

# Huawei FusionHome Smart Energy Solution

# **Smart Energy Center**







# **Higher Revenue**

 High efficiency inverter topology, Max. Efficiency 98.6%, European Efficiency 98.0%

## Simple & Easy

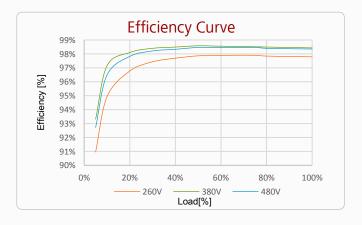
- 10.6kg, allows one person simple installation
- Optimized AC connector for quick wiring
- Supports one-click inverter configuration

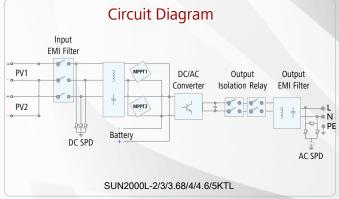
#### **Battery Ready**

• Integrated energy storage interface

# Safe & Reliable

- IP65, Natural cooling
- Integrated lightening protection for both DC and AC





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# SUN2000L-2/3/3.68/4/4.6/5KTL

Technical Specification	SUN2000L-2KTL	SUN2000L-3KTL	SUN2000L-3.68KTL	SUN2000L-4KTL	SUN2000L-4.6KTL	SUN2000L-5KTI	
	Efficiency						
Max. efficiency	98.4%	98.5 %	98.5 %	98.6 %	98.6 %	98.6 %	
European weighted efficiency	97.0 %	97.6 %	97.8%	97.9 %	98 %	98 %	
			Inp	out			
Recommended max. PV power	2660 Wp	3990 Wp	4968 Wp	5400 Wp	6210 Wp	6750 Wp	
Max. input voltage			600	0 V			
Operating voltage range <sup>1</sup>	90 V~ 600 V						
Start-up voltage			120	0 V			
Full power MPPT voltage range	120V~480 V	160 V~480 V	190 V~480 V	210 V~480 V	260 V~480 V	260 V~480 V	
Rated input voltage	380 V						
Max. input current per MPPT		11 A					
Number of MPP trackers			2	2			
Max. number of inputs per MPPT			1	1			
			Out	put			
Rated output power	2000 W	3000 W	3680 W	4000 W	4600 W	5000 W <sup>2</sup>	
Maximum apparent power	2200 VA	3300 VA	3680 VA	4400 VA	5000 VA <sup>3</sup>	5500 VA <sup>4</sup>	
Rated output voltage			220 V / 23	0 V / 240 V			
Rated AC grid frequency			50 Hz /	/ 60 Hz			
Maximum output current	10 A	15 A	16 A	20 A	23 A <sup>5</sup>	25 A <sup>5</sup>	
Adjustable power factor			0.8 leading	0.8 lagging			
Max. total harmonic distortion			≤3	3 %			
			Prote	ction			
Anti-Islanding protection			Ye	es			
DC reverse polarity protection	Yes						
Insulation monitoring	Yes						
DC lightening protection	Yes						
AC lightening protection	Yes						
Residual current monitoring			Ye	es			
AC overcurrent protection	Yes						
AC short-circuit protection	Yes						
AC over-voltage protection		Yes					
Over-heat protection			Ye	es			
			Genera	al Data			
Operating temperature range		-30 ~	+60 °C ( Derating above	e 45°C @ Rated output	power)		
Relative operating humidity	0 %RH∼100 %RH						
Operating altitude	0-4000 m ( Derating above 2000m )						
Cooling			Natural C	onvection			
Display	LED Indicators						
Communication			RS485,	WLAN			
Weight (incl. mounting bracket)	10.6 kg						
Dimension (incl. mounting bracket)		375X375X161.5 mm					
Degree of protection	IP65						
			Battery Co	mpatibility			
Battery	LG Chem RESU 7H_R / 10H_R						
Voltage range	350~450 Vdc						
Max. current	10 A						
Communication			RS4				
	Standards Compliance						
Safety			EN/IEC 62109-1,	•			
Grid connection standards		C8313 CE013		-AR-N-4105, UTE C 15-	-712-1 AS A777		

<sup>\*1.</sup> Only applicable for PV string. The maximum input voltage and operating voltage upper limit will be reduced to 495 V when inverter connects and works with battery. \*2. AS4777:4990W. \*3. VDE-AR-N 4105:4600VA / AS4777:4990VA. \*4. AS4777:4990VA. \*5. AS4777:21.7A.

# **Smart PV Optimizer**





- Max. efficiency 99.5%, weighted efficiency 99.0%
- Allows more panels on each roof to achieve higher system yields



# Simple & Easy

- Supports installation in shade prone areas and in different directions
- · Quick frame mount at warehouse, less rooftop installation time
- Supports remote module-level monitoring

#### Safe & Reliable

- IP68, support outdoor application
- Communication through DC Power Line Communication
- · Single module shutdown capability to secure people and assets safety

Technical Specification	SUN2000P-375W
	Input
Rated input power	375 W
Absolute maximum input voltage	80 V
MPPT operating voltage range	10-80 V
Max. input current	12 A
Max. efficiency	99.5 %
Weighted efficiency	99 %
Overvoltage category	
	Output Output
Max. output voltage	80 V
Max. output current	15 A
Output bypass	Yes
·	Standard Compliance
Safety	IEC62109-1 (class II safety)
RoHS	Yes
	General Specification
Maximum allowed system voltage	1000 V
Communication	PLC
Dimensions (W x L x H)	125*85*25.5 mm
Weight (including cables)	0.7 kg
Installation Part	PV module frame / Aluminum extrusion profile Optional
Input connector	MC4
Output connector	MC4
Output wire length	47 in / 1.2 m
Operating temperature/humidity range	-40 to 85 °C / 0-100 %
Protection rating	IP68
	PV System Design Using A SUN2000L Inverter
Minimum String Length	
Maximum String Length	According to inverter design rules & PV module datasheet
Maximum Power per String	

# **Smart PV Safety Box (Preliminary Version)**





# Simple & Easy

- Communicate with optimizers through Power Line communication
- · Support module-level real time monitoring & management

#### Safe & Reliable

- Single module shutdown capability to secure people and assets safety
- IP65, support outdoor application

Technical Specification	SmartPSB2000L	
	DC Input	
Maximum input voltage	1100 V	
Number of inputs	2	
Maximum input current per input	15 A	
	DC Output	
Maximum output voltage	1100 V	
Number of outputs	2	
Maximum output current per output	15 A	
-	Features	
Module-level remote management	Yes	
Onsite master module shutdown	Yes	
Remote auto module shutdown	Yes	
	General Specification	
Dimensions ( H x W x D )	148 x 148 x 38 mm	
Weight	3 kg	
Display	LED	
Communication	PLC, RS485	
Input type	HH4	
Operating temperature range	-30 to 60 °C	
Protection rating	IP65	

# **FusionHome-NetEco 1000S**





#### **Smart**

- Easy data access on mobile devices
- Proactive reports of yields and alarms

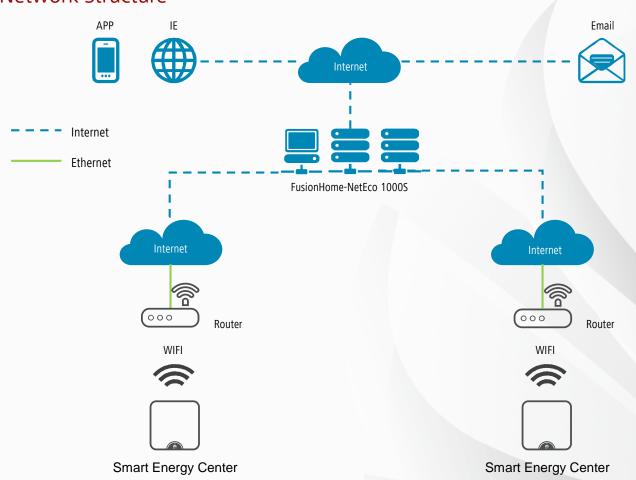
## Simple

- Easy & simple to get started
- Fault alarms via E-mail

#### Stable

- Centralized management on all PV systems
- Up to 20 years data storage

#### **Network Structure**



# **FusionHome-NetEco 1000S**



Function	Submenu	Description
Monitor	Details	<ul> <li>Browse detailed and real-time device information.</li> <li>including alarms, key performance indicators and device status.</li> <li>Support remote on &amp; off inverter control.</li> </ul>
	Alarm	Collect, store, browse current alarms.
	Device List / Plant List	Show Device / Plant information and real-time status.
	Setting	Setting device parameters, like device information, Time Zone, Communication parameter, etc.
Historical Data	Alarm log	History alarms can be inquired according to the time and severity.
	Performance data	Query plant and device daily / monthly / yearly power.
Maintenance	Device Maintenance	<ul> <li>Browse the device operation log.</li> <li>Support device inspection &amp; management.</li> <li>Support batch modification on device name.</li> </ul>
System -	User Management	<ul> <li>According to different users, FusionHome-NetEco provides different log on authorities.</li> <li>Create users.</li> </ul>
	Remote Notifications of Alarms and Reports	Through setting on the server and sending rules, the alarms and yield reports could be sent to user's email automatically

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