

# Single Phase Hybrid Inverter

SUN-3.6/5/6/7/7.6/8/10K-SG05LP1-EU-AM2-P



## Intuitive

- Colorful touch LCD, IP65 protection degree



## Intelligent

- 6 time periods for battery charging/discharging



## Flexible

- AC couple to retrofit existing solar system
- Max. 16 pcs parallel for on-grid and off-grid operation; support multiple batteries parallel



## Reliable

- Max. charging/discharging current of 210A
- Support storing energy from diesel generator

| Model                                              | SUN-3.6K-SG05<br>LP1-EU-AM2-P                                                                                                                                                                                                                                                                                                          | SUN-5K-SG05<br>LP1-EU-AM2-P | SUN-6K-SG05<br>LP1-EU-AM2-P | SUN-7K-SG05<br>LP1-EU-AM2-P | SUN-7.6K-SG05<br>LP1-EU-AM2-P | SUN-8K-SG05<br>LP1-EU-AM2-P | SUN-10K-SG05<br>LP1-EU-AM2-P |
|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------------|-----------------------------|------------------------------|
| Battery Input Data                                 |                                                                                                                                                                                                                                                                                                                                        |                             |                             |                             |                               |                             |                              |
| Battery Type                                       | Lead-acid or Lithium-ion                                                                                                                                                                                                                                                                                                               |                             |                             |                             |                               |                             |                              |
| Battery Voltage Range (V)                          | 40-60                                                                                                                                                                                                                                                                                                                                  |                             |                             |                             |                               |                             |                              |
| Max. Charging/Discharging Current (A)              | 90                                                                                                                                                                                                                                                                                                                                     | 120                         | 135                         | 175                         | 190                           | 190                         | 210                          |
| Charging Strategy for Li-ion Battery               | Self-adaption to BMS                                                                                                                                                                                                                                                                                                                   |                             |                             |                             |                               |                             |                              |
| Number of Battery Input                            | 1                                                                                                                                                                                                                                                                                                                                      |                             |                             |                             |                               |                             |                              |
| PV String Input Data                               |                                                                                                                                                                                                                                                                                                                                        |                             |                             |                             |                               |                             |                              |
| Max. PV access power (W)                           | 7200                                                                                                                                                                                                                                                                                                                                   | 10000                       | 12000                       | 14000                       | 15200                         | 16000                       | 20000                        |
| Max. PV Input Power (W)                            | 5760                                                                                                                                                                                                                                                                                                                                   | 8000                        | 9600                        | 11200                       | 12160                         | 12800                       | 16000                        |
| Max. PV Input Voltage (V)                          | 500                                                                                                                                                                                                                                                                                                                                    |                             |                             |                             |                               |                             |                              |
| Start-up Voltage (V)                               | 125                                                                                                                                                                                                                                                                                                                                    |                             |                             |                             |                               |                             |                              |
| MPPT Voltage Range (V)                             | 150-425                                                                                                                                                                                                                                                                                                                                |                             |                             |                             |                               |                             |                              |
| Rated PV Input Voltage (V)                         | 370                                                                                                                                                                                                                                                                                                                                    |                             |                             |                             |                               |                             |                              |
| Max. Operating PV Input Current (A)                | 18+18                                                                                                                                                                                                                                                                                                                                  |                             |                             | 32+32                       |                               |                             |                              |
| Max. Input Short-Circuit Current (A)               | 27+27                                                                                                                                                                                                                                                                                                                                  |                             |                             | 48+48                       |                               |                             |                              |
| No. of MPP Trackers/<br>No. of Strings MPP Tracker | 2/1+1                                                                                                                                                                                                                                                                                                                                  |                             |                             | 2/2+2                       |                               |                             |                              |
| AC Input/Output Data                               |                                                                                                                                                                                                                                                                                                                                        |                             |                             |                             |                               |                             |                              |
| Rated AC Input/Output Active Power (W)             | 3600                                                                                                                                                                                                                                                                                                                                   | 5000                        | 6000                        | 7000                        | 7600                          | 8000                        | 10000                        |
| Max. AC Input/Output Apparent Power (VA)           | 3960                                                                                                                                                                                                                                                                                                                                   | 5500                        | 6600                        | 7700                        | 8360                          | 8800                        | 11000                        |
| Rated AC Input/Output Current (A)                  | 16.4/15.7                                                                                                                                                                                                                                                                                                                              | 22.7/21.7                   | 27.3/26.1                   | 31.9/30.5                   | 34.5/33                       | 36.4/34.8                   | 45.5/43.5                    |
| Max. AC Input/Output Current (A)                   | 18/17.2                                                                                                                                                                                                                                                                                                                                | 25/23.9                     | 30/28.7                     | 35/33.5                     | 38/36.3                       | 40/38.3                     | 50/47.9                      |
| Max. Continuous AC Passthrough (grid to load) (A)  | 35                                                                                                                                                                                                                                                                                                                                     |                             | 40                          | 50                          |                               |                             |                              |
| Peak Power (off-grid) (W)                          | 2 times of rated power, 10s                                                                                                                                                                                                                                                                                                            |                             |                             |                             |                               |                             |                              |
| Power Factor Adjustment Range                      | 0.8 leading to 0.8 lagging                                                                                                                                                                                                                                                                                                             |                             |                             |                             |                               |                             |                              |
| Rated input/output voltage                         | 220/230V 0.85Un-1.1Un L+N+PE                                                                                                                                                                                                                                                                                                           |                             |                             |                             |                               |                             |                              |
| Rated Input/Output Grid Frequency/Range(Hz)        | 50/45-55, 60/55-65                                                                                                                                                                                                                                                                                                                     |                             |                             |                             |                               |                             |                              |
| Total Current Harmonic Distortion THDi             | <3% (of nominal power)                                                                                                                                                                                                                                                                                                                 |                             |                             |                             |                               |                             |                              |
| DC Injection Current                               | <0.5% In                                                                                                                                                                                                                                                                                                                               |                             |                             |                             |                               |                             |                              |
| Efficiency                                         |                                                                                                                                                                                                                                                                                                                                        |                             |                             |                             |                               |                             |                              |
| Max. Efficiency                                    | 97.6%                                                                                                                                                                                                                                                                                                                                  |                             |                             |                             |                               |                             |                              |
| Euro Efficiency                                    | 96.5%                                                                                                                                                                                                                                                                                                                                  |                             |                             |                             |                               |                             |                              |
| MPPT Efficiency                                    | >99%                                                                                                                                                                                                                                                                                                                                   |                             |                             |                             |                               |                             |                              |
| Equipment Protection                               |                                                                                                                                                                                                                                                                                                                                        |                             |                             |                             |                               |                             |                              |
| Integrated                                         | DC Reverse Polarity Protection, AC Output Overcurrent Protection, Thermal Protection, AC Output Overvoltage Protection, AC Output Short Circuit Protection, DC Component Monitoring, Arc Fault Circuit Interrupter (AFCI) (optional), Anti-islanding Protection, DC Switch, Insulation Impedance Detection, Residual Current Detection |                             |                             |                             |                               |                             |                              |
| Surge Protection Level                             | TYPE II(DC), TYPE II(AC)                                                                                                                                                                                                                                                                                                               |                             |                             |                             |                               |                             |                              |
| Interface                                          |                                                                                                                                                                                                                                                                                                                                        |                             |                             |                             |                               |                             |                              |
| LCD/LED Display                                    | LCD                                                                                                                                                                                                                                                                                                                                    |                             |                             |                             |                               |                             |                              |
| Communication Interface                            | WIFI, RS485, CAN                                                                                                                                                                                                                                                                                                                       |                             |                             |                             |                               |                             |                              |
| General Data                                       |                                                                                                                                                                                                                                                                                                                                        |                             |                             |                             |                               |                             |                              |
| Operating Temperature Range (°C)                   | -40 to +60°C, >45°C Derating                                                                                                                                                                                                                                                                                                           |                             |                             |                             |                               |                             |                              |
| Permissible Ambient Humidity                       | 0-100%                                                                                                                                                                                                                                                                                                                                 |                             |                             |                             |                               |                             |                              |
| Permissible Altitude                               | 2000m                                                                                                                                                                                                                                                                                                                                  |                             |                             |                             |                               |                             |                              |
| Noise (dB)                                         | <45                                                                                                                                                                                                                                                                                                                                    |                             |                             |                             |                               |                             |                              |
| Ingress Protection(IP) Rating                      | IP 65                                                                                                                                                                                                                                                                                                                                  |                             |                             |                             |                               |                             |                              |
| Inverter Topology                                  | Non-Isolated (solar), Isolated (battery)                                                                                                                                                                                                                                                                                               |                             |                             |                             |                               |                             |                              |
| Over Voltage Category                              | OVC II(DC), OVC III(AC)                                                                                                                                                                                                                                                                                                                |                             |                             |                             |                               |                             |                              |
| Cabinet Size (WxHxD mm)                            | 330×580×232 (Excluding Connectors and Brackets)                                                                                                                                                                                                                                                                                        |                             |                             |                             |                               |                             |                              |
| Weight (kg)                                        | 24.9                                                                                                                                                                                                                                                                                                                                   |                             |                             |                             |                               |                             |                              |
| Type of Cooling                                    | Intelligent Air Cooling                                                                                                                                                                                                                                                                                                                |                             |                             |                             |                               |                             |                              |
| Warranty                                           | 5 Years / Up to 10 Years*<br>*Warranty period varies by installation country. Refer to the Warranty Policy for details.                                                                                                                                                                                                                |                             |                             |                             |                               |                             |                              |
| Grid Regulation                                    | IEC 61727, IEC 62116, CEI 0-21, EN 50549, NRS 097, RD 140, UNE 217002, OVE-Richtlinie R25, G99, VDE-AR-N 4105                                                                                                                                                                                                                          |                             |                             |                             |                               |                             |                              |
| Safety / EMC Standard                              | IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2                                                                                                                                                                                                                                                                                 |                             |                             |                             |                               |                             |                              |