

# Power-Box SH3/3.7/4.6/5/6K

## Single Phase Hybrid Inverter



### KEY FEATURES



#### Energy Management

- Max. efficiency 97.7%
- Max. PV input current 16 A \* 2
- 200% PV input oversizing
- Max. battery charge / discharge current 35 A



#### Safe & Convenient

- SPD type : DC II / AC III
- Working noise < 25 dB
- Quick installation and easy debugging



#### Powerful Backup

- THDv < 2%
- 200% peak output power
- Seamless on-grid / off-grid switching



#### Smart O & M

- Firmware OTA updates
- 24 / 7 online monitoring
- Smart remote diagnosis



# TECHNICAL PARAMETERS

| Models                                | Power-Box SH3K                                                                           | Power-Box SH3.7K | Power-Box SH4.6K | Power-Box SH5K | Power-Box SH6K |
|---------------------------------------|------------------------------------------------------------------------------------------|------------------|------------------|----------------|----------------|
| <b>Input (PV)</b>                     |                                                                                          |                  |                  |                |                |
| Max. PV Input Power                   | 6000 Wp                                                                                  | 7360 Wp          | 8280 Wp          | 9000 Wp        | 9000 Wp        |
| Max. PV Input Voltage                 |                                                                                          |                  | 600 V            |                |                |
| Start-up Voltage                      |                                                                                          |                  | 120 V            |                |                |
| MPPT Voltage Range                    |                                                                                          |                  | 80 ~ 550 V       |                |                |
| Max. Current per MPPT                 |                                                                                          |                  | 16 A             |                |                |
| Max. Short Circuit Current per MPPT   |                                                                                          |                  | 24 A             |                |                |
| Number of MPP Trackers                |                                                                                          |                  | 2                |                |                |
| Number of Strings per MPPT            |                                                                                          |                  | 1/1              |                |                |
| <b>Battery</b>                        |                                                                                          |                  |                  |                |                |
| Compatible Battery                    | BYD Battery-Box HVE or BYD Battery-Box HVB                                               |                  |                  |                |                |
| Battery Voltage                       | 80 ~ 480 V                                                                               |                  |                  |                |                |
| Max. Charge / Discharge Current       | 35 A                                                                                     |                  |                  |                |                |
| Max. Charge / Discharge Power         | 3000 W                                                                                   | 3680 W           | 4600 W           | 5000 W         | 6000 W         |
| <b>AC Input / Output (Grid)</b>       |                                                                                          |                  |                  |                |                |
| Rated AC Input / Output Power         | 3000 W                                                                                   | 3680 W           | 4600 W           | 5000 W         | 6000 W         |
| Max. AC Input / Output Apparent Power | 3300 VA                                                                                  | 4050 VA          | 4600 VA          | 5500 VA        | 6600 VA        |
| Rated AC Input / Output Current       | 13 A                                                                                     | 16 A             | 20 A             | 21.7 A         | 26.1 A         |
| Max. AC Input / Output Current        | 26 A / 15 A                                                                              | 32 A / 18 A      | 40 A / 20.9 A    | 44 A / 25 A    | 52 A / 30 A    |
| Rated AC Voltage Range                | 1 / N / PE, 220 V / 230 V / 240 V                                                        |                  |                  |                |                |
| AC Voltage Range                      | 0.9 Ur ~ 1.1 Ur                                                                          |                  |                  |                |                |
| AC Grid Frequency                     | 50 Hz (47.5 Hz ~ 52.5 Hz) / 60 Hz (57 Hz ~ 63 Hz)                                        |                  |                  |                |                |
| Power Factor                          | 0.99, 0.8 leading ~ 0.8 lagging adjustable                                               |                  |                  |                |                |
| THDi                                  | < 3%                                                                                     |                  |                  |                |                |
| <b>AC Output (Backup)</b>             |                                                                                          |                  |                  |                |                |
| Rated AC Output Power                 | 3000 W                                                                                   | 3680 W           | 4600 W           | 5000 W         | 6000 W         |
| Peak Output Power                     | 6000 VA, 10 s                                                                            | 7360 VA, 10 s    | 9200 VA, 10 s    | 10000 VA, 10 s | 12000 VA, 10 s |
| Back-up Switch Time                   | < 13 ms                                                                                  | < 13 ms          | < 13 ms          | < 13 ms        | < 13 ms        |
| Max. AC Output Current                | 13 A                                                                                     | 16 A             | 20 A             | 22 A           | 26 A           |
| Rated Output Voltage                  | 1 / N / PE, 220 V / 230 V / 240 V                                                        |                  |                  |                |                |
| Rated Output Grid Frequency           | 50 Hz / 60 Hz                                                                            |                  |                  |                |                |
| THDv                                  | < 2%                                                                                     |                  |                  |                |                |
| <b>Efficiency</b>                     |                                                                                          |                  |                  |                |                |
| MPPT Efficiency                       | 99.90%                                                                                   |                  |                  |                |                |
| Max. Efficiency                       | 97.70%                                                                                   |                  |                  |                |                |
| EU Efficiency                         | 96.60%                                                                                   |                  |                  |                |                |
| <b>Protection</b>                     |                                                                                          |                  |                  |                |                |
| Protection Class                      | I                                                                                        |                  |                  |                |                |
| Anti-islanding Protection             | Yes                                                                                      |                  |                  |                |                |
| DC Reverse Polarity Protection        | Yes                                                                                      |                  |                  |                |                |
| Insulation Monitoring                 | Yes                                                                                      |                  |                  |                |                |
| DC Surge Protection                   | II                                                                                       |                  |                  |                |                |
| AC Surge Protection                   | III                                                                                      |                  |                  |                |                |
| Residual Current Monitoring           | Yes                                                                                      |                  |                  |                |                |
| AC Overcurrent Protection             | Yes                                                                                      |                  |                  |                |                |
| DC Overvoltage Protection             | Yes                                                                                      |                  |                  |                |                |
| DC Undervoltage Protection            | Yes                                                                                      |                  |                  |                |                |
| AC Short-circuit Protection           | Yes                                                                                      |                  |                  |                |                |
| Over Voltage Category                 | DC : II / AC : III                                                                       |                  |                  |                |                |
| Battery Reverse Charging From Grid    | Yes                                                                                      |                  |                  |                |                |
| Ground Fault                          | Yes                                                                                      |                  |                  |                |                |
| Over-heat Protection                  | Yes                                                                                      |                  |                  |                |                |
| <b>General Data</b>                   |                                                                                          |                  |                  |                |                |
| Operating Temperature Range           | -25 °C ~ +60 °C                                                                          |                  |                  |                |                |
| Relative Operating Humidity           | 0 ~ 100 %RH, Non-Condensing                                                              |                  |                  |                |                |
| Operating Altitude                    | 4000 m                                                                                   |                  |                  |                |                |
| Cooling                               | Natural Convection                                                                       |                  |                  |                |                |
| Noise                                 | < 25 dB                                                                                  |                  |                  |                |                |
| Dimensions                            | 480 mm * 480 mm * 180 mm                                                                 |                  |                  |                |                |
| Weight                                | 20 kg                                                                                    |                  |                  |                |                |
| Inverter Topology                     | Non-isolated                                                                             |                  |                  |                |                |
| Display                               | LED                                                                                      |                  |                  |                |                |
| Parallel Operation                    | 3                                                                                        |                  |                  |                |                |
| Communication                         | WiFi, LAN, Bluetooth, RS485, CAN                                                         |                  |                  |                |                |
| Ingress Protection                    | IP65                                                                                     |                  |                  |                |                |
| Nighttime Power                       | < 13 W                                                                                   |                  |                  |                |                |
| <b>Standards Compliance</b>           |                                                                                          |                  |                  |                |                |
| Safety / EMC Standard                 | EN / IEC 62109-1 / 2, EN / IEC 62040-1, EN / IEC 62477-1, EN IEC 61000-6, EN IEC 61000-3 |                  |                  |                |                |
| Grid Connection Standard              | CEI 0-21, EN 50549-1, VDE-AR-N 4105, UNE 217002, NTS TYPEA, G99                          |                  |                  |                |                |