



**solis**

**20<sup>th</sup>**  
ANNIVERSARY

# Solis Solarator Series

Experience Uninterrupted Power with Solis Energy Storage Inverters

## Energy Storage Inverters

### S6-EH3P(12-20)K-ND-H

Three Phase | High Voltage



#### Smart Energy Management

- AI intelligently manages charging and discharging based on TOU (Time-of-Use) tariffs
- Seamless integration with VPP and EMS platforms for enhanced energy optimization
- Built-in control for SG-ready heat pumps



#### High Performance

- Supports three-phase unbalanced output, allowing up to 40% of rated inverter power per phase
- 160% PV input capacity to maximize solar energy utilization
- Switching time < 10ms



#### Flexible & Scalable

- Compatible with mainstream lithium batteries
- Easily expand system capacity using parallel connections and AC coupling



#### Simple & Fast Configuration

- Bluetooth app support for quick and easy setup

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# DATASHEET

## S6-EH3P(12-20)K-ND-H

| Models                                          | 12K                                                                                     |  | 15K                                  | 20K             |
|-------------------------------------------------|-----------------------------------------------------------------------------------------|--|--------------------------------------|-----------------|
| Input DC (PV side)                              |                                                                                         |  |                                      |                 |
| Recommended max. PV array size                  | 24 kW                                                                                   |  | 30 kW                                | 40 kW           |
| Max. usable PV input power                      | 19.2 kW                                                                                 |  | 24 kW                                | 32 kW           |
| Max. input voltage                              |                                                                                         |  | 1000 V                               |                 |
| Rated voltage                                   |                                                                                         |  | 600 V                                |                 |
| Start-up voltage                                |                                                                                         |  | 160 V                                |                 |
| MPPT voltage range                              |                                                                                         |  | 200 - 850 V                          |                 |
| Max. input current                              |                                                                                         |  | 4 × 20 A                             |                 |
| Max. short circuit current                      |                                                                                         |  | 4 × 30 A                             |                 |
| MPPT number / Max. input strings number         |                                                                                         |  | 4 / 4                                |                 |
| Battery                                         |                                                                                         |  |                                      |                 |
| Battery type                                    |                                                                                         |  | Li-ion                               |                 |
| Battery voltage range                           |                                                                                         |  | 120 - 800 V                          |                 |
| Max. charge / discharge power                   | 12 kW                                                                                   |  | 15 kW                                | 20 kW           |
| Max. charge / discharge current                 |                                                                                         |  | 50 A                                 |                 |
| Communication                                   |                                                                                         |  | CAN / RS485                          |                 |
| Output AC (Grid side)                           |                                                                                         |  |                                      |                 |
| Rated output power                              | 12 kW                                                                                   |  | 15 kW                                | 20 kW           |
| Max. apparent output power                      | 12 kVA                                                                                  |  | 15 kVA                               | 20 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                       | 18.2 A / 17.3 A                                                                         |  | 22.8 A / 21.7 A                      | 30.4 A / 28.9 A |
| Max. output current                             | 18.2 A / 17.3 A                                                                         |  | 22.8 A / 21.7 A                      | 30.4 A / 28.9 A |
| Power factor                                    |                                                                                         |  | > 0.99 (0.8 leading - 0.8 lagging)   |                 |
| THDi                                            |                                                                                         |  | < 3%                                 |                 |
| Input AC (Grid side)                            |                                                                                         |  |                                      |                 |
| Input voltage range                             |                                                                                         |  | 304 - 437 V / 320 - 460 V            |                 |
| Max. input current                              | 27.3 A / 26.0 A                                                                         |  | 34.2 A / 32.5 A                      | 45.6 A / 43.3 A |
| Rated grid frequency                            |                                                                                         |  | 50 Hz / 60 Hz                        |                 |
| Frequency range                                 |                                                                                         |  | 45 - 55 Hz / 55 - 65 Hz              |                 |
| Input Generator                                 |                                                                                         |  |                                      |                 |
| Max. input power                                | 12 kW                                                                                   |  | 15 kW                                | 20 kW           |
| Max. input current                              | 18.2 A / 17.3 A                                                                         |  | 22.8 A / 21.7 A                      | 30.4 A / 28.9 A |
| Rated input frequency                           |                                                                                         |  | 50 Hz / 60 Hz                        |                 |
| Output AC (Back-up)                             |                                                                                         |  |                                      |                 |
| Rated output power                              | 12 kW                                                                                   |  | 15 kW                                | 20 kW           |
| Max. apparent output power                      |                                                                                         |  | 1.6 time of rated power, 10 s        |                 |
| Back-up switch time                             |                                                                                         |  | < 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                            | 18.2 A / 17.3 A                                                                         |  | 22.8 A / 21.7 A                      | 30.4 A / 28.9 A |
| THDv (@linear load)                             |                                                                                         |  | < 3%                                 |                 |
| Efficiency                                      |                                                                                         |  |                                      |                 |
| Max. efficiency                                 |                                                                                         |  | 97.7%                                |                 |
| EU efficiency                                   |                                                                                         |  | 97.5%                                |                 |
| BAT charged by PV max. efficiency               |                                                                                         |  | 98.5%                                |                 |
| BAT charged / discharged to AC max. efficiency  |                                                                                         |  | 97.2%                                |                 |
| Protection                                      |                                                                                         |  |                                      |                 |
| Anti-islanding protection                       |                                                                                         |  | Yes                                  |                 |
| Output over current protection                  |                                                                                         |  | Yes                                  |                 |
| Short circuit protection                        |                                                                                         |  | Yes                                  |                 |
| Integrated AFCI 2.0                             |                                                                                         |  | Optional                             |                 |
| Integrated DC switch                            |                                                                                         |  | Yes                                  |                 |
| DC reverse-polarity protection                  |                                                                                         |  | Yes                                  |                 |
| PV over voltage protection                      |                                                                                         |  | Yes                                  |                 |
| Battery reverse protection                      |                                                                                         |  | Yes                                  |                 |
| General Data                                    |                                                                                         |  |                                      |                 |
| Max. allowable phase imbalance (grid & back-up) |                                                                                         |  | 100%                                 |                 |
| Max. power per phase (grid & back-up)           |                                                                                         |  | 40% rated power                      |                 |
| Dimensions (W × H × D)                          |                                                                                         |  | 563 × 546 × 235 mm                   |                 |
| Weight                                          |                                                                                         |  | 32.6 kg                              |                 |
| Topology                                        |                                                                                         |  | Transformerless                      |                 |
| Self-consumption (night)                        |                                                                                         |  | < 25 W                               |                 |
| Operating ambient temperature range             |                                                                                         |  | -25 ~ +60°C                          |                 |
| Relative humidity                               |                                                                                         |  | 0 - 95%                              |                 |
| Ingress protection                              |                                                                                         |  | IP66                                 |                 |
| Noise emission (typical)                        |                                                                                         |  | < 65 dB(A)                           |                 |
| Cooling concept                                 |                                                                                         |  | Intelligent fan-cooling              |                 |
| Max. operation altitude                         |                                                                                         |  | 4000 m                               |                 |
| Grid connection standard                        | EN 50549-1/-10, VDE4105, CEI 0-21, CEI 0-16, NC-RFG TypeB, NRS 097-2-1, LTU-1, G99, PEA |  |                                      |                 |
| Safety / EMC standard                           | IEC/EN 62109-1/-2, IEC/EN 61000-6-1/-2/-3/-4                                            |  |                                      |                 |
| Features                                        |                                                                                         |  |                                      |                 |
| PV connection                                   |                                                                                         |  | MC4 connector                        |                 |
| Battery connection                              |                                                                                         |  | OT terminal                          |                 |
| AC connection                                   |                                                                                         |  | OT terminal                          |                 |
| Display                                         |                                                                                         |  | LED indicator & Bluetooth + APP      |                 |
| Communication                                   | CAN, RS485, Ethernet, Optional: Wi-Fi, Cellular, LAN                                    |  |                                      |                 |