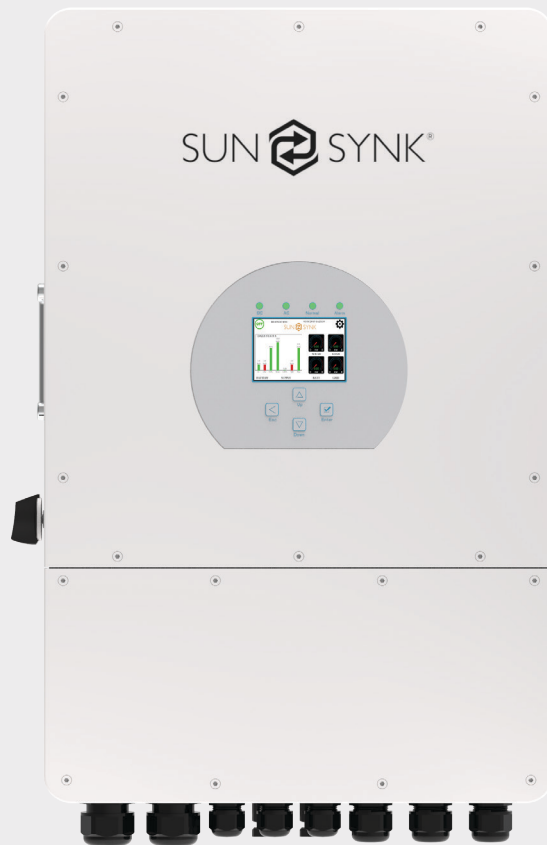




SINGLE-PHASE HYBRID INVERTER




DATASHEET

SUNSYNK-10K-SG02LP1
SUNSYNK-12K-SG02LP1

www.sunsynk.com
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v.7 (22/07/25)

 PLEASE RETAIN FOR
FUTURE REFERENCE

| Model | SUNSYNK-10K-SG02LP1 | SUNSYNK-12K-SG02LP1 |
|--|---|---------------------|
| Battery Input Data | | |
| Battery Type | Lead-acid or Lithium-ion | |
| Battery Voltage Range | 40~60V | |
| Max. Charge Current | 220A | 250A |
| Max. Discharge Current | 220A | 250A |
| Charging Curve | 3 Stages/Equalisation | |
| External Temperature Sensor | Yes | |
| Charging Strategy for Li-Ion Battery | Self-Adaptation to BMS | |
| PV String Input Data | | |
| Max. PV Input Power | 15000W | 18000W |
| Max. PV Input Voltage | 500V | |
| MPPT Voltage Range | 150V~425V | |
| Start-up Voltage | 125V | |
| Rated PV Input Voltage | 370V | |
| Max. Operating PV Input Current | 32A+32A+32A | |
| Max. PV Isc | 60A+60A+60A | |
| No. of MPPT / Strings Per MPPT | 3 / 2+2+2 | |
| AC Input/Output Data | | |
| Rated AC Input/Output Active Power | 10000W | 12000W |
| Max. AC Input/Output Apparent Power | 11000VA | 13200VA |
| Rated AC Input/Output Current | 45.5/43.5A | 54.6/52.2A |
| Max. AC Input/Output Current | 45.5/43.5A | 54.6/52.2A |
| Max Continuous AC Passthrough | 60A | |
| Peak Power (Off-Grid) | 2 times of rated power, 10 S | |
| Power Factor | 0.8 leading to 0.8 lagging | |
| Rated Input/Output Voltage/Range | 220/230V 0.85Un-1.1Un | |
| Rated Input/Output Grid Frequency/Range | 50/45-55Hz, 60/55-65Hz | |
| Grid Connection Form | L+N+PE | |
| Total Current Harmonic Distortion (THDi) | <3% (of nominal power) | |
| DC Current Injection | <0.5% In | |
| Efficiency | | |
| Max. Efficiency | 97.60% | |
| Euro Efficiency | 96.50% | |
| MPPT Efficiency | >99% | |
| Protection | | |
| Integrated | PV Arc Fault Detection, PV Input Lightning Protection, Anti-islanding Protection, PV String Input Reverse Polarity Protection, Insulation Resistor Detection, Residual Current Monitoring Unit, Output Over Current Protection, Output Shorted Protection, Surge Protection, Over Voltage Category. | |
| Surge Protection Level | TYPE II(DC), TYPE II(AC) | |
| Over Voltage Category | OVC II(DC), OVC III(AC) | |
| Certifications and Standards | | |
| Grid Regulation | EN 50549-1, AS-NZS 4777.2, NRS 097-2-1; Additional connections available upon request | |
| Safety EMC / Standard | IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2 | |

General Data

| | |
|-----------------------------|--|
| Operating Temperature Range | -40 to +60°C, >45°C Derating |
| Cooling | Intelligent Air Cooling |
| Noise | <45dB |
| Communication with BMS | RS485; CAN |
| Net Weight | 36kg |
| Gross Weight | 42kg |
| Size | 420W×670H×233D mm (Excluding connectors and brackets) |
| Protection Degree | IP65 |
| Installation Style | Wall-mounted |
| Warranty | 5 years (10 years when installed with a Sunsynk battery) |



NOTE:

Safe Transport and Handling of Inverter:

When transporting the equipment, use its original packaging and keep it as a complete unit. Store the product in a dry environment, avoiding direct sunlight, and maintain a temperature range between -40°C and 60°C. Since the equipment can be quite heavy, always consider its total weight when moving, transporting, or installing it, ensuring that the installation site has adequate load-bearing capacity. Transporting and installing the inverter should be carried out solely by qualified personnel.



Contact Us

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