

## HS4-A-O PV Smart Optimizer



## Basic Information

## PV Smart Optimizer &amp; shutdown

Power 600W

Model HS4-A-O

warranty period 10years

lifetime 25 years

Certificate



## Product specification

Product Model		HS4-A-O
Efficiency	Maximum efficiency	≥99.5%
	Euro-area efficiency	≥99.0%
	North American efficiency	≥99.1%
	Efficiency in China	≥99.1%
DC Input	Maximum input power	600W
	maximum input voltage	70 V
	Maximum input current	15 A
	MPPT voltage range	10~70 V
	Starting voltage	15 V
DC Output	Output power	0~600W
	Output voltage	0~70 V
	Maximum output current	18 A
Function	Bypass cut-off function	Yes
	Automatic shutdown function	Yes
	Manual shutdown function	Yes
	Dc overvoltage protection	Yes
	Dc overload protection	Yes
	Polarity reverse protection	Yes
	Short-circuit protection	Yes
	Wireless data acquisition	Yes
Detection Precision	Voltage	0.01 V
	Circuit	0.01 A
General Parameter	Size	95mm*129mm*56mm
	Weight	≤1000 g
	Level of protection	IP68
	System voltage	1100 V
	Data reporting cycle	1 minute
	Wireless distance	≤100m indoor ≤30m outdoor
	Dc input/output terminals	MC4
	Input DC line length	≥0.12m
	Output DC line length	≥1.3m
	Operating temperature	-45°C~85°C
	Storage temperature	-40°C~70°C
	Operating humidity	0%~100%
	Working altitude	2000 m
	Power supply mode	DC power supply
	Turn-off time	10s
	Way to install	Fixed bracket/fixed PV panel frame

## HS4-A-M PV smart gateway



## Basic Information

## intelligent gateway

Communication protocol Zigbee

Model HS4-A-M

warranty period 3years

lifetime 10 years

Certificate

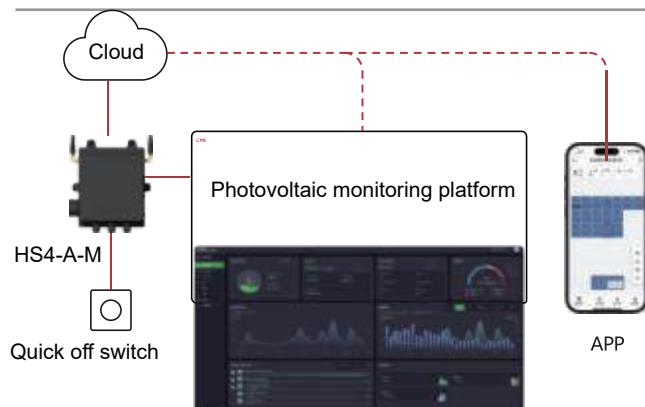


EN 62368, EN 300328, EN301489-1,  
EN301489-17, EN62311, EN55032,  
EN55035, EN61000-3-2, EN61000-3-3

## Product specification

Product Model		HS4-A-M
communication	Communication protocol	Zigbee
	Wireless distance	100m outdoor 30m indoor
	Maximum number of connected	30
	Communicate with the quick break button	Control mode IO
Communicate with the cloud	Wired Internet access	RJ45×1 100Mbps
	Wireless Internet access	Wifi 802.11b/g/n 2.4G
	Number of antennas	2
	Sample interval	1 minute
Extended communication interface	RS485	COM×1, 9600bps, ModBus-RTU
Interaction	Reset button	Self-reset button*1
	pilot lamp	LED pilot lamp*2
	APP	Monitoring APP
General Parameter	Operating temperature	-20°C~55°C
	Size	181mm*163mm*51mm (L*W*H)
	Weight	≤200g
	Way to install	Wall mounting
	Level of protection	IP65
	Power supply mode	DC 12V power supply
Certificate		CE ROHS

HS4-A-O and HS4-A-M work together  
Web: <https://solar-eu.solarpilot.com/>  
APP:google play or apple store /solarpilot



Compatible with mainstream brand inverter, plug and play

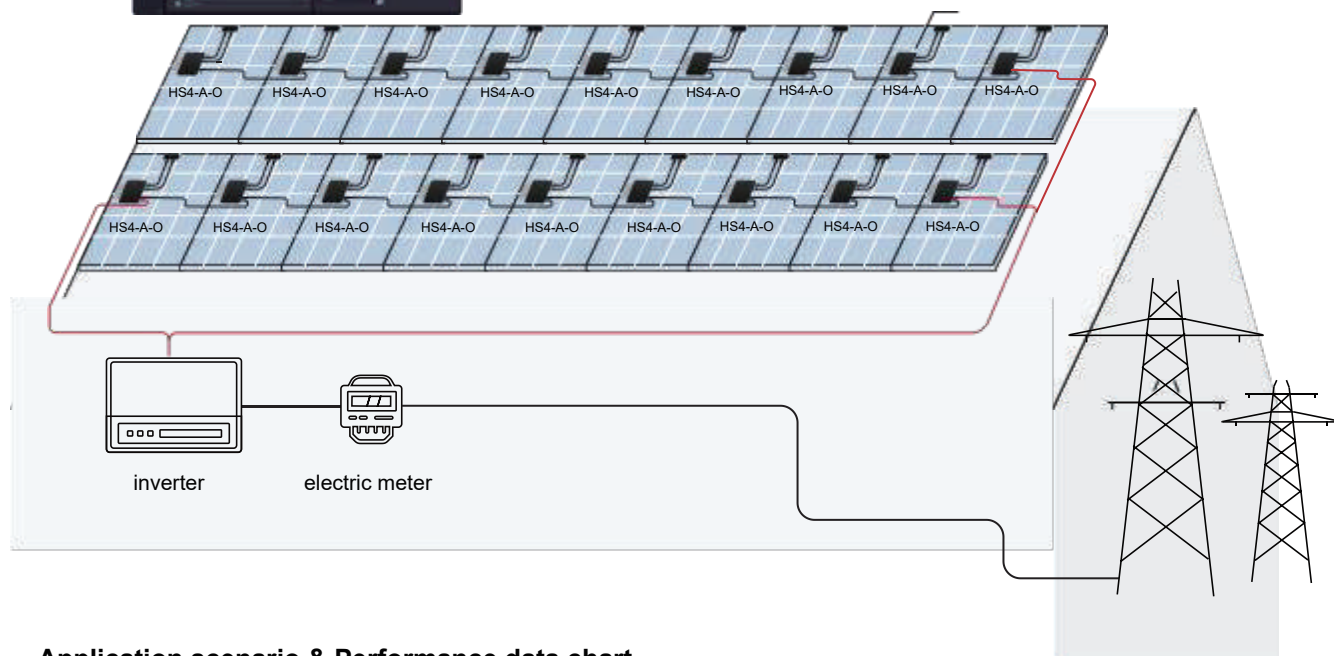
Suitable for pre-installed and post-installed distributed photovoltaic systems

Convenient scanning code distribution network, APP intelligent control

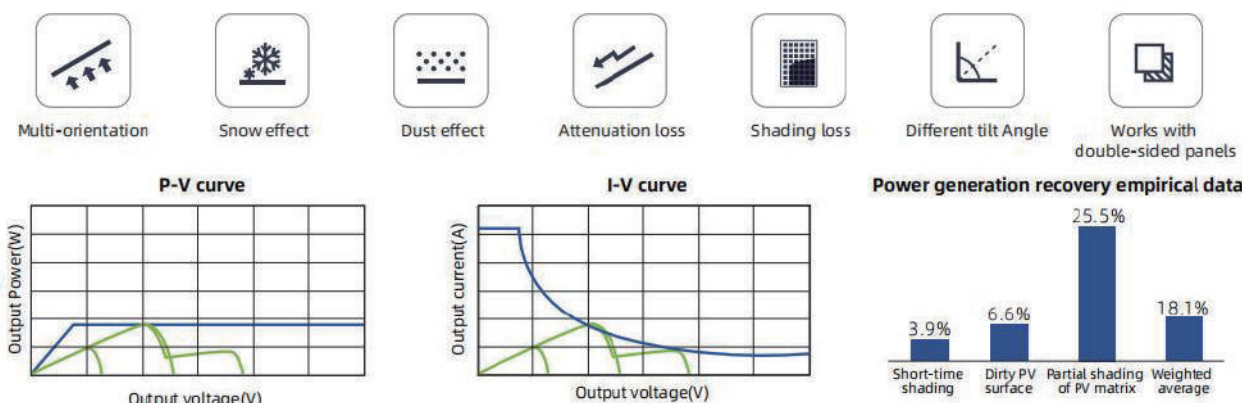
Real-time data acquisition and system analysis

IP68 waterproof, indoor and outdoor scenarios are widely used

Remote monitoring for efficient operation and maintenance



### Application scenario & Performance data chart



### Usage Scenario



Household rooftop photovoltaic power station

Photovoltaic carport power station

Industrial and commercial park building rooftop photovoltaic power station

## HS4-O-800 PV Optimizer

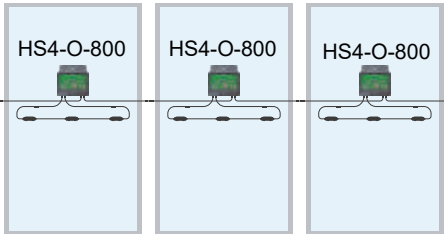
### Features&Benefits:

- ◆ 3% ~ 25% optimization, retrieve power generation loss;
- ◆  $\Delta < 10^{\circ}\text{C}$  Anti-Hotspot, more safe and durable;
- ◆ Applies to all types of modules, Optimization +Voltage Limiting +Anti-Hotspot;
- ◆ Based on power optimization chip, eliminate panel or cell level mismatch;
- ◆ Solve the current mismatch issues caused by shading gradients, aging variations, temperature gradients, soiling gradients, etc;
- ◆ Optimize power generation, lower LCOE, improve solar system reliability, extend the service life of module;
- ◆ CE Certification;



CHARACTERISTIC PARAMETERS		
Product Model	HS4-O-800	
input	Maximum Input Power	800W
	Operating voltage range	14~65V
	MPPT Voltage Range	14~65V
	Maximum input Current	17A
	Over-temperature Protection	160℃
Conversion Efficiency	Peak Conversion Efficiency	99.2%
	Power Consumption @26V	0.8W
	Power Consumption @36V	1.3W
	Power Consumption @46V	1.8W
Specifications	Dimensions(L*W*H)	107*105*22mm
	Weight	505g
	Cable	4.0mm <sup>2</sup>
	Connector	MC4 or compatible MC4
	Operating Temperature Range	-40℃~+85℃
	Protection Degree	IP68
Design Standard	Designed Life	25 Years
	Quality Commitment	10 Years
Funciom	Standard Features	Optimization  Anti-Hotspot

### Module Assembly Diagram



## HS4-A-F PV Shutdown Specifications

### Ratings:

- ◇ Maximum DC Voltage: 10~80V
- ◇ Rated DC Current: 16A
- ◇ Maximum System Voltage: 1500VDC
- ◇ Protection Degree: IP68
- ◇ Ambient Temperature : -40°C~ +65°C

### Approvals/Standards:

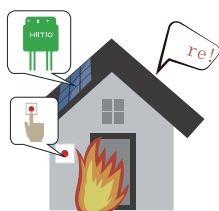
- ◇ CE
- ◇ NEC 2020 690.12
- ◇ SunSpec

### Features&Benefits:

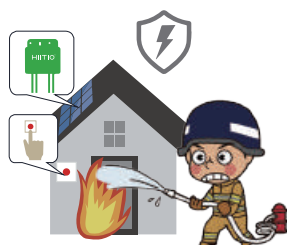
- ◇ Low internal resistance MOSFET switch, low temperature rise, no arc pulling and no sputtering;
- ◇ PLC communication technology, no peripheral signal cable;
- ◇ MINI type shell design, frame snap-on insertion, easy installation;
- ◇ Reverse polarity protection, compatible with short circuit, reverse irrigation design, high reliability;
- ◇ A low-cost, cost-effective, 25-year life design.
- ◇ HS4-A-F and HCPT2 work together



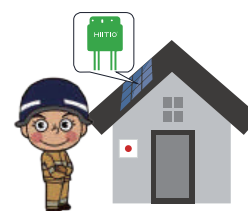
CHARACTERISTIC PARAMETERS	
Product Model	HS4-A-F
Mode of communication	PLC
Maximum input current	20A
Maximum input voltage	80V
Maximum power	750W
Maximum system voltage	1500V ( Optional )
Rated power	600W
Rated current	16A
Start-up voltage	12V
Degree of protection	IP68
Operating temperature	-40℃ ~ 65℃
Connector	MC4 or compatible MC4
Size(L×W×H mm)	106*105*22
Execution standards	NEC 2017/2020 690.12



Manually turn off the transmitter power and inverter switch.



Firefighter can work now, no life risk put out fire using water.



Fire put out, house is safe now.

## HCPT2 Control Box

Noted: After receiving the PACK, please check whether the internal wiring and accessories of the control box are well fixed and intact.



The upper end of the breaker/  
100-240V AC power supply

12V/AC-DC switch

Communication interface  
(for two DCON-S connecting)

DCON-S power supply interface

Heartbeat switch (ignorable)

Magnetic ring interface

HS4-A-F and HCPT2 work together

### Installation Process

Install the four-corner fasteners on the back of the control box and secure it to the wall or bracket.

Thread the magnetic ring cable through the hole and connect it to the DCON-S-CORE interface.

Match each magnetic ring with its corresponding strings, pass the negative pole of the inverter DC bus through the ring, and then connect it to the inverter.

Thread the 100-240V AC power supply through the hole and connect it to the upper end of the breaker.

### Caution

Please install the micro-controllers first, and then power the control box;

When the system is running normally, the DCON-S power light and the signal indicator light are always on;

Max. input string of each magnetic ring: 6 strings;

Max. Input current of each magnetic ring: 200A;

The communication distance between the control box and the farthest micro-controller:  $\leq 400\text{M}$ ;

The strings within the same MPPT of the inverter should be connected with the same DCON-S;

Protective measures should be taken during installation before construction.

6 sets of strings/per magnetic ring(About 180 single magnetic rings)