

PV Chargers Modular

S4850G1



Introduction

The PV Chargers Modular S4850G1 is a high efficiency DC/DC conversion module that has the maximum power point track (MPPT) function and provides -48 Vdc output.

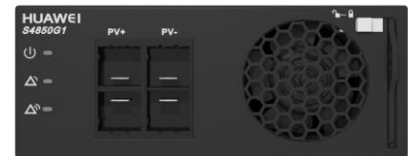
It tracks the highest solar power point based on the output features of PV modules to maximize the use of solar energy. The S4850G has been qualified by TUV and CE certifications.



Overview of S4850G1

Features

- **High efficiency:** >98%, facilitating huge energy saving
- **Modular design:** compatible with 50A rectifiers with Huawei power frames
- **Wide operating temperature range:** -20°C to +75°C (can startup @ -40 °C with light load(20%) after heating for 20 minutes)
- **Hot-swappable** PV charger
- **CAN communication**
- Night standby power consumption ≤ 1.2 W, further saving energy
- Adjustable voltage and current
- Built-in fan: the speed of fan depends on the internal temperature



Front view of S4850G1

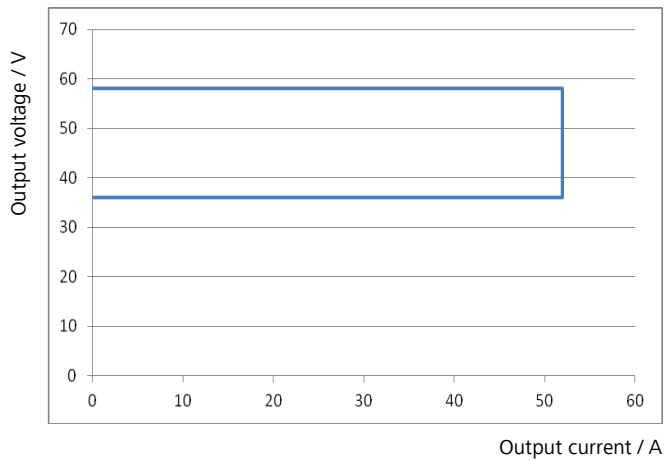
Scenarios

Off / poor grid regions with adequate sunshine

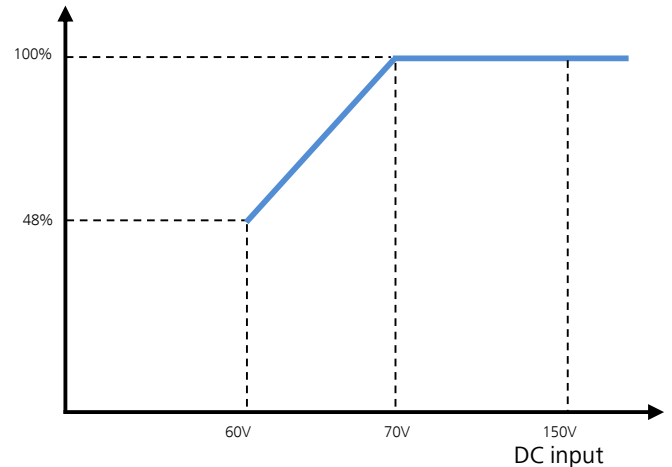
- Solar hybrid power



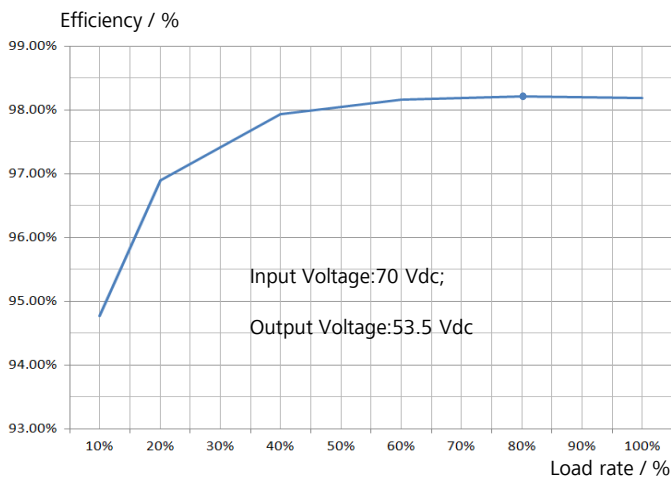
Feature Curve



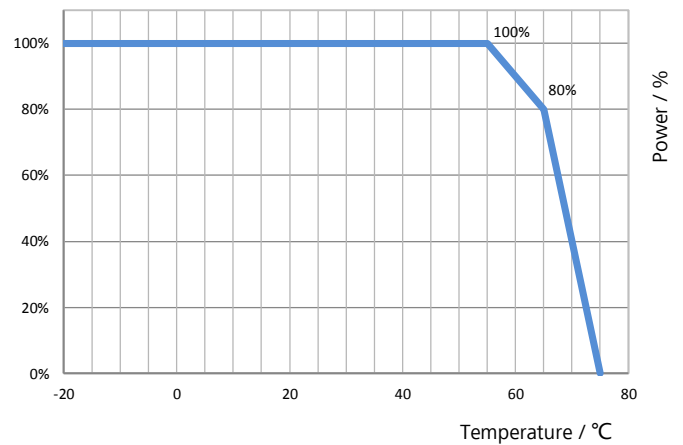
Output Feature Curve



Output Power Vs Input Voltage Curve

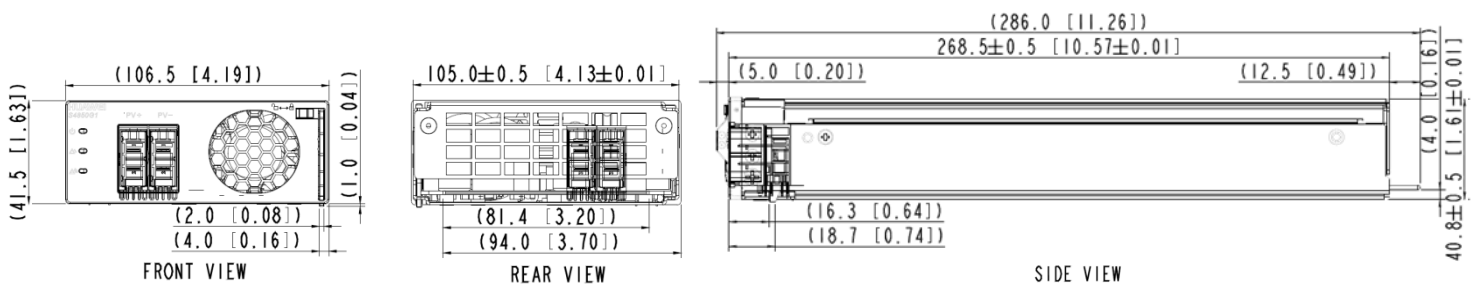


Energy Efficiency Curve



Output Power Vs Temperature curve

Dimension Drawings



Specifications

Product Type		S4850G1
Basic Specifications	Dimension	105 mm(W) × 281 mm(D) × 40.8 mm(H)
	Weight	≤ 1.85 kg
	Cooling	Forced air cooling (Built-in fan)
Input Feature	Input Voltage	58 to 150 Vdc
	Maximum Input Current	≤ 45 A
	Maximum Input Power	3100 W
Output Feature	Peak Efficiency	> 98% (50% to 100% load) > 98.2% Max
	MPPT Tracking Precision	≥ 99.8%
	Output Voltage	43.2 to 58 Vdc, rated voltage: 53.5 Vdc
	Maximum Output Power	3000W
	Maximum Output Current	52 A
	Ripple and Noise	≤ 200 mV (Pk-Pk, 20 M bandwidth)
	Telephone Weighing Noise	≤ 2 mV
Environmental Specifications	Output Regulated Voltage Precision	≤ 0.6%
	Operating Temperature	-20 °C to +75 °C (non-derating under 55 °C), @ -40 °C, S4850G1 can startup @ - 40 °C with light load(20%) after heating for 20 minutes
	Storage Temperature	-40 °C to +70 °C
	Relative Humidity	0% to 95% (non-condensing)
Protection	Altitude Range	≤ 4000 m (If the altitude is within the range of 1800m to 4000 m, the maximum operating temperature decreases by 1°C as the altitude increases by 200 m)
	Input Overvoltage Protection	Protection threshold: 155 Vdc
	Output Over-voltage Protection	Protection threshold: 58.5 Vdc
	Output Short Circuit Protection	The module is in good condition after a long-term short circuit. The module output resumes after the short circuit is rectified.
Reliability	Over-temperature Protection	If over-temperature occurs, the module is shut down. When the temperature near the vent is less than 70°C, the module is enabled.
Audible Noises	MTBF	≥300,000 hours, at an ambient temperature of 25°C
Safety/EMC/ Lightning Protection	Specification	≤55dB (25 °C, full load); sound pressure@1m distance
	Safety Certification	Passes TUV, CE certifications; complies with IEC/EN62109-1
	Isolation	Input & output to PE :1500 Vdc
	EMC	EN55022 Class B, EN55024
	Lightening protection	Common model(input to earth) / differential model (input to input): 5KA (8/20uS)

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