

# Introduction

Huawei Technologies, adhering to the concept of "high quality, perfect service, and quick response to customer's demand", constantly brings high quality products and services to the world. As the world's top 500 enterprises, we are actively promoting the use of clean solar energy by providing a full range of solar inverters and intelligent monitoring solutions.

In more than 20 years, Huawei has provided communication equipments and stable power supplies for one-third of global population's communication service, and has accumulated rich experience of R & D and application in the ICT and network energy field. Based on leading technology platforms of power supplies and digital control, we release the SUN2000 series three-phase inverter with telecom class reliability and top efficiency all over the world.

This series of products meets Germany BDEW MV directive and VDE AR N 4105 LV directive, CE Low Voltage Directive and the Directive for Electromagnetic Compatibility, Italy Enel-GUIDA and CEI 0-21 certification, as well as China Golden Sun certification. It has good environment adaptability and can be used for various scenarios covering from 8kW to Megawatts, either rooftop or ground mounted power plants.















### **Key Features**

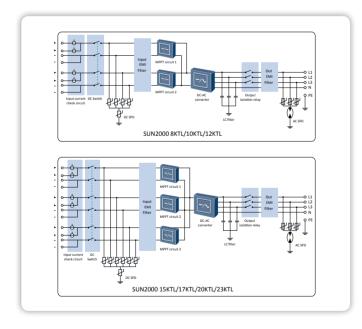
#### **Higher Yields**

- SUN2000-20KTL Photon test result: A+/A+ at medium and high irradiation
- Maximum efficiency 98.6%
- European efficiency 98.3%

#### Smart

- Maximum of 3 MPPT for versatile adaption to different module types or quantities built up with different alignments
- Up to 6 strings intelligent monitoring and fault detection
- Local graphic LCD and remote monitoring
- RS 485 and USB ports for connectivity and data management

### **Circuit Diagram**



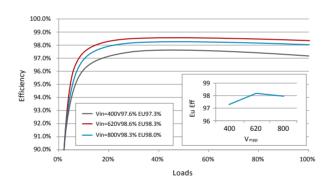
#### **High Reliability**

- With 20 years technology accumulation in telecom power, the same platform building inverter product
- No need of external fan with natural cooling technology
- Type II DC and Type III AC surge protection devices integrated
- Warranty up to 25 years

#### Friendly

- 48kg@23KW, compact design of 0.08m <sup>3</sup>
- Easy connection with external waterproof DC / AC and signal terminals
- Noise ≤ 29dB
- Outdoor application of IP65

## **Efficiency Curve**





## **Technical Specifications**

Technical Specifications	SUN2000-8KTL	SUN2000- 10KTL	SUN2000- 12KTL	SUN2000- 15KTL	SUN2000- 17KTL	SUN2000- 20KTL	SUN2000- 23KTL
			Efficiency				
Max. efficiency	98.5%	98.5%	98.5%	98.6%	98.6%	98.6%	98.6%
European efficiency	98%	98%	98%	98.3%	98.3%	98.3%	98.3%
	1	1	Input	I	I	I.	I.
Max. DC input (cos φ=1)	9,100 W	11,400 W	13,700 W	17,100 W	19,200 W	22,500 W	23,600 W
Max. input voltage	1000 V						
Max. input current per MPPT	18 A						
Min. operating voltage	200 V						
MPP voltage range	320 V~800 V	320 V~800 V	380 V~800 V	400 V~800 V	400 V~800 V	480 V~800 V	480 V~800 V
Rated input voltage	620 V						
Max. number of inputs	4	4	4	6	6	6	6
Number of MPP trackers	2	2	2	3	3	3	3
		,	Output				
Rated power (230V, 50Hz)	8,000 W	10,000 W	12,000 W	15,000 W	17,000 W	20,000 W	23,000 W
Max. AC output power (cos φ=1)	8,800 W	11,000 W	13,200 W	16,500 W	18,700 W	22,000 W	23,000 W
Rated output voltage	3×230V/400V+N+PE 3×220V/380V+N+PE						
AC power frequency	50 Hz/60 Hz						
Max. output current	12.8 A	16 A	19.2 A	24 A	27.2 A	32 A	33.5 A
Adjustable power factor	0.8 leading 0.8 lagging						
Max. total harmonic distortion	<3%	<3%	<3%	<3%	<3%	<3%	<3%
			Protection				
Input-side disconnection device	Yes						
Anti-Islanding protection	Yes						
AC over current protection	Yes						
DC reverse-polarity protection	Yes						
PV array string fault monitoring	Yes						
DC surge arresters	Type II						
AC surge arresters	Type III						
Insulation monitoring	Yes						
Residual current detection	Yes						
Display and Communication							
Display	Graphic LCD						
RS485	Yes						
USB	Yes						
General Data							
Dimensions(W/H/D)	520x610x255 mm (20.5 x 24.0 x 10.0 in.)						
Weight	40 kg	40 kg	40 kg	48 kg	48 kg	48 kg	48 kg
Operating temperature range	-25 °C to +60 °C (-13 °F to +140 °F)	-25 °C to +60 °C (-13 °F to +140 °F)	-25 °C to +60 °C (-13 °F to +140 °F)	-25 °C to +60 °C (-13 °F to +140 °F)	-25 °C to +60 °C (-13 °F to +140 °F)	-25 °C to +60 °C (-13 °F to +140 °F)	-25 °C to +60 °C (-13 °F to +140 °F)
Cooling	Natural convection						
Operating altitude	3000 m						
Relative humidity (non-condensing)	0~100%	0~100%	0~100%	0~100%	0~100%	0~100%	0~100%
DC connector	Amphenol H4						
AC connector	Amphenol C16/3						
Degree of protection	IP65						
Self-consumption at night	< 1 W	< 1 W	< 1 W	< 1 W	< 1 W	< 1 W	< 1 W
Topology	Transformerless						
Noise emission	29dB						
Warranty	5 years 10/15/20/25 years optional						