

# 10 Technical Specifications

## Efficiency

Technical Specifications	SUN2000-8KTL	SUN2000-10KTL	SUN2000-12KTL	SUN2000-15KTL	SUN2000-17KTL	SUN2000-20KTL	SUN2000-23KTL	SUN2000-28KTL
Maximum efficiency	98.5%			98.6%			98.7%	
European efficiency	98.0%			98.3%			98.4%	

## Input

Technical Specifications	SUN2000-8KTL	SUN2000-10KTL	SUN2000-12KTL	SUN2000-15KTL	SUN2000-17KTL	SUN2000-20KTL	SUN2000-23KTL	SUN2000-28KTL
Maximum input power	9000 W	11,400 W	13,500 W	17,000 W	19,100 W	22,500 W	23,600 W	28,200 W
Maximum input voltage	1000 V							
Maximum input current (per MPPT)	18 A							
Maximum short-circuit current (per MPPT)	25 A							
Maximum operating voltage	950 V							
Minimum operating/startup voltage	200 V/250 V							
Max. inverter backfeed current to PV	0 A							

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array								
Full power MPPT voltage range	320–800 V		380–800 V	400–800 V		480–800 V		520–800 V
Maximum number of inputs	4			6				
Number of MPP trackers	2 <sup>a</sup>			3 <sup>b</sup>				

a: Two MPPT routes can work independently or work in parallel.

b: Three MPPT routes can work independently or work in parallel, or any two of the three MPPT routes can work in parallel.

## Output

Technical Specifications	SUN2000-8KTL	SUN2000-10KTL	SUN2000-12KTL	SUN2000-15KTL	SUN2000-17KTL	SUN2000-20KTL	SUN2000-23KTL	SUN2000-28KTL
Rated active power	8000 W	10,000 W	12,000 W	15,000 W	17,000 W	20,000 W	23,000 W	27,500 W
Maximum apparent power	8800 VA	11,000 VA	13,200 VA	16,500 VA	18,700 VA	22,000 VA	23,000 VA	27,500 VA
Maximum active power (cosφ = 1)	8800 W	11,000 W	13,200 W	16,500 W	18,700 W	22,000 W	23,000 W	27,500 W
Rated output voltage	220 V-230 V/380 V-400 V, 3W + N + PE							277 V/480 V, 3W+PE
Adapted grid frequency	50 Hz/60 Hz							
Maximum output current	13.4 A	17 A	20 A	25.2 A	28.5 A	33.5 A		
Power factor	0.8 leading ... 0.8 lagging							
Maximum total harmonic distortion (rated power)	< 3%							

## Protection

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Input DC switch	Yes							
Anti-islanding protection	Yes							
Output overcurrent protection	Yes							
Input reverse polarity protection	Yes							
PV string fault detection	Yes							
DC surge protection	Type II							
AC surge protection	Type II							
Insulation resistance detection	Yes							
Residual	Yes							

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current monitoring unit (RCMU)								

## Display and Communication

Technical Specifications	SUN2000-8KTL	SUN2000-10KTL	SUN2000-12KTL	SUN2000-15KTL	SUN2000-17KTL	SUN2000-20KTL	SUN2000-23KTL	SUN2000-28KTL
Display	Graphical LCD, LED, Bluetooth module+app, USB data cable+app							
RS485	Yes							

## General Data

Technical Specifications	SUN2000-8KTL	SUN2000-10KTL	SUN2000-12KTL	SUN2000-15KTL	SUN2000-17KTL	SUN2000-20KTL	SUN2000-23KTL	SUN2000-28KTL
Dimensions (W x H x D)	520 mm x 610 mm x 266 mm (including the mounting plate)							
Weight	About 41 kg (excluding the mounting plate)/About 42 kg (including the mounting plate)			About 49 kg (excluding the mounting plate)/About 50 kg (including the mounting plate)				
Operating temperature range	-25°C to +60°C							
Cooling	Natural convection							
Maximum operating altitude	3000 m							
Humidity	0%–100% RH							
Input terminal	Amphenol Helios H4							
Output terminal	Amphenol C16/3							
Ingress Protection Rating	IP65							
Protective class	Class I							
Degree of pollution	III							

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<b>Topology</b>	Transformerless							



# **A** Acronyms and Abbreviations

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## **A**

**ACDU**

AC Distribution Unit

## **E**

**EMC**

Electromagnetic Compatibility

**EMI**

Electromagnetic Interference

**EMS**

Element Management System

**ESD**

Electrostatic Discharge

## **L**

**LCD**

Liquid Crystal Display

**LED**

Light Emitting Diode

## **M**

**MPP**

Maximum Power Point

**MPPT**

Maximum Power Point Tracking

## **P**

**PE**

Protective Earthing

**PGND**

Protection Ground

**PV**

Photovoltaic

## **R**

**RCMU**

Residual current monitoring unit

**S**

**SPD**

Surge Protective Device