

# HS3 Three Phase All-in-One Solution

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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

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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°C ~ +50°C		
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
<b>Inverter Module</b>					
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
<b>DC Input</b>					
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		
<b>AC Output/Input [On-grid]</b>					
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%		
<b>Battery Parameters</b>					
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)		
<b>AC Output [Back-up]</b>					
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%		
<b>Efficiency</b>					
Max. Efficiency			98.0%		
Euro Efficiency			97.6%		
<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]			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