



# HYBRID SOLAR INVERTER

Three Phase 5-12KW, 2 MPPT Hybrid Inverter

SUN-5/6/8/10/12K-SG04LP3



**Screen & IP65**  
Colorful touch LCD,  
IP65 protection degree



**Galvanic coupling**  
DC couple and AC couple to  
retrofit existing solar system



**Maximum Current**  
Max. charging/discharging  
current of 240A



**Charging/Discharging**  
6 time periods for battery  
charging/discharging



**Generator Storing**  
Support storing energy from  
diesel generator

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Three Phase 5-12KW, 2 MPPT Hybrid Inverter

| Model                                          | SUN-5K-SG04LP3-EU                                                                                                                                                                                  | SUN-6K-SG04LP3-EU | SUN-8K-SG04LP3-EU | SUN-10K-SG04LP3-EU | SUN-12K-SG04LP3-EU |
|------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------|--------------------|--------------------|
| Battery Input Data                             |                                                                                                                                                                                                    |                   |                   |                    |                    |
| Battery Type                                   | Lead-acid or Lithium-ion                                                                                                                                                                           |                   |                   |                    |                    |
| Battery Voltage Range (V)                      | 40~60                                                                                                                                                                                              |                   |                   |                    |                    |
| Max. Charging Current (A)                      | 120                                                                                                                                                                                                | 150               | 190               | 210                | 240                |
| Max. Discharging Current (A)                   | 120                                                                                                                                                                                                | 150               | 190               | 210                | 240                |
| External Temperature Sensor                    | Yes                                                                                                                                                                                                |                   |                   |                    |                    |
| Charging Curve                                 | 3 Stages / Equalization                                                                                                                                                                            |                   |                   |                    |                    |
| Charging Strategy for Li-Ion Battery           | Self-adaption to BMS                                                                                                                                                                               |                   |                   |                    |                    |
| PV String Input Data                           |                                                                                                                                                                                                    |                   |                   |                    |                    |
| Max. DC Input Power (W)                        | 6500                                                                                                                                                                                               | 7800              | 10400             | 13000              | 15600              |
| Rated PV Input Voltage (V)                     | 550 (160~800)                                                                                                                                                                                      |                   |                   |                    |                    |
| Start-up Voltage (V)                           | 160                                                                                                                                                                                                |                   |                   |                    |                    |
| MPPT Voltage Range (V)                         | 200~650                                                                                                                                                                                            |                   |                   |                    |                    |
| Full Load DC Voltage Range (V)                 | 350~650                                                                                                                                                                                            |                   |                   |                    |                    |
| PV Input Current (A)                           | 13+13                                                                                                                                                                                              |                   |                   | 26+13              |                    |
| Max. PV Isc (A)                                | 17+17                                                                                                                                                                                              |                   |                   | 34+17              |                    |
| No.of MPP Trackers                             | 2                                                                                                                                                                                                  |                   |                   |                    |                    |
| No.of Strings per MPP Tracker                  | 1+1                                                                                                                                                                                                |                   |                   | 2+1                |                    |
| AC Output Data                                 |                                                                                                                                                                                                    |                   |                   |                    |                    |
| Rated AC Output Active Power (W)               | 5000                                                                                                                                                                                               | 6000              | 8000              | 10000              | 12000              |
| Max AC Output Active Power (W)                 | 5500                                                                                                                                                                                               | 6600              | 8800              | 11000              | 13200              |
| AC Output Rated Current (A)                    | 7.6/7.2                                                                                                                                                                                            | 9.1/8.7           | 12.1/11.6         | 15.2/14.5          | 18.2/17.4          |
| Max. AC Output Current (A)                     | 8.4/8                                                                                                                                                                                              | 10/9.6            | 13.4/12.8         | 16.7/15.9          | 20/19.1            |
| Max. Three-phase Unbalanced Output Current (A) | 11.4/10.9                                                                                                                                                                                          | 13.6/13           | 18.2/17.4         | 22.7/21.7          | 27.3/26.1          |
| Max. Output short circuit current(A)           | 75                                                                                                                                                                                                 |                   |                   |                    |                    |
| Max. Continuous AC Passthrough (A)             | 45                                                                                                                                                                                                 |                   |                   |                    |                    |
| Peak Power (Off Grid)                          | 2 time of rated power, 10 S                                                                                                                                                                        |                   |                   |                    |                    |
| Power Factor                                   | 0.8 lagging to 0.8 lagging                                                                                                                                                                         |                   |                   |                    |                    |
| Output Frequency and Voltage                   | 50/60Hz; 3L/N/PE 220/380, 230/400Vac                                                                                                                                                               |                   |                   |                    |                    |
| Grid Type                                      | Three Phase                                                                                                                                                                                        |                   |                   |                    |                    |
| Total Harmonic Distortion (THD)                | <3% (of nominal power)                                                                                                                                                                             |                   |                   |                    |                    |
| DC Current Injection                           | <0.5% In                                                                                                                                                                                           |                   |                   |                    |                    |
| Efficiency                                     |                                                                                                                                                                                                    |                   |                   |                    |                    |
| Max. Efficiency                                | 97.60%                                                                                                                                                                                             |                   |                   |                    |                    |
| Euro Efficiency                                | 97.00%                                                                                                                                                                                             |                   |                   |                    |                    |
| MPPT Efficiency                                | 99.90%                                                                                                                                                                                             |                   |                   |                    |                    |
| Protection                                     |                                                                                                                                                                                                    |                   |                   |                    |                    |
| Integrated                                     | 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                               | DC Type III / AC Type III                                                                                                                                                                          |                   |                   |                    |                    |
| Over Voltage Category                          | DC Type II/AC Type III                                                                                                                                                                             |                   |                   |                    |                    |
| Certifications and Standards                   |                                                                                                                                                                                                    |                   |                   |                    |                    |
| Grid Regulation                                | VDE4105, IEC61727/62116, VDE0126, AS4777.2, CEI 0 21, EN50549-1,G98, G99, C10-11, UNE217002, NBR16149/NBR16150                                                                                     |                   |                   |                    |                    |
| Safety EMC/ Standard                           | IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2                                                                                                                                             |                   |                   |                    |                    |
| General Data                                   |                                                                                                                                                                                                    |                   |                   |                    |                    |
| Operating Temperature Range (°C)               | -40~60°C, >45°C Derating                                                                                                                                                                           |                   |                   |                    |                    |
| Cooling                                        | Smart Cooling                                                                                                                                                                                      |                   |                   |                    |                    |
| Noise (dB)                                     | ≤45 dB                                                                                                                                                                                             |                   |                   |                    |                    |
| Communication with BMS                         | RS485; CAN                                                                                                                                                                                         |                   |                   |                    |                    |
| Weight (kg)                                    | 33.6                                                                                                                                                                                               |                   |                   |                    |                    |
| Cabinet Size (WxHxD mm)                        | 422×702×281 (Excluding Connectors and Brackets)                                                                                                                                                    |                   |                   |                    |                    |
| Protection Degree                              | IP65                                                                                                                                                                                               |                   |                   |                    |                    |
| Installation Style                             | Wall-mounted                                                                                                                                                                                       |                   |                   |                    |                    |
| Warranty                                       | 5 Years (10 Years Optional)                                                                                                                                                                        |                   |                   |                    |                    |