

# Solis Solarator Series

Experience Uninterrupted Power with Solis Energy Storage Inverters

## Energy Storage Inverters

### S6-EH1P(12-16)K03-NV-YD-L

Single Phase | Low 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

- 160% PV input capacity to maximize solar energy utilization
- Switching time < 4ms



#### Flexible & Scalable

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



#### Simple & Fast Configuration

- 7-inch LCD screen for an intuitive user experience
- Bluetooth app support for quick and easy setup

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# DATASHEET

## S6-EH1P(12-16)K03-NV-YD-L

| Models                                         | 12K             |  | 14K                                                                          |  | 16K               |  |
|------------------------------------------------|-----------------|--|------------------------------------------------------------------------------|--|-------------------|--|
| Input DC (PV side)                             |                 |  |                                                                              |  |                   |  |
| Recommended max. PV array size                 | 24 kW           |  | 28 kW                                                                        |  | 32 kW             |  |
| Max. usable PV input power                     | 19.2 kW         |  | 22.4 kW                                                                      |  | 22.4 kW           |  |
| Max. input voltage                             |                 |  | 550 V                                                                        |  |                   |  |
| Rated voltage                                  |                 |  | 380 V                                                                        |  |                   |  |
| Start-up voltage                               |                 |  | 100 V                                                                        |  |                   |  |
| MPPT voltage range                             |                 |  | 100 - 450 V                                                                  |  |                   |  |
| Max. input current                             |                 |  | 40 A / 40 A / 40 A                                                           |  |                   |  |
| Max. short circuit current                     |                 |  | 50 A / 50 A / 50 A                                                           |  |                   |  |
| MPPT number / Max. input strings number        |                 |  | 3 / 6                                                                        |  |                   |  |
| Battery                                        |                 |  |                                                                              |  |                   |  |
| Battery type                                   |                 |  | Li-ion / Lead-acid                                                           |  |                   |  |
| Battery voltage range                          |                 |  | 40 - 60 V                                                                    |  |                   |  |
| Max. charge / discharge current                | 250 A           |  | 290 A                                                                        |  | 290 A             |  |
| Communication                                  |                 |  | CAN / RS485                                                                  |  |                   |  |
| Output AC (Grid side)                          |                 |  |                                                                              |  |                   |  |
| Rated output power                             | 12 kW           |  | 14 kW                                                                        |  | 16 kW             |  |
| Operation phase                                |                 |  | L/N/PE                                                                       |  |                   |  |
| Rated grid voltage                             |                 |  | 220 V / 230 V                                                                |  |                   |  |
| Rated grid frequency                           |                 |  | 50 Hz                                                                        |  |                   |  |
| Rated grid output current                      | 54.5 A / 52.2 A |  | 63.6 A / 60.9 A                                                              |  | 72.7 A / 69.6 A   |  |
| Power factor                                   |                 |  | > 0.99 (0.8 leading - 0.8 lagging)                                           |  |                   |  |
| THDi                                           |                 |  | < 3%                                                                         |  |                   |  |
| Input AC (Grid side)                           |                 |  |                                                                              |  |                   |  |
| Input voltage range                            |                 |  | 187 - 253 V                                                                  |  |                   |  |
| Max. input current                             | 81.8 A / 78.3 A |  | 95.5 A / 91.3 A                                                              |  | 109.1 A / 104.3 A |  |
| Frequency range                                |                 |  | 45 - 55 Hz / 55 - 65 Hz                                                      |  |                   |  |
| Output AC (Back-up)                            |                 |  |                                                                              |  |                   |  |
| Rated output power                             | 12 kW           |  | 14 kW                                                                        |  | 16 kW             |  |
| Max. apparent output power                     |                 |  | 2 times of rated power, 10 s                                                 |  |                   |  |
| Back-up switch time                            |                 |  | < 4 ms                                                                       |  |                   |  |
| Rated output voltage                           |                 |  | L/N/PE, 220 V / 230 V                                                        |  |                   |  |
| Rated frequency                                |                 |  | 50 Hz                                                                        |  |                   |  |
| Rated output current                           | 54.5 A / 52.2 A |  | 63.6 A / 60.9 A                                                              |  | 72.7 A / 69.6 A   |  |
| THDv (@linear load)                            |                 |  | < 3%                                                                         |  |                   |  |
| Input Generator                                |                 |  |                                                                              |  |                   |  |
| Max. input power                               | 12 kW           |  | 14 kW                                                                        |  | 16 kW             |  |
| Max. input current                             | 54.5 A / 52.2 A |  | 63.6 A / 60.9 A                                                              |  | 72.7 A / 69.6 A   |  |
| Rated input frequency                          |                 |  | 50 Hz                                                                        |  |                   |  |
| Efficiency                                     |                 |  |                                                                              |  |                   |  |
| Max. efficiency                                |                 |  | 97.6%                                                                        |  |                   |  |
| EU efficiency                                  |                 |  | 97.0%                                                                        |  |                   |  |
| BAT charged by PV max. efficiency              |                 |  | > 94.9%                                                                      |  |                   |  |
| BAT charged / discharged to AC max. efficiency |                 |  | > 94.33% / 93.51%                                                            |  |                   |  |
| Protection                                     |                 |  |                                                                              |  |                   |  |
| Surge protection                               |                 |  | Yes                                                                          |  |                   |  |
| DC reverse-polarity protection                 |                 |  | Yes (PV only)                                                                |  |                   |  |
| Ground fault monitoring                        |                 |  | Yes                                                                          |  |                   |  |
| Integrated AFCI                                |                 |  | Yes <sup>(1)</sup>                                                           |  |                   |  |
| Protection class / Over voltage category       |                 |  | I / II (PV and BAT), III (MAINS and BACKUP and GEN)                          |  |                   |  |
| General Data                                   |                 |  |                                                                              |  |                   |  |
| Dimensions (W × H × D)                         |                 |  | 459 × 845 × 313 mm                                                           |  |                   |  |
| Weight                                         |                 |  | 55.5 kg                                                                      |  |                   |  |
| Topology                                       |                 |  | Transformerless                                                              |  |                   |  |
| Operating ambient temperature range            |                 |  | -25 ~ +60°C                                                                  |  |                   |  |
| Ingress protection                             |                 |  | IP66                                                                         |  |                   |  |
| Noise emission (typical)                       |                 |  | < 65 dB(A)                                                                   |  |                   |  |
| Cooling concept                                |                 |  | Intelligent fan-cooling                                                      |  |                   |  |
| Max. operation altitude                        |                 |  | 4000 m                                                                       |  |                   |  |
| Grid connection standard                       |                 |  | NRS 097-2-1, IEC 62116, IEC 61727, IEC 60068, IEC 61683, EN 50530, EN50549-1 |  |                   |  |
| Safety / EMC standard                          |                 |  | IEC/EN 62109-1/-2, EN 61000-6-2/-3                                           |  |                   |  |
| Features                                       |                 |  |                                                                              |  |                   |  |
| DC connection                                  |                 |  | MC4 plug (PV port) / Terminal Block (BAT port)                               |  |                   |  |
| AC connection                                  |                 |  | Terminal Block                                                               |  |                   |  |
| Display                                        |                 |  | 7.0" LCD display & Bluetooth + APP                                           |  |                   |  |
| Communication                                  |                 |  | RS485, Optional: Cellular, Wi-Fi, LAN                                        |  |                   |  |

(1) Activation required.