expandable from 3.8 to 15.3 kWh
- 4.0 kWh Battery Module
Expandable from 4.0 to 16.0 kWh
- 8.2 kWh Battery Module
Expandable from 8.2 to 49.2 kWh
- 10.1 kWh Battery Module
Expandable from 10.1 to 60.5 kWh

Munich RE 



reddot design award 2022 GOOD DESIGN AWARD



200% PV Input

All in One Design

MPPT Shadow Scanning

Support Dual Power Supply
(Grid & Diesel Generator)

No Additional High Voltage Box

150% Overload Capability for 30s

Support Multiple VPP Applications

Easy Installation and Maintenance

Bypass Function for Series Battery

PV Inverter Works in Off-Grid 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 ~ 15.3 kWh / 4.0 ~ 16.0 kWh / 8.2 ~ 49.2 kWh / 10.1 ~ 60.5 kWh (95% DoD)		
Battery Chemistry	LFP (LiFePO4)		
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	24 A / 24 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
Backup	UPS		
Communication	Ethernet / WiFi / Modbus / API		
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		
IP Protection	IP65		
EMC	EN 61000-6-1/-2/-3/-4		
Grid Regulations	VDE 4105, VDE 0126-01-01, EN 50549-1, 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
Nominal 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%**			
Nominal Voltage	96 V	96 V	256 V	96 V
Max. Charging/Discharging Current	40 A***	42 A	32 A****	60 A
Rated Charging/Discharging Rate	1 C	1 C	1 C	0.5 C
Operating Temperature Range	-10 °C ~ 50 °C*****			
Cycle Life	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 793 mm	
Weight	39.2 kg	42.5 kg	78.3 kg	90 kg

* Under specific application

** 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. 1086, Bihua Road, Nantong Hi-Tech Zone, 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
 techsupport@alphaess.au
 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

Alpha ESS South Africa (Pty) Ltd.

measervice@alpha-ess.com
 La Rocca Office Park, Block B1 321 Main Road, Bryanston, Johannesburg, 2191