HS3 Three 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 5-12kW, 2 MPPTs and three phase grid.

- Integrated with 11kW 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
- Supported 100% three phase voltage imbalance
- 170mm thick, blend in with its surrounding
- Self-heating and fire-protection system inside the battery

HS3-5-12K-T2-W/G-P1 | HS3-5-12K-T2-W/G-P2
HS3-5-12K-T2-W/G-P3 | HS3-5-12K-T2-W/G-P4
HS3-5-12K-T2-W/G-P5

System Model	HS3-5-12K-T2-W/G-P1	HS3-5-12K-T2-W/G-P2	HS3-5-12K-T2-W/G-P3	HS3-5-12K-T2-W/G-P4	HS3-5-12K-T2-W/G-P5
System Diagram					
Rated Output [W]	5000-12000				
EV Charging Power [W]	11000				
Number of Battery Modules	1	2	3	4	5
Nominal Energy [kWh]	5.0	10.0	15.0	20.0	25.0
Ingress Protection	IP65				
Operating Temperature Range	-30℃ ~ +50℃				
Relative Humidity Range	5-95%				
Max. Operating Altitude [m]	2000				
Dimensions [H*W*D] [mm]	1030*695*170	1400*695*170	1770*695*170	1770*695*170 520*695*170	1770*695*170 890*695*170
Inverter Module					
Module	HS3-5K-T2-W/G-P	HS3-6K-T2-W/G-P	HS3-8K-T2-W/G-P	HS3-10K-T2-W/G-P	HS3-12K-T2-W/G-P
DC Input					
Max. PV Array Power [Wp]@STC	10000	12000	12000	15000	15000
Max. DC Voltage [V]	1000				
MPPT Voltage Range [V]	180 ~ 900				
Rated DC Voltage [V]	600				
Start Voltage [V]	180				
Max. DC Input Current [A]	20/20				
Max. DC Short Circuit Current [A]	25/25				
No. of MPPT	2				
AC Output/Input [On-grid]					
Rated AC Power [W]	5000	6000	8000	10000	12000*
Max. Apparent Power [VA]	5500	6600	8800	11000	12000*
Rated Output Current [A]@230Vac	7.2	8.7	11.6	14.5	17.4**
Max. Output Current [A]	8.0	9.6	12.8	15.9	17.4**
Max. Input Current [A]@230Vac	29.0				
Rated AC Voltage/Range [V]	3L+N+PE, 220/380, 230/400, 240/415; 180 ~ 280/312 ~ 485				
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%				
Battery Parameters					
Battery Type	LiFePO4				
Battery Voltage Range[V]	380~500				
Max. Charging/Discharging Current [A]	30/15.8	30/18.4	30/25	30/30	30/30
Scalability	BU3-5.0-TV2-PRO (up to 8 battery modules)				
AC Output [Back-up]					
Rated Output Power [W]	5000	6000	8000	10000	12000
Peak Output Apparent Power [VA]	7500,60s	9000,60s	12000,60s	15000,60s	15000,60s
Rated AC Voltage/Range [V]	3L+N+PE, 220/380, 230/400, 240/415; 180 ~ 280/312 ~ 485				
Rated Output Frequency/Range [Hz]	50,60/45 ~ 55,55 ~ 65				
Output THDv (@ Linear Load)	<3%				
Efficiency					
Max. Efficiency	98.0%				
Euro Efficiency	97.6%				
Protection					
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				
Interface					
PV Connection	MC4/D4				
AC Connection	Plug-in connector				
Battery Connection	Quick connector				
Display	LED+APP				
Communication	Wi-Fi/Ethernet/4G (Optional)				
General Parameters					
Topology	Non-isolated				
Operating Temperature Range	-30℃ ~ +50℃				
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]	450*695*170				
Weight [kg]	34				
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				

* For Ireland HS3-12K-T2-W/G-P Rated AC Power(W) and Max.Apparent Power(VA) is 11000 ** For Ireland HS3-12K-T2-W/G-P Rated Output Current(A) @230Vac and Max. Output Current(A) is 15.9