

• YOUR
• SMART
• ENERGY



SMILE-G3-T4/T5/T6/T8/T10

RESIDENTIAL SERIES

POWER

4 / 5 / 6 / 8 / 10 kW

CAPACITY

3.8 ~ 23.0 kWh with
3.8 kWh Battery Module

4.0 ~ 24.0 kWh with
4.0 kWh Battery Module

8.2 ~ 49.2 kWh with
8.2 kWh Battery Module



reddot design award 2022



GOOD DESIGN AWARD



KEY FEATURES

3 MPPT for Higher PV Input

Bypass Function for Series Battery

Safer with Aerosols Inside the Battery

Capable of 150% Unbalancing per Phase

Compatible with EV Charger and Heat Pump

SMILE-G3-T4/T5/T6/T8/T10



Model	SMILE-G3-T4	SMILE-G3-T5	SMILE-G3-T6	SMILE-G3-T8	SMILE-G3-T10
System Specifications					
Nominal Output Power	4000 W	5000 W	6000 W	8000 W	10000 W
Capacity Range	3.8 ~ 23.0 kWh / 4.0 ~ 24.0 kWh / 8.2 ~ 49.2 kWh (95% DoD)				
Battery Chemistry	LFP (LiFePO ₄)				
Warranty	10 Years Product Warranty, 10 Years Battery Performance Warranty				

Inverter Technical Specifications					
Model	SMILE-G3-T4-INV	SMILE-G3-T5-INV	SMILE-G3-T6-INV	SMILE-G3-T8-INV	SMILE-G3-T10-INV
Coupling	Hybrid	Hybrid	Hybrid	Hybrid	Hybrid
Max. PV Input Power	8000 W	10000 W	12000 W	16000 W	20000 W
Max. PV Input Current	16 A / 16 A / 16 A				
Max. PV Input Voltage	1000 V				
MPPT Number / Max. Input Strings Number per MPPT	3 / 1				
MPPT Voltage Range	140 ~ 950 V				
Max. PV Short-Circuit Current	24 A / 24 A / 24 A				
Max. Charging/Discharging Current	40 A				
Max. Charging/Discharging Power	4000 W	5000 W	6000 W	8000 W	10000 W
Rated Frequency	50 / 60 Hz				
Rated Voltage	220 V / 380 V, 230 V / 400 V				
Phase	Three Phase				
Rated Output Power (Grid Port)	4000 W	5000 W	6000 W	8000 W	10000 W
Rated Output Power (Backup Port)	4000 W	5000 W	6000 W	8000 W	10000 W
Rated Input Power (on-grid)	8000 W	10000 W	12000 W	15000 W	15000 W
Backup	UPS				
Communication	Ethernet / WiFi				
Relative Humidity	0 ~ 90% (No Condensation)				
Dimensions (W x D x H)	610 x 212.5 x 416 mm				
Weight	26.7 kg				
IP Protection	IP65				
Safety	IEC 62109-1/-2				
EMC	IEC 61000-6-1/-3				
Overvoltage Category	DC II				
Grid Regulation	VDE 4105, EN 50549-1, VDE0126-01-01, NC RFC				

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