

● YOUR  
● SMART  
● ENERGY



# SMILE-G3-T12-20

RESIDENTIAL SERIES

## POWER

12 / 15 / 20 kW

## CAPACITY

8.2 kWh Battery Modular  
Expandable To 49.2 kWh



- Easy Installation & Maintenance
- HV-Battery with Higher Efficiency
- No Additional DC / DC or LMU Module
- Backup 150% Overload Up to 30 Seconds



# SMILE-G3-T12-20



Model	SMILE-G3-T12	SMILE-G3-T15	SMILE-G3-T20
<b>System Specifications</b>			
Nominal Output Power	12 kW	15 kW	20 kW
Capacity Range	8.2 ~ 49.2 kWh (95% DoD)		
Battery Chemistry	LFP (LiFePO <sub>4</sub> )		
IP Protection	IP21 (Indoor)		
Warranty	10 Years Product Warranty		
<b>Inverter Technical Specifications</b>			
Model	SMILE-G3-T12-INV	SMILE-G3-T15-INV	SMILE-G3-T20-INV
Coupling	Hybrid	Hybrid	Hybrid
Max. PV Input Power	24 kW	30 kW	40 kW
Max. PV Input Current	18 A / 18 A / 18 A	18 A / 18 A / 18 A	18 A / 18 A / 18 A
Max. PV Input Voltage	1000 V	1000 V	1000 V
MPPT Number/Max. Input Strings Number per MPPT	3 / 1	3 / 1	3 / 1
MPPT Voltage Range	200 ~ 850 V	200 ~ 850 V	200 ~ 850 V
Max. PV Short-Circuit Current	21 A / 21 A / 21 A	21 A / 21 A / 21 A	21 A / 21 A / 21 A
Max. Charging/Discharging Current	60 A	60 A	60 A
Max. Charging/Discharging Power	12 kW	15 kW	20 kW
Rated Frequency	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz
Rated Voltage	380 V	380 V	380 V
Rated Output Apparent Power (Grid Port)	12 kW	15 kW	20 kW
Rated Output Apparent Power (Backup Port)	12 kVA	15 kVA	20 kVA
Backup	UPS	UPS	UPS
Communication	WiFi / LAN / RS485		
Relative Humidity	0~90% (Non-Condensing)		
Dimensions (W x D x H)	610 x 250 x 610 mm		
Weight	44 kg		
Safety	IEC 62109-1/-2		
EMC	IEC 61000-6-1/-3		
Overvoltage Category	DC II		
Grid Regulation	VDE-AR-N 4105: 2018-11, EN 50549-1: 2019		
<b>Battery Technical Specifications</b>			
Module Mode	SMILE-G3-BAT-8.2P		
Capacity	8.2 kWh		
Usable Capacity	7.8 kWh		
Depth of Discharge (DoD)	95%*		
Nominal Voltage	256 V		
Max. Charging/Discharging Current	32 A		
Operating Temperature Range	-10 °C ~ +50 °C**		
Cycle Life	8000***		
Battery Modules Connection	1 ~ 6 in Parallel		
Dimensions (W x D x H)	610 x 212 x 793 mm		
Weight	72 kg		

\* Test Condition: Max. 0.5C charge&discharge at 25±2 °C

\*\* 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 Suzhou Co., Ltd.

+86 512 6828 7609  
 info@alpha-ess.com  
 www.alphaess.com  
 Building 10-A, Canal Town Industrial  
 Park, 99 Taihu E Rd, Wuzhong District,  
 Suzhou, 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 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 International Pte. Ltd.

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

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