

YOUR
SMART
ENERGY



SMILE5

RESIDENTIAL SERIES

POWER
5 kW

CAPACITY

2.9 kWh Battery Module Expandable to 17.2 kWh
5.7 kWh Battery Module Expandable to 34.4 kWh
10.1 kWh Battery Module Expandable to 60.6 kWh
13.3 kWh Battery Module Expandable to 80 kWh



reddot design award 2018



product design award 2018



5kW Single Phase Hybrid Inverter

Fast Response

UPS Ability

24/7 Online Monitoring

- S**elf sufficient
- M**odular battery
- I**ntelligent control
- L**ong lifespan
- E**ssential load protected
- 5** kW system

SMILE5



Model SMILE5				
System Specifications				
Rated Output Power	5000 W			
Rated Output Apparent Power	5000 VA			
Capacity Range	2.9 ~ 17.2 kWh (96% DoD)	5.7 ~ 34.4 kWh (96% DoD)	10.1 ~ 60.6 kWh (96% DoD)	13.3 ~ 80 kWh (100% DoD)
Usable Capacity Range	2.8 ~ 16.5 kWh	5.5 ~ 33.0 kWh	9.7 ~ 58.1 kWh	13.3 ~ 80 kWh
Battery Chemistry	LFP (LiFePO ₄)			
IP Protection	IP65			
Warranty	5 Years Product Warranty, 10 Years Battery Performance Warranty			

Inverter Technical Specifications			
Model	SMILE5-INV	Rated Output Apparent Power (Backup Port)	5000 VA
Coupling	Hybrid	Max. AC Input Power (Grid Port)	7500 W
Max. PV Input Power	7500 W	Rated Output Current (Grid Port)	21.7 A
Max. PV Input Current	15 A / 15 A	Max. AC Output Current (Grid Port)	21.7 A
Max. PV Input Voltage	550 V	Rated Output Current (Backup Port)	21.7 A
Start-Up Input Voltage	90 V	Max. AC Output Current (Backup Port)	21.7 A
Rated PV Input Voltage	360 V	Max. Inverter Efficiency	96.50%
MPPT Number / Max. Input Strings Number per MPPT	2 / 1	Backup	UPS
MPPT Voltage Range	70 ~ 540 V	Communication	Ethernet / WIFI
Max. PV Short-Circuit Current	18 A / 18 A	Relative Humidity	0 ~ 90% (No Condensation)
Max. Charging/Discharging Current	100 A	Dimensions (W x D x H)	610 x 210 x 627 mm
Max. Charging/Discharging Power	5000 W	Weight	30 kg
Rated Frequency	50 / 60 Hz	Safety	IEC 62109
Rated Voltage	230 V	EMC	EN 61000-6-1 / EN 61000-6-3
Rated Output Apparent Power (Grid Port)	5000 VA	Grid Regulation	AS 4777.2

Battery Technical Specifications				
Module Model	M4856-P	SMILE5-BAT	SMILE-BAT-10.1P	SMILE-BAT-13.3P
Module Capacity	2.9 kWh	5.7 kWh	10.1 kWh	13.3 kWh
Module Nominal Voltage	51.2 V	51.2 V	48 V	48 V
Operating Temperature Range	-10 °C ~ 50 °C*	-10 °C ~ 50 °C*	-10 °C ~ 50 °C*	-10 °C ~ 50 °C*
Max. Modules in Parallel	6	6	6	6**
Max. Charging/Discharging Current	56 A	56 A	100 A	100 A
Cycle Life	10 000***	10 000***	8000***	8000***

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

** ≥2 needs to install expansion pack.

*** 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