

NEW



29.9-60K

## SOLARATOR SERIES

Experience Uninterrupted Power with Solis Energy Storage Inverters

### S6-EH3P(29.9-60)K-H(21A)

Three Phase | High Voltage

#### 10 Unique Advantages

- ★ Supports PV input up to 100kW, maximising solar utilisation
- ★ Supports a maximum string input current of 21A, ensuring compatibility with high-power PV modules
- ★ Compatible with 100-314Ah battery modules, reducing overall system costs
- ★ Supports fast battery charging with a maximum charging current of 168A
- ★ Two independent battery ports for flexible configurations and easy capacity expansion
- ★ Delivers 160% overload for 2s in off-grid mode, ensuring stable startup of heavy loads
- ★ Offers flexible control for weak grid and genset-hybrid scenarios, reducing investment costs
- ★ SolisCloud: Smart remote control, AI optimisation, and instant troubleshooting - all in one platform
- ★ Integrates PV and storage for demand management and anti-reverse flow functions
- ★ Provides dynamic reactive power compensation to improve grid power factor and reduce reactive power charges

#### 6 Leading Advantages

- Supports both DC and AC coupling, for flexible retrofits and system expansions
- Ensures reliable backup power across diverse scenarios through battery reserve management
- Extends supply time for critical loads with intelligent load prioritization
- Offers a versatile three-in-one interface for seamless integration of on-grid PV, wind power, and diesel generators
- Achieves on- and off-grid transitions in less than 10ms, ensuring an uninterrupted power supply
- Supports multi-unit parallel operation up to 600kW (Solis STS cabinet recommended for systems over 6 units)

CINLONG TECHNOLOGIES CO., LTD.

t: +86 574 6580 2188 e: sales@ginlong.com  
w: solisinverters.com service@ginlong.com



# DATASHEET

| Models                                       | 29.9K  | 30K             | 40K               | 49K             | 50K             | 60K             |
|--|--|-----------------|-------------------|-----------------|-----------------|-----------------|
| <b>Input DC (PV side)</b>                    |  |                 |                   |                 |                 |                 |
| Recommended max. PV array size               | 59.8 kW  | 60 kW           | 80 kW             | 98 kW           | 100 kW          | 100 kW          |
| Max. usable PV input power                   | 59.8 kW  | 60 kW           | 80 kW             | 98 kW           | 100 kW          | 100 kW          |
| Max. input voltage                           | 1000 V   |                 |                   |                 |                 |                 |
| Rated voltage                                | 600 V  |                 |                   |                 |                 |                 |
| Start-up voltage                             | 180 V  |                 |                   |                 |                 |                 |
| MPPT voltage range                           | 150 - 850 V  |                 |                   |                 |                 |                 |
| Max. input current                           | 3 × 42 A   |                 | 4 × 42 A          |                 |                 |                 |
| Max. current per DC input                    | 42 A   |                 |                   |                 |                 |                 |
| Max. short circuit current                   | 3 × 60 A   |                 | 4 × 60 A          |                 |                 |                 |
| MPPT number / Max. input strings number      | 3 / 6  |                 | 4 / 8             |                 |                 |                 |
| <b>Battery</b>                               |  |                 |                   |                 |                 |                 |
| Battery type                                 | Li-ion   |                 |                   |                 |                 |                 |
| Battery voltage range                        | 150 - 800 V  |                 |                   |                 |                 |                 |
| Max. charge / discharge current              | 80 A × 2   |                 |                   |                 |                 |                 |
| Number of battery port / Number of BMS port  | 2  |                 |                   |                 |                 |                 |
| Max. charge / discharge current of each port | 80 A   |                 |                   |                 |                 |                 |
| Communication                                | CAN / RS485  |                 |                   |                 |                 |                 |
| <b>Output AC (Grid side)</b>                 |  |                 |                   |                 |                 |                 |
| Rated output power                           | 29.9 kW  | 30 kW           | 40 kW             | 49 kW           | 50 kW           | 60 kW           |
| Max. apparent output power                   | 29.9 kVA   | 30 kVA          | 40 kVA            | 49 kVA          | 50 kVA          | 60 kVA          |
| Rated grid voltage                           | 3/N/PE, 220 V / 380 V, 230 V / 400 V   |                 |                   |                 |                 |                 |
| Rated grid frequency                         | 50 Hz / 60 Hz  |                 |                   |                 |                 |                 |
| Rated grid output current                    | 45.4 A / 43.2 A  | 45.6 A / 43.3 A | 60.8 A / 57.7 A   | 74.5 A / 70.7 A | 76 A / 72.2 A   | 91.2 A / 86.6 A |
| Power factor                                 | > 0.99 (0.8 leading - 0.8 lagging)   |                 |                   |                 |                 |                 |
| THDi   | < 3%   |                 |                   |                 |                 |                 |
| <b>Input AC (Grid side)</b>                  |  |                 |                   |                 |                 |                 |
| Max. input power                             | 59.8 kW  | 60 kW           | 60 kW             | 98 kW           | 100 kW          | 100 kW / 105 kW |
| Input voltage range                          | 304 - 460 V  |                 |                   |                 |                 |                 |
| Max. input current                           | 90.8 A / 86.4 A  | 91.2 A / 86.6 A | 121.6 A / 115.4 A | 149 A / 141.4 A | 152 A / 144.4 A | 152 A / 152 A   |
| <b>Output AC (Back-up)</b>                   |  |                 |                   |                 |                 |                 |
| Rated output power                           | 29.9 kW  | 30 kW           | 40 kW             | 49 kW           | 50 kW           | 60 kW           |
| Max. apparent output power                   | 1.6 times of rated power, 2 s; 1.5 times of rated power, 10 s  |                 |                   |                 |                 |                 |
| Back-up switch time <sup>①</sup>             | < 10 ms  |                 |                   |                 |                 |                 |
| Rated output voltage                         | 3/N/PE, 220 V / 380 V, 230 V / 400 V   |                 |                   |                 |                 |                 |
| Rated frequency                              | 50 Hz / 60 Hz  |                 |                   |                 |                 |                 |
| Rated output current                         | 45.4 A / 43.2 A  | 45.6 A / 43.3 A | 60.8 A / 57.7 A   | 74.5 A / 70.7 A | 76 A / 72.2 A   | 91.2 A / 86.6 A |
| Max. AC passthrough current                  | 45.4 A / 43.2 A  | 45.6 A / 43.3 A | 60.8 A / 57.7 A   | 74.5 A / 70.7 A | 76 A / 72.2 A   | 91.2 A / 86.6 A |
| THDv (@linear load)                          | < 2%   |                 |                   |                 |                 |                 |
| <b>Input AC (Generator side)</b>             |  |                 |                   |                 |                 |                 |
| Max. input power                             | 29.9 kW  | 30 kW           | 40 kW             | 49 kW           | 50 kW           | 60 kW           |
| Rated input current                          | 45.4 A / 43.2 A  | 45.6 A / 43.3 A | 60.8 A / 57.7 A   | 74.5 A / 70.7 A | 76 A / 72.2 A   | 91.2 A / 86.6 A |
| Rated input voltage                          | 3/N/PE, 220 V / 380 V, 230 V / 400 V   |                 |                   |                 |                 |                 |
| Rated input frequency                        | 50 Hz / 60 Hz  |                 |                   |                 |                 |                 |
| <b>Efficiency</b>                            |  |                 |                   |                 |                 |                 |
| Max. efficiency                              | 97.7%  |                 |                   |                 |                 |                 |
| EU efficiency                                | 97.3%  |                 |                   |                 |                 |                 |
| BAT charged by PV / AC max. efficiency       | 98.5% / 97.8%  |                 |                   |                 |                 |                 |
| Battery discharged efficiency                | 97.5%  |                 |                   |                 |                 |                 |
| <b>Protection</b>                            |  |                 |                   |                 |                 |                 |
| Surge protection                             | DC Type II / AC Type II  |                 |                   |                 |                 |                 |
| Output over current protection               | Yes  |                 |                   |                 |                 |                 |
| Insulation resistance monitoring             | Yes  |                 |                   |                 |                 |                 |
| Residual current detection                   | Yes  |                 |                   |                 |                 |                 |
| Integrated PV switch                         | Yes  |                 |                   |                 |                 |                 |
| DC reverse-polarity protection               | Yes  |                 |                   |                 |                 |                 |
| Protection class / Over voltage category     | I / PV II, battery II, AC III  |                 |                   |                 |                 |                 |
| Integrated AFCI 2.0                          | Optional   |                 |                   |                 |                 |                 |
| Anti-islanding protection                    | Yes  |                 |                   |                 |                 |                 |
| <b>General Data</b>                          |  |                 |                   |                 |                 |                 |
| Max. power per phase (grid & back-up)        | 33% rated power  |                 |                   |                 |                 |                 |
| Dimensions (W × H × D)                       | 530 × 880 × 290 mm   |                 |                   |                 |                 |                 |
| Weight                                       | 76 kg  |                 |                   |                 |                 |                 |
| Inverter topology                            | Transformerless  |                 |                   |                 |                 |                 |
| Self-consumption                             | < 35 W   |                 |                   |                 |                 |                 |
| Operating temperature range                  | -25 ~ +60°C  |                 |                   |                 |                 |                 |
| Relative humidity                            | 0 - 100%   |                 |                   |                 |                 |                 |
| Ingress protection                           | IP66   |                 |                   |                 |                 |                 |
| Cooling concept                              | Intelligent redundant fan-cooling  |                 |                   |                 |                 |                 |
| Max. operation altitude                      | 4000 m   |                 |                   |                 |                 |                 |
| Grid connection standard <sup>②</sup>        | G99, VDE-AR-N 4105/VDE V 0124, EN 50549-1/EN 50549-10, PTPIREE, VDE 0126/XP C15/VFR:2019, NTS 631/RD 1699/UNE 217002, CEI 0-21, CEI 0-16, C10/11, NRS 097-2-1, TOR, EIFS 2018.2, IEC 62116, IEC 61727, DEWA, MEA, PEA, PORTARIA N° 140/PORTARIA N° 515 |                 |                   |                 |                 |                 |
| Safety / EMC standard                        | IEC/EN 62109-1/-2, IEC/EN 61000-6-2/-4, EN 55011   |                 |                   |                 |                 |                 |
| <b>Features</b>                              |  |                 |                   |                 |                 |                 |
| PV connection                                | MC4 connector  |                 |                   |                 |                 |                 |
| Battery connection                           | Terminal connector   |                 |                   |                 |                 |                 |
| AC connection                                | OT terminal  |                 |                   |                 |                 |                 |
| Display                                      | 7.0" LCD display & Bluetooth + APP   |                 |                   |                 |                 |                 |
| Communication interface                      | Standard: WIFI+LAN+Bluetooth, CAN-BMS×2, CAN-Parallel×2, RS485-Meter, RS485, DRM, DI×3, DO×3; Optional: 4G   |                 |                   |                 |                 |                 |

① From On-Grid Mode to Off-Grid Mode: For a single inverter system, switchover time <10ms.  
 For a parallel system which consists of up to 6 inverters, switchover time <20ms.  
 If customer wishes to connect more than 6 inverters in parallel, please contact Solis Technical Team.

② This column only shows the planned certification standards.  
 Please confirm the specific time of obtaining the standards with the local team.