Huawei SUN2000-2/3/3.68/4/4.6/5/6KTL-L1

The Huawei SUN2000-L1 is a single-phase residential smart energy controller delivering 2-6kW with up to 98.4% efficiency. Features dual MPPT, battery-ready design compatible with LUNA2000, and intelligent AFCI arc fault protection.

Models Covered: SUN2000-2KTL-L1, SUN2000-3KTL-L1, SUN2000-3.68KTL-L1, SUN2000-4KTL-L1, SUN2000-4.6KTL-L1, SUN2000-5KTL-L1, SUN2000-6KTL-L1

Manufacturer: Huawei Digital Power Technologies Co., Ltd.

Application: Ideal for United Arab Emirates's climate with wide operating temperature range and dust-resistant design.

INVERTERS | L1 SINGLE-PHASE SMART ENERGY CONTROLLER | 98.4% MAX EFFICIENCY | DUAL MPPT TRACKERS | BATTERY-READY (LUNA2000 COMPATIBLE) | INTELLIGENT AFCI ARC PROTECTION | IP65 NATURAL CONVECTION COOLING

Technical Specifications

Parameter	SUN2000-2KTL-L1	SUN2000-3KTL-L1	SUN2000-3.68KTL-L1	SUN2000-4KTL-L1	SUN2000-4.6KTL-L1	SUN2000-5KTL-L1	SUN2000-6KTL-L1
DC Input							
Max DC Voltage [V]	600						
Startup Voltage [V]	100						
MPPT Voltage Range [V]	90-560						
Max Input Current per MPPT [A]	12.5						
Max Short-Circuit Current [A]	18						
No. of MPPTs / Strings per MPPT	2 / 1						
AC Output							
Rated AC Power [W]	2000	3000	3680	4000	4600	5000	6000
Grid Connection	Single-Phase						
Nominal AC Voltage [V]	220/230/240						
Frequency [Hz]	50/60						
Max Efficiency [%]	98.2	98.3	98.4	98.4	98.4	98.4	98.4
European Efficiency [%]	96.7	97.3	97.5	97.5	97.7	97.8	97.8
Battery (DC)							
Compatible Batteries	LUNA2000-5/10/15-S0, LUNA2000-7/14/21-S1						
Operating Voltage [V]	350-560						

Parameter	SUN2000-2KTL-L1	SUN2000-3KTL-L1	SUN2000-3.68KTL-L1	SUN2000-4KTL-L1	SUN2000-4.6KTL-L1	SUN2000-5KTL-L1	SUN2000-6KTL-L1
Max Charge Power [W]	5000						
General Data							
Dimensions (W×H×D) [mm]	365 × 375 × 156						
Weight [kg]	12.0						
Protection Degree	IP65						
Operating Temperature	-25 °C ~ +60 °C						
Cooling	Natural Convection						
Communication	RS485, WLAN (built-in), Ethernet/4G via Smart Dongle						

Note: Specifications are based on the official Huawei datasheet. Values may be subject to change; always verify against the latest manufacturer documentation.

Key Features

- 98.4% Max Efficiency
- Dual MPPT Trackers
- Battery-Ready (LUNA2000 Compatible)
- Intelligent AFCI Arc Protection
- IP65 Natural Convection Cooling
- FusionSolar APP Monitoring

Applications & Use Cases

Typical Applications

- Residential solar systems
- Commercial installations
- Industrial solar plants
- Utility-scale projects
- Smart grid integration

Frequently Asked Questions

▼ Is the SUN2000-L1 battery-ready?

Yes, the SUN2000-L1 series is fully compatible with Huawei LUNA2000-S0 and LUNA2000-S1 battery systems via a DC-coupled connection, with operating voltage range of 350-560V and up to 5kW charge power.

▶ What backup options are available?

▶ What is the warranty coverage for the Huawei SUN2000-2/3/3.68/4/4.6/5/6KTL-L1?

▶ What certifications does the Huawei SUN2000-2/3/3.68/4/4.6/5/6KTL-L1 have?

▶ What model variants are available in the SUN2000-2/3/3.68/4/4.6/5/6KTL-L1 series?

▶ What are the installation requirements for the Huawei SUN2000-2/3/3.68/4/4.6/5/6KTL-L1?

▶ How does the Huawei SUN2000-2/3/3.68/4/4.6/5/6KTL-L1 perform in hot climates?

▶ What are the dimensions and weight of the Huawei SUN2000-2/3/3.68/4/4.6/5/6KTL-L1?

Availability & grid compliance in UAE

Market	UAE
Grid authority / regulator	DEWA, ADDC, SEWA
Quotation currency	AED
Support hours timezone	Asia/Dubai
Delivery & installation coverage	Dubai, Abu Dhabi, Sharjah, Ajman, Ras Al Khaimah

Figures on this page are the manufacturer's own, measured at the test conditions the datasheet states — they do not change by country. What changes is the approval that has to be met before the unit is energised: in UAE that is DEWA, ADDC, SEWA. Confirm the grid code, import requirements and any local certification with them, or with us, before you order.

Official Source & Documentation

This technical datasheet is derived from official manufacturer documentation provided by **Huawei Digital Power Technologies Co., Ltd.**.

- **Manufacturer Website:** https://solar.huawei.com
- **Technical Support:** sales@huawei-solar.org
- **Sales Inquiries:** sales@huawei-solar.org
- **Data Source:** Official Datasheet - Huawei Digital Power Technologies Co., Ltd.

Disclaimer: *All specifications are based on the official datasheet. Specifications are subject to change without notice. Please verify with the manufacturer for the most current information.*

Last Updated: March 2026 | **Document Version:** 1.0 | **Published by:** Huawei UAE (huawei-solar.org)