

Sietová elektrárň (On-Grid)

s výkonom 3,135 kWp v paneloch a prípravou na batériu Huawei

Ponuka obsahuje:



11x Fotovoltaický panel
Hybridný menič
Nemecká konštrukcia
AC a DC istenie
Ostatný materiál
Administratíva
Ostatné služby

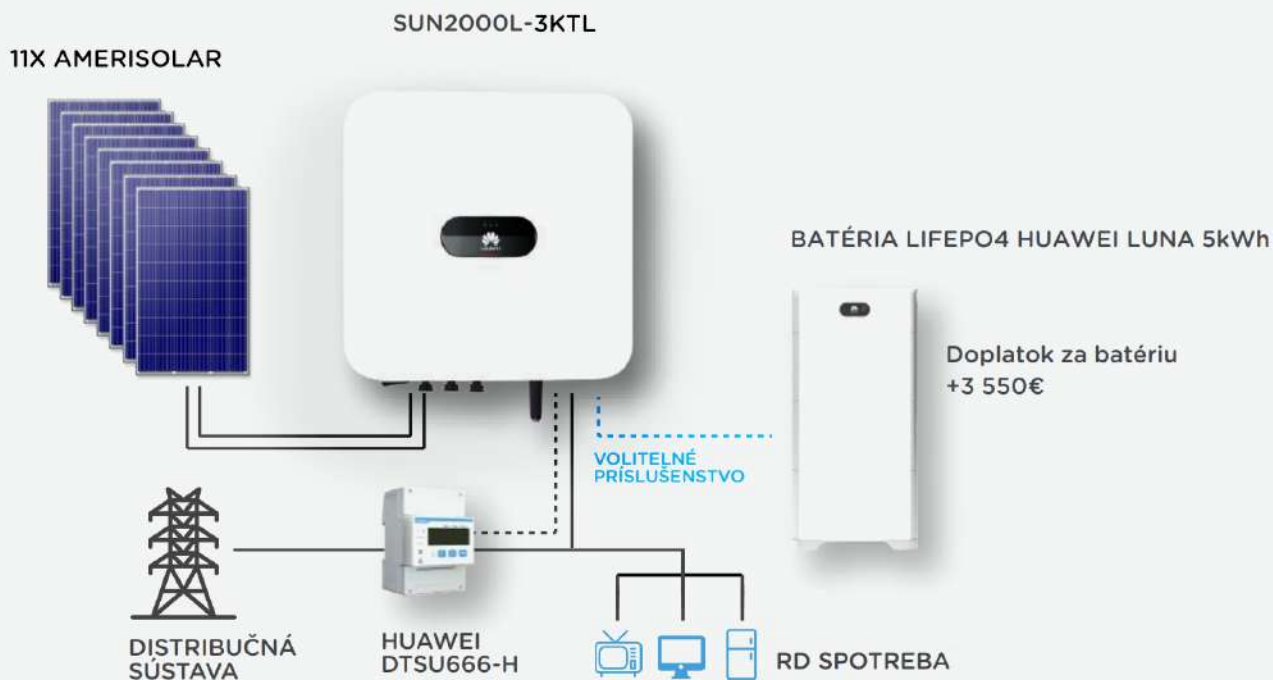
Amerisolar 285Wp
Huawei SUN2000L-3KTL
Renusol, GmbH
ETI, Citel, OEZ
Inštalačný materiál, kabeláž, chráničky, lišty
Revízná správa, vybavenie dotácie a pripojenia do DIS
Doprava, uvedenie do prevádzky, zaškolenie

Celková cena

4 750 €

Po odpočítaní dotácie (-1 500€)

3 250 € s DPH



Túto cenovú ponuku pre vás vypracoval

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Prognóza energetických výnosov počas roka

Na základe Vašej lokality, orientácie strechy a sklonu strechy Vám vieme vypočítať prognózu výroby elektrárne.

Výpočet sa odráža od priemerných dát poskytovaných Európskou úniou v rámci projektu JRC

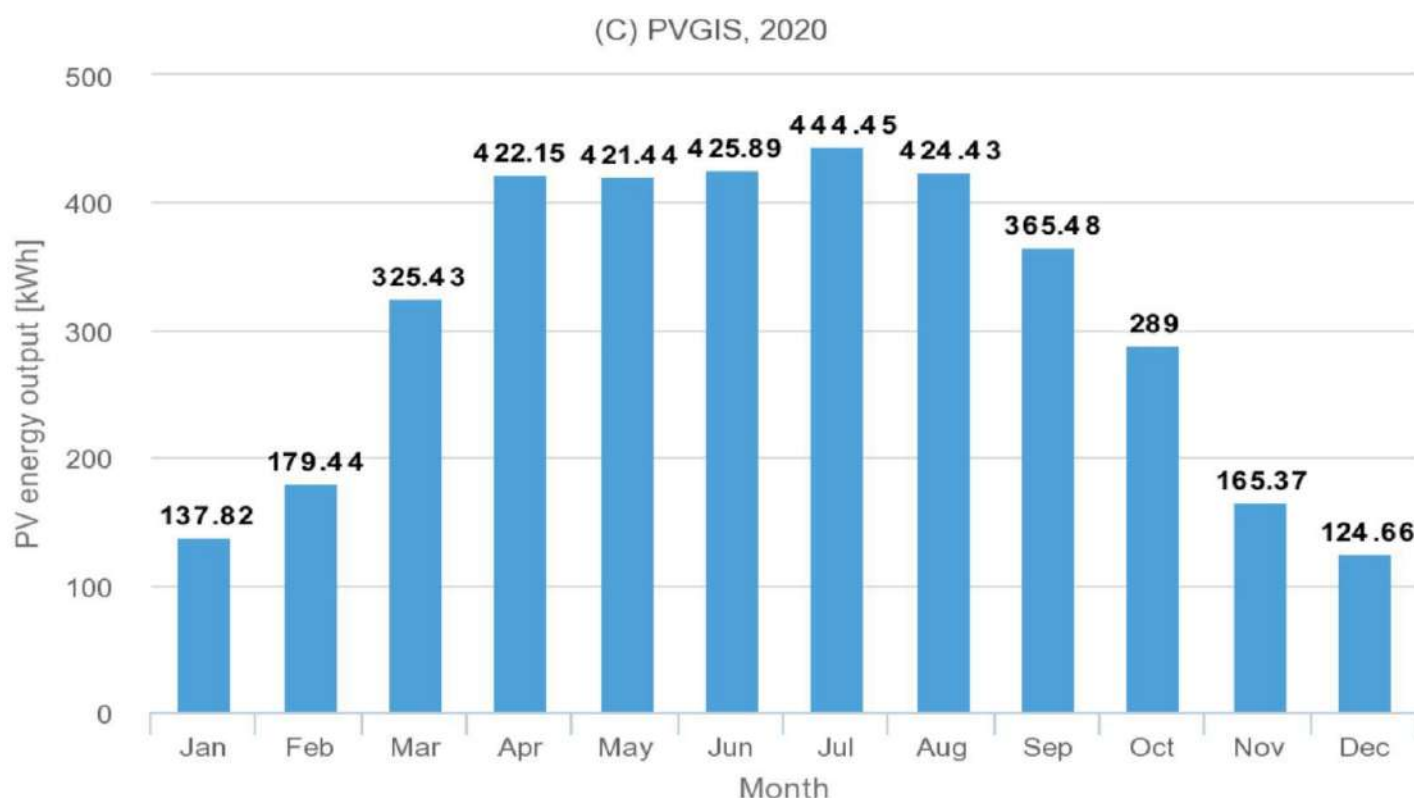
(odkaz: https://re.jrc.ec.europa.eu/pvg_tools/en/tools.html).

*štandardná aplikácia: orientácie strechy na juh, bez zatienenia a so sklonom 35 stupňov.

Dôležitým predpokladom plného využitia výkonu je dostatočný odber energie počas dňa.

Mesačná produkcia solárneho systému

Ukážková výroba sieťovej elektrárne s výkonom 3,135 kWp*



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Číslo	Položka	Typ	Počet
1	FV panely	Amerisolar AS-6P30-285 (285 Wp)	11
2	Menič	Huawei SUN2000L-3KTL (3kW)	1
3	Konštrukcia	Konštrukcie na šikmú strechu Renusol Germany	1
4	Instenie, kabeláž	Kabeláž, istenie na AC aj DC strane. ETI a Citel	1
5	Príslušenstvo	Solárny silový kábel 6mm, MC4 Páry	1
6	Montáž	+ doprava, oživenie, skúšky	1
7	Administratíva	Získanie dotácie od štátu	1
8	Administratíva	Pripojenie do distribučnej siete (komunikácia s DIS)	1
9	Administratíva	Projektová dokumentácia a revízná správa	1
Spolu			4 750 € s DPH
Spolu po odčítaní dotácie			-1 500 € 3 250 € s DPH

Voliteľné príslušenstvo

Solárny panel polykryštál Amerisolar 285 Wp + konštrukcia	+159 € / ks
Optimizér výkonu	+65 € / kus
Smart meter + zapojenie	+350 €
Wattrouter na reguláciu prebytkov + zapojenie	+500 €
Batéria LiFePo4 HUAWEI LUNA 5kWh	+3,550 €

Cenová ponuka platí 1 mesiac od vypracovania.

Spoplatnenie dopravy materiálu a odborných pracovníkov je 0,5 €/km, v prípade ak je lokalita inštalácie vzdialená viac ako 100 km od sídla našej firmy (Bojnice)



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Výhody našej ponuky

1 Záruky na zariadenia

✓ Solárne panely

12 rokov na produkt a vyhotovenie
30 rokov na dodávanie 80.6% nominálneho výkonu

✓ Menič

10 rokov

2 Monitoring

- ✓ Wifi
- ✓ Monitoring výroby elektrárne
- ✓ Monitoring spotreby v domácnosti
- ✓ Možnosť riešenia problémov na diaľku



3 Riadenie prebytkov

- ✓ Wattrouter +500€ s DPH
- ✓ Batérie +3550 s DPH

4 Skúsenosti

- ✓ Inštalácie, administratíva

5 Certifikácie

Dizajn a inštalácia ostrovných fotovoltaiických elektrární a poradca v oblasti fotovoltaiiky.

6 10 Rokov na trhu



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O nás

Sme firma ktorá sa venuje predaju a výrobe energetických a ekologických produktov na e-shope, zároveň sme špecialisti na predaj, navrhovanie a inštalovanie solárnych systémov.

Na trhu pôsobíme od roku 2010, a neustále rastieme. Snažíme sa naším zákazníkom doručovať najkvalitnejšie riešenia navrhnuté na mieru podľa Vašich potrieb.

Dôraz kladieme nato, aby naše vedomosti na poli fotovoltiky boli čo najaktuálnejšie. To sa týka aktuálnych technológií, legislatívy, dotačných programov, či technických noriem.

Radi Vám doručíme Wow službu, či produkt, ktorú by sme si sami radi kúpili!



Dotácia

Finančný príspevok na inštaláciu zariadenia/zariadení na využívanie obnoviteľných zdrojov energie v domácnostiach je poskytovaný z finančných prostriedkov Európskeho fondu regionálneho rozvoja a štátneho rozpočtu SR, prostredníctvom Operačného programu Kvalita životného prostredia v rámci národného projektu Zelená domácnostiam II v súlade so Všeobecnými podmienkami projektu zverejnenými na internetovej stránke zelenadomacnostiam.sk.

ECO PRODUKT s.r.o. je zapísaný v zozname oprávnených zhotoviteľov v zmysle Všeobecných podmienok národného projektu Zelená domácnostiam II.

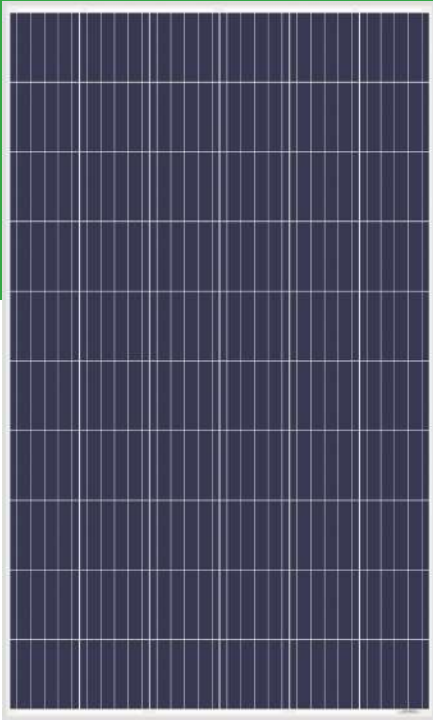


Zelená domácnostiam

Túto cenovú ponuku pre vás vypracoval



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AS-6P30

270W~300W

POLYCRYSTALLINE MODULE

ADVANCED PERFORMANCE & PROVEN ADVANTAGES

- High module conversion efficiency up to 18.44% through innovative five busbar cell technology.
- Low degradation and excellent performance under high temperature and low light conditions.
- Robust aluminum frame ensures the modules to withstand wind loads up to 3600Pa and snow loads up to 5400Pa.
- High reliability against extreme environmental conditions (passing salt mist, ammonia and hail tests).
- Potential induced degradation (PID) resistance.
- Positive power tolerance of 0 ~ +3 %.

CERTIFICATIONS

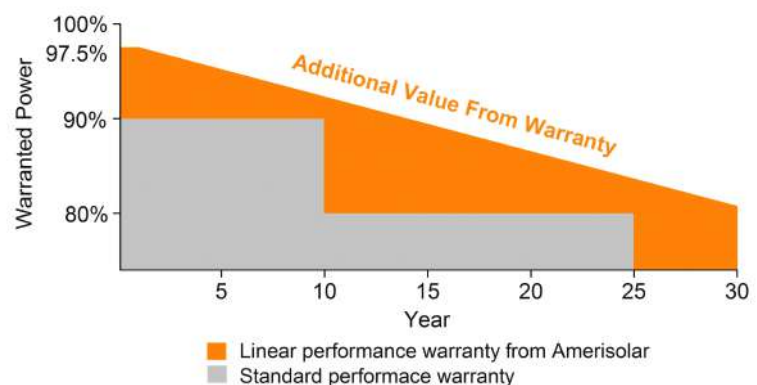


- IEC 61215, IEC 61730, UL 1703, IEC 62716, IEC 61701, IEC TS 62804, CE, CQC, ETL(USA), JET(Japan), J-PEC(Japan), KS(South Korea), BIS(India), MCS(UK), CEC(Australia), CSI Eligible(CA-USA), Israel Electric(Israel), InMetro(Brazil), TSE(Turkey)
- ISO9001:2015: Quality management system
- ISO14001:2015: Environmental management system
- OHSAS18001:2007: Occupational health and safety management system

SPECIAL WARRANTY

- 20 years product warranty
- 30 years linear power output warranty

Passionately
committed to
delivering innovative
energy solution



ELECTRICAL CHARACTERISTICS AT STC

Maximum Power (P_{max})	270W	275W	280W	285W	290W	295W	300W
Open Circuit Voltage (V_{OC})	38.4V	38.6V	38.8V	39.0V	39.2V	39.4V	39.6V
Short Circuit Current (I_{SC})	9.15A	9.26A	9.37A	9.48A	9.59A	9.70A	9.80A
Voltage at Maximum Power (V_{mp})	31.2V	31.4V	31.6V	31.8V	32.0V	32.2V	32.4V
Current at Maximum Power (I_{mp})	8.66A	8.76A	8.87A	8.97A	9.07A	9.17A	9.26A
Module Efficiency (%)	16.60	16.90	17.21	17.52	17.83	18.13	18.44
Operating Temperature	-40°C to +85°C						
Maximum System Voltage	1000V DC/1500V DC						
Fire Resistance Rating	Type 1(in accordance with UL 1703)/Class C(IEC 61730)						
Maximum Series Fuse Rating	15A						

STC: Irradiance 1000W/m², Cell temperature 25°C, AM1.5

ELECTRICAL CHARACTERISTICS AT NOCT

Maximum Power (P_{max})	200W	204W	207W	211W	215W	218W	222W
Open Circuit Voltage (V_{OC})	35.3V	35.5V	35.7V	35.9V	36.1V	36.3V	36.5V
Short Circuit Current (I_{SC})	7.41A	7.50A	7.59A	7.68A	7.77A	7.86A	7.94A
Voltage at Maximum Power (V_{mp})	28.4V	28.6V	28.8V	29.0V	29.2V	29.4V	29.6V
Current at Maximum Power (I_{mp})	7.05A	7.14A	7.19A	7.28A	7.37A	7.42A	7.50A

NOCT: Irradiance 800W/m², Ambient temperature 20°C, Wind Speed 1 m/s

MECHANICAL CHARACTERISTICS

Cell type	Polycrystalline 6inch
Number of cells	60 (6x10)
Module dimensions	1640x992x35mm (64.57x39.06x1.38inches)
Weight	17.5kg (38.6lbs)
Front cover	3.2mm (0.13inches) tempered glass with AR coating
Frame	Anodized aluminum alloy
Junction box	IP67, 3 diodes
Cable	4mm ² (0.006inches ²), 900mm (35.43inches)
Connector	MC4 or MC4 compatible

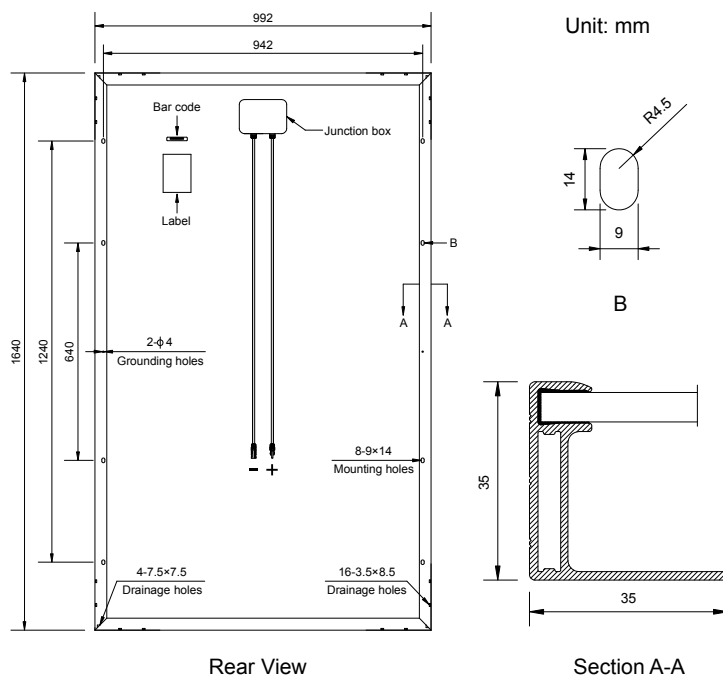
TEMPERATURE CHARACTERISTICS

Nominal Operating Cell Temperature (NOCT)	45°C±2°C
Temperature Coefficients of P_{max}	-0.39%/°C
Temperature Coefficients of V_{OC}	-0.30%/°C
Temperature Coefficients of I_{SC}	0.05%/°C

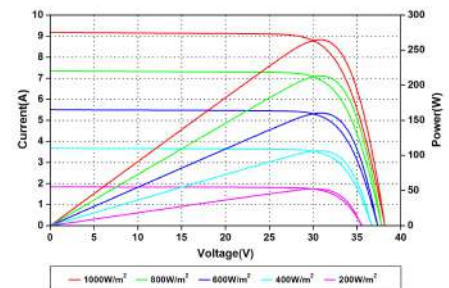
PACKAGING

Standard packaging	31pcs/pallet
Module quantity per 20' container	372pcs
Module quantity per 40' container	868pcs(GP)/952pcs(HQ)

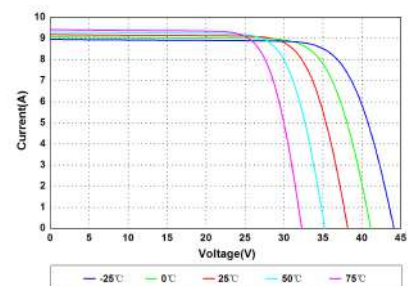
ENGINEERING DRAWINGS



IV CURVES



Current-Voltage and Power-Voltage Curves at Different Irradiances



Current-Voltage Curves at Different Temperatures

Specifications in this datasheet are subject to change without prior notice.



Active Safety

AI Powered
Active Arcing Protection



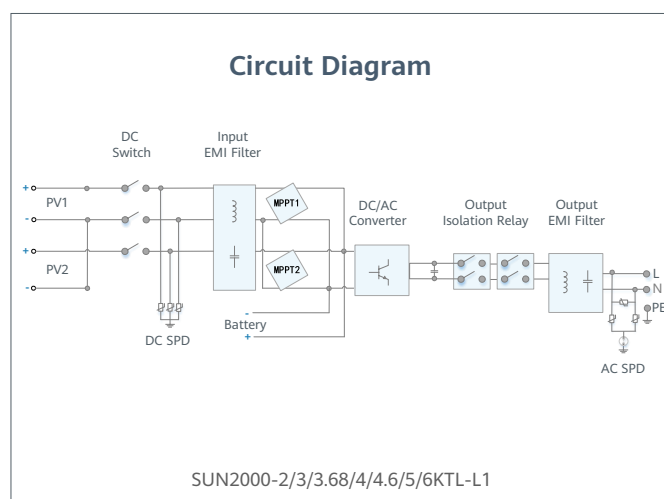
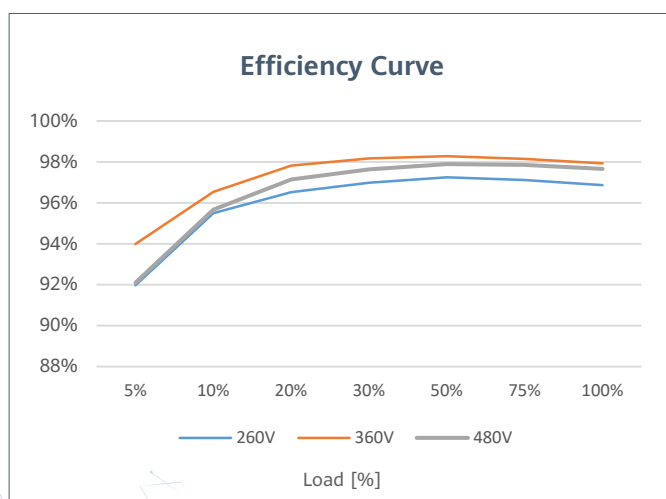
Higher Yields

Up to 30% More
Energy with Optimizer



2x POWER Battery Ready

5KW AC Output plus
5KW Battery Charge



Technical Specification

Technical Specification	SUN2000 -2KTL-L1	SUN2000 -3KTL-L1	SUN2000 -3.68KTL-L1	SUN2000 -4KTL-L1	SUN2000 -4.6KTL-L1	SUN2000 -5KTL-L1	SUN2000 -6KTL-L1 ¹
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Efficiency

Max. efficiency	98.2 %	98.3 %	98.4 %	98.4 %	98.4 %	98.4 %	98.4 %
European weighted efficiency	96.7 %	97.3 %	97.3 %	97.5 %	97.7 %	97.8 %	97.8 %

Input (PV)

Recommended max. PV power ²	3,000 Wp	4,500 Wp	5,520 Wp	6,000 Wp	6,900 Wp	7,500 Wp	9,000 Wp
Max. input voltage	600 V ³						
Start-up voltage	100 V						
MPPT operating voltage range	90 V – 560 V ³						
Rated input voltage	360 V						
Max. input current per MPPT	12.5 A						
Max. short-circuit current	18 A						
Number of MPP trackers	2						
Max. number of inputs	2						

Input (DC Battery)

Compatible Battery	LG Chem RESU 7H_R / 10H_R						
Operating voltage range	350 ~ 450 Vdc						
Max operating current	10 A @7H_R / 15 A @10H_R						
Max charge power	3,500 W @7H_R / 5,000 W @10H_R						
Max discharge Power @7H_R	2,200 W	3,300 W	3,500 W	3,500 W	3,500 W	3,500 W	3,500 W
Max discharge Power @10H_R	2,200 W	3,300 W	3,680 W	4,400 W	4,600 W	5,000 W	5,000 W
Compatible Battery	HUAWEI Smart ESS Battery 5kWh – 30kWh ¹						
Operating voltage range	350 ~ 560 Vdc						
Max operating current	15 A						
Max charge Power	5,000 W ⁴						
Max discharge Power	2,200 W	3,300 W	3,680 W	4,400 W	4,600 W	5,000 W	5,000 W

Output

Grid connection	Single phase						
Rated output power	2,000 W	3,000 W	3,680 W	4,000 W	4,600 W	5,000 W ⁵	6,000 W
Max. apparent power	2,200 VA	3,300 VA	3,680 VA	4,400 VA	5,000 VA ⁶	5,500 VA ⁷	6,000 VA
Rated output voltage	220 Vac / 230 Vac / 240 Vac						
Rated AC grid frequency	50 Hz / 60 Hz						
Max. output current	10 A	15 A	16 A	20 A	23 A ⁸	25 A ⁸	27.3 A
Adjustable power factor	0.8 leading ... 0.8 lagging						
Max. total harmonic distortion	≤ 3 %						
Backup power output	Yes (via Backup Box-5000 ¹)						

Protection & Feature

Anti-Islanding protection	Yes
DC reverse polarity protection	Yes
Insulation monitoring	Yes
DC surge protection	Yes, compatible with TYPE II protection class according to EN/IEC 61643-11
AC surge protection	Yes, compatible with TYPE II protection class according to EN/IEC 61643-11
Residual current monitoring	Yes
AC overcurrent protection	Yes
AC short-circuit protection	Yes
AC overvoltage protection	Yes
Over-heat protection	Yes
Arc fault protection	Yes
Battery reverse charging from grid	Yes

General Data

Operating temperature range	-25 ~ +60 °C (Derating above 45°C @ Rated output power)
Relative operating humidity	0 %RH ~ 100 %RH
Operating altitude	0 ~ 4,000 m (Derating above 2,000 m)
Cooling	Natural convection
Display	LED indicators; integrated WLAN + FusionSolar APP
Communication	RS485, WLAN via inverter built-in WLAN module Ethernet via Smart Dongle-WLAN-FE (Optional); 4G / 3G / 2G via Smart Dongle-4G (Optional)
Weight (incl. mounting bracket)	12.0 kg (26.5 lb)
Dimension (incl. mounting bracket)	365mm * 365mm * 156 mm (14.4 x 14.4 x 6.1 inch)
Degree of protection	IP65

Optimizer Compatibility

DC MBUS compatible optimizer	SUN2000-450W-P
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Standard Compliance (more available upon request)

Safety	EN/IEC 62109-1, EN/IEC 62109-2
Grid connection standards	G98, G99, EN 50549-1, CEI 0-21, VDE-AR-N-4105, AS 4777.2, C10/11, ABNT, UTE C15-712, RD 1699, TOR D4, IEC61727, IEC62116

¹ Available in 2020 Q3.² Inverter max input PV power is 10,000 Wp when long strings are designed and fully connected with SUN2000-450W-P power optimizers.³ The maximum input voltage and operating voltage upper limit will be reduced to 495 V when inverter connects and works with LG battery.⁴ 2,500 W @ 5kWh HUAWEI ESS battery⁵ AS4777.2: 4999W. ⁶ VDE-AR-N 4105: 4600VA / AS4777.2: 4999VA. ⁷ AS4777.2: 4999VA. ⁸ AS4777.2: 21.7A.

Smart String Energy Storage System



More Usable Energy

100% Depth of Discharge
Pack Level Energy Optimization



Flexible Investment

5kWh Modular Design,
Scalable from 5 to 30 kWh



Safe & Reliable

Lithium Iron Phosphate (LFP) Cell



Easy Installation

12 kg Power Module
50 kg Battery Module



Quick Commissioning

Automatically Detected in App

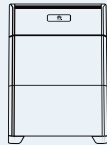
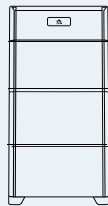


Perfect Compatibility

Compatible to Both Residential
Single & Three Phase Inverter

LUNA2000-5/10/15-S0

Technical Specification

Technical Specification	LUNA2000-5-S0	LUNA2000-10-S0	LUNA2000-15-S0
			

Performance			
Power module	LUNA2000-5KW-C0		
Number of power modules	1		
Battery module	LUNA2000-5-E0		
Battery module energy	5 kWh		
Number of battery Modules	1	2	3
Battery usable energy ¹	5 kWh	10 kWh	15 kWh
Max. output power	2.5 kW	5 kW	5 kW
Peak output power	3.5 kW, 10 s	7 kW, 10 s	7 kW, 10 s
Nominal voltage (single phase system)	360 V		
Operating voltage range (single phase system)	350 – 560 V		
Nominal voltage (three phase system)	600 V		
Operating voltage range (three phase system)	600 – 980 V		

Communication	
Display	SOC status indicator, LED indicator
Communication	RS485 / CAN (only for parallel operation)

General Specification			
Dimension (W*D*H)	670 * 150 * 600 mm (26.4 * 5.9 * 23.6 inch)	670 * 150 * 960 mm (26.4 * 5.9 * 37.8 inch)	670 * 150 * 1320 mm (26.4 * 5.9 * 60.0 inch)
Weight (Floor stand toolkit included)	63.8 kg (140.7 lb)	113.8 kg (250.9 lb)	163.8 kg (361.1 lb)
Power module dimension (W*D*H)	670 * 150 * 240 mm (26.4 * 5.9 * 9.4 inch)		
Power module weight	12 kg (26.5 lb)		
Battery module dimension (W*D*H)	670 * 150 * 360 mm (26.4 * 5.9 * 14.0 inch)		
Battery module weight	50 kg (110.2 lb)		
Installation	Floor stand (standard), Wall mount (optional)		
Operating temperature	-10°C ~ + 55°C (14°F ~ 131°F) ²		
Operating altitude	0 - 4,000 m (13,123 ft.) (Derating above 2,000 m)		
Relative humidity	5% ~ 95%		
Cooling	Natural convection		
Protection rating	IP 65		
Noise emission	<29 dB		
Cell technology	Lithium-iron phosphate (LiFePO4)		
Warranty	10 years ³		
Scalability	Max. 2 systems in parallel operation		
Compatible inverters	SUN2000L-2/3/3.68/4/4.6/5KTL ⁴ , SUN2000-2/3/3.68/4/4.6/5/6KTL-L1, SUN2000-3/4/5/6/8/10KTL-M0 ⁴ , SUN2000-3/4/5/6/8/10KTL-M1		

Standard Compliance (more available upon request)	
Certificates	CE, RCM, CEC, VDE2510-50, IEC62619, IEC 60730, UN38.3

Ordering and Deliverable Part	
Product ordering model ⁵	LUNA2000-5KW-C0, LUNA2000-5-E0, LUNA2000 Wall Mounting Bracket

1. Test conditions: 100% depth of discharge (DoD), 0.2C charge & discharge at 25°C

2. Charge/discharge derating occurs when the operating temperature from -10°C to 5 °C & 45 °C to 55 °C.

3. Refer to battery warranty letter for conditional application.

4. Available in Q1, 2021

5. Storage system is ordered and delivered in the form of power module and battery module separately with corresponding quantity.