

# HS3 Single Phase All-in-One Solution

SAJ's latest all-in-one solution for residential energy storage system, integrated PCS, BMS, EMS, EV charger and battery, with plug-in play design, IP65 design and only 12 screws, making the installation a lot easier. HS3 covers from 3-6kW, 2 MPPTs and single phase grid.



- ❑ Integrated with 7kW EV charger module
- ❑ Max. 20A input current to better match high power panel
- ❑ Battery module integrated with a DC/DC optimiser, expandable whenever you need
- ❑ Plug-in connection of the modules without any cabling, easy installation
- ❑ 170mm thick, blend in with its surrounding
- ❑ Self-heating and fire-protection system inside the battery

HS3-3-6K-S2-W/G-P1 | HS3-3-6K-S2-W/G-P2  
HS3-3-6K-S2-W/G-P3 | HS3-3-6K-S2-W/G-P4  
HS3-3-6K-S2-W/G-P5 | HS3-3-6K-S2-W/G-P6

| System Model                              | HS3-3-6K-S2-W/G-P1   | HS3-3-6K-S2-W/G-P2 | HS3-3-6K-S2-W/G-P3 | HS3-3-6K-S2-W/G-P4          | HS3-3-6K-S2-W/G-P5          | HS3-3-6K-S2-W/G-P6           |                    |
|---|--|--------------------|--------------------|-----------------------------|-----------------------------|------------------------------|--------------------|
| System Diagram                            |  |                    |                    |                             |                             |                              |                    |
| Rated Output [W]                          | 3000-6000  |                    |                    |                             |                             |                              |                    |
| EV Charging Power [W]                     | 7000   |                    |                    |                             |                             |                              |                    |
| Number of Battery Modules                 | 1  | 2                  | 3                  | 4                           | 5                           | 6                            |                    |
| Nominal Energy [kWh]                      | 5.0  | 10.0               | 15.0               | 20.0                        | 25.0                        | 30.0                         |                    |
| Ingress Protection                        | IP65   |                    |                    |                             |                             |                              |                    |
| Operating Temperature Range               | -30°C ~ +50°C  |                    |                    |                             |                             |                              |                    |
| Relative Humidity Range                   | 5-95%  |                    |                    |                             |                             |                              |                    |
| Max. Operating Altitude [m]               | 2000   |                    |                    |                             |                             |                              |                    |
| Dimensions [H*W*D] [mm]                   | 980*695*170  | 1350*695*170       | 1720*695*170       | 1720*695*170<br>520*695*170 | 1720*695*170<br>890*695*170 | 1720*695*170<br>1260*695*170 |                    |
| <b>Inverter Model</b>                     |  |                    |                    |                             |                             |                              |                    |
| Model                                     | HS3-3K-S2-W/G-P  | HS3-3.6K-S2-W/G-P  | HS3-4K-S2-W/G-P    | HS3-4.6K-S2-W/G-P           | HS3-5K-S2-W/G-P             | HS3-6K-S2-W/G-P              | HS3-6K-S2-W/G-P-IE |
| <b>DC Input</b>                           |  |                    |                    |                             |                             |                              |                    |
| Max. PV Array Power [Wp]@STC              | 6000   | 7200               | 8000               | 9200                        | 10000                       | 12000                        | 12000              |
| Max. DC Voltage [V]                       | 600  |                    |                    |                             |                             |                              |                    |
| MPPT Voltage Range [V]                    | 90~550   |                    |                    |                             |                             |                              |                    |
| Rated DC Voltage [V]                      | 360  |                    |                    |                             |                             |                              |                    |
| Start Voltage [V]                         | 100  |                    |                    |                             |                             |                              |                    |
| Max. DC Input Current [A]                 | 20/20  |                    |                    |                             |                             |                              |                    |
| Max. DC Short Circuit Current [A]         | 25/25  |                    |                    |                             |                             |                              |                    |
| No. of MPPT                               | 2  |                    |                    |                             |                             |                              |                    |
| <b>AC Output/Input [On-grid]</b>          |  |                    |                    |                             |                             |                              |                    |
| Rated AC Power [W]                        | 3000   | 3600               | 4000               | 4600                        | 5000                        | 6000                         | 5750               |
| Max. Apparent Power [VA]                  | 3300   | 3600               | 4400               | 4600                        | 5500                        | 6000                         | 5750               |
| Rated Output Current [A]@230Vac           | 13.0   | 15.7               | 17.4               | 20.0                        | 21.7                        | 26.1                         | 25                 |
| Max. Output Current [A]                   | 14.3   | 15.7               | 19.1               | 20.0                        | 23.9                        | 27.3                         | 25                 |
| Max. Input Current [A]@230Vac             | 54.5   |                    |                    |                             |                             |                              |                    |
| Rated AC Voltage/Range [V]                | L+N+PE, 220, 230, 240/180 ~ 280  |                    |                    |                             |                             |                              |                    |
| Rated Output Frequency/Range [Hz]         | 50, 60/45 ~ 55, 55 ~ 65  |                    |                    |                             |                             |                              |                    |
| Power Factor [cos φ]                      | 0.8 leading ~ 0.8 lagging  |                    |                    |                             |                             |                              |                    |
| Total Harmonic Distortion [THDi]          | <3%  |                    |                    |                             |                             |                              |                    |
| <b>Battery Parameters</b>                 |  |                    |                    |                             |                             |                              |                    |
| Battery Type                              | LiFePO4  |                    |                    |                             |                             |                              |                    |
| Battery Voltage Range[V]                  | 380 ~ 500  |                    |                    |                             |                             |                              |                    |
| Max. Charging/Discharging Current [A]     | 15.8/9.2   | 15.8/10            | 15.8/12.4          | 15.8/12.9                   | 15.8/15.2                   | 15.8/16.8                    | 15.8/16            |
| Scalability                               | BU3-5.0-TV2-PRO (up to 8 battery modules)  |                    |                    |                             |                             |                              |                    |
| <b>AC Output [Back-up]</b>                |  |                    |                    |                             |                             |                              |                    |
| Rated Output Power [W]                    | 3000   | 3680               | 4000               | 4600                        | 5000                        | 6000                         | 6000               |
| Peak Output Apparent Power [VA]           | 3600,60s   | 4416,60s           | 4800,60s           | 5520,60s                    | 6000,60s                    | 7200,60s                     | 7200,60s           |
| Rated AC Voltage/Range [V]                | L+N+PE, 220,230,240/180 ~ 280  |                    |                    |                             |                             |                              |                    |
| Rated Output Frequency/Range [Hz]         | 50,60/45 ~ 55,55 ~ 65  |                    |                    |                             |                             |                              |                    |
| Output THDv (@ Linear Load)               | <3%  |                    |                    |                             |                             |                              |                    |
| <b>Efficiency</b>                         |  |                    |                    |                             |                             |                              |                    |
| Max. Efficiency                           | 97.6%  |                    |                    |                             |                             |                              |                    |
| Euro Efficiency                           | 97.2%  |                    |                    |                             |                             |                              |                    |
| <b>Protection</b>                         |  |                    |                    |                             |                             |                              |                    |
| Battery Input Reverse Polarity Protection | Integrated   |                    |                    |                             |                             |                              |                    |
| Over load Protection                      | Integrated   |                    |                    |                             |                             |                              |                    |
| AC Short Circuit Current Protection       | Integrated   |                    |                    |                             |                             |                              |                    |
| AC Overcurrent Protection                 | Integrated   |                    |                    |                             |                             |                              |                    |
| AC Overvoltage Protection                 | Integrated   |                    |                    |                             |                             |                              |                    |
| DC Surge Protection                       | Type II  |                    |                    |                             |                             |                              |                    |
| AC Surge Protection                       | Type II  |                    |                    |                             |                             |                              |                    |
| Anti-islanding Protection                 | Integrated   |                    |                    |                             |                             |                              |                    |
| AFCI Protection                           | Integrated   |                    |                    |                             |                             |                              |                    |
| <b>Interface</b>                          |  |                    |                    |                             |                             |                              |                    |
| PV Connection                             | MC4/D4   |                    |                    |                             |                             |                              |                    |
| AC Connection                             | Plug-in connector  |                    |                    |                             |                             |                              |                    |
| Battery Connection                        | Quick connector  |                    |                    |                             |                             |                              |                    |
| Display                                   | LED+APP  |                    |                    |                             |                             |                              |                    |
| Communication                             | Wi-Fi/Ethernet/4G(Optional)  |                    |                    |                             |                             |                              |                    |
| <b>General Parameters</b>                 |  |                    |                    |                             |                             |                              |                    |
| Topology                                  | Non-isolated   |                    |                    |                             |                             |                              |                    |
| Operating Temperature Range               | -30°C ~ +50°C  |                    |                    |                             |                             |                              |                    |
| Cooling Method                            | Natural Convection   |                    |                    |                             |                             |                              |                    |
| Relative Humidity Range                   | 0-100% Non-condensing  |                    |                    |                             |                             |                              |                    |
| Max. Operating Altitude [m]               | 3000   |                    |                    |                             |                             |                              |                    |
| Noise [dBA]                               | <35  |                    |                    |                             |                             |                              |                    |
| Ingress Protection                        | IP65   |                    |                    |                             |                             |                              |                    |
| Dimensions [H*W*D] [mm]                   | 400*695*170  |                    |                    |                             |                             |                              |                    |
| Weight [kg]                               | 27.5   |                    |                    |                             |                             |                              |                    |
| Standard                                  | EN 62109-1/2, EN 61000-6-2/4, EN 50438, EN 50549, C10/11, IEC 62116, IEC 61727, RD 1699, RD 413, UNE 206006, UNE 206007, NTS, CEI 0-16, CEI 0-21, AS 4777.2, NBR 16149, NBR 16150, VDE-AR-N 4105, VDE 0126-1-1 |                    |                    |                             |                             |                              |                    |