

YOUR
SMART
ENERGY



SMILE-G3-T15/T20

RESIDENTIAL SERIES

POWER

15 / 20 kW

CAPACITY

18.6 ~ 55.8 kWh

9.3 kWh Battery Module



reddot design award 2022



GOOD DESIGN AWARD



KEY FEATURES

3 MPPT for Higher PV Input

Automatic Bypass Function for Series Battery

Fast-Suppression Aerosol Fire Defense

SMILE-G3-T15/T20



Model	SMILE-G3-T15	SMILE-G3-T20
System Specification		
Nominal Output Power	15000 W	20000 W
Capacity Range	18.6 ~ 55.8 kWh (100% DoD)	
Battery Chemistry	LFP (LiFePO ₄)	
IP Protection	IP65 (Outdoor)	
Warranty	10 Years Product Warranty, 10 Years Battery Performance Warranty	
Inverter Technical Specification		
Model	SMILE-G3-T15-INV	SMILE-G3-T20-INV
Coupling	Hybrid Inverter	
Max. PV Input Power	30000 W	30000 W
Max. PV Input Current	18 A / 18 A / 18 A	
Max. PV Input Voltage	1000 V	
DC Voltage Range for Battery Port	160 ~ 650V	
Max. Input DC Power for PV Port	30000 W	30000 W
MPPT Number / Max. Input Strings per MPPT	3 / 1	
Start-up Voltage	220 V	
MPPT Voltage Range	200 ~ 850 V	
Max. PV Short-Circuit Current per MPPT	22.5 A / 22.5 A / 22.5 A	
Max. Charging / Discharging Current	60 A / 60 A	
Max. Charging / Discharging Power	15000 W	20000 W
Rated Frequency	50 Hz	
Rated Voltage	230 V / 400 V	
Rated Output Apparent Power (Grid Port)	15000 VA	20000 VA
Rated Output Apparent Power (Backup Port)	15000 VA	20000 VA
Max. AC Input Power (Grid Port)	20000 W	25000 W
Rated Output Current (Grid Port)	21.7 A	28.9 A
Max. AC Output Current (Grid Port)	21.7 A	28.9 A
Rated Output Current (Backup Port)	21.7 A	28.9 A
Max. AC Output Current (Backup Port)	21.7 A	28.9 A
Phase	Three Phase	
Communication	Wi-Fi / LAN	
Dimensions (W x H x D)	610 x 610 x 250 mm	
Weight	39 kg	
IP Protection	IP65	
Max. Inverter Efficiency	97.6%	98%
Humidity	0 ~ 90% (No Condensation)	
Operating Temperature	-25 °C ~ 60 °C (Charge / Discharge)	
Overvoltage category	BAT,PV (II) / Grid,Backup (III)	
Active Anti-Islanding Method	Frequency Shift	
Country of Manufacture	China	
Safety	IEC 62109	
EMC	IEC 61000	
Grid Regulation	AS / NZS 4777.2	
Battery Technical Specification		
Module Model	SMILE-G3-BAT-9.3S	
Usable Capacity	9.3 kWh (100% DoD)	
Nominal Voltage	96 V	
Operating Voltage Range	90 ~ 105.6 V	
Max. Charging / Discharging Current	52.5 A / 52.5 A	
Modules Connection	2 ~ 6 in Series	
Operating Temperature Range	-20°C ~ 50°C*	
IP Protection	IP65	
Dimensions (W x H x D)	610 x 630 x 212 mm	
Weight	81 kg	

* Performance reduction may occur depending on the state of charge and temperature. Optimal operating temperature 15°C ~ 30°C.

Alpha ESS Australia Pty.Ltd.

✉ australia@alpha-ess.com

☎ +61 02 90007676

📍 31 Richmond Rd, Homebush West NSW 2140

Alpha ESS Co., Ltd

✉ info@alpha-ess.com

☎ +86 513 8060 6891

📍 No. 1086, Bihua Road, Nantong Hi-Tech Zone, Jiangsu Province, China



V 2.1.21042026 | Text and images correspond to the current state of technology at the time of printing. Subject to modifications. All information is without guarantee in spite of careful editing - liability excluded.