



# RAYBOX™ HS2

SINGLE PHASE HYBRID ALL-IN-ONE SOLUTION



AC retrofit & easy installation

**16A**

Max 16A input current to better match high power panel



Modular design and expandable up to 20.0kWh

**UPS**

With UPS function switch time  $\leq 10\text{ms}$

**IP65**

IP65 outdoor design

**AFCI**

AFCI integrated(optional)  
RSD supported(optional)

MODEL	HS2-3K-S2-X	HS2-3.6K-S2-X	HS2-4K-S2-X	HS2-4.6K-S2-X	HS2-5K-S2-X	HS2-5K-S2-B-X	HS2-6K-S2-IE-X	HS2-6K-S2-X
<b>DC Input</b>								
Max. PV Array Power [Wp]@ STC	4500	5400	6000	6900	7500	7500	9000	9000
Max. DC Voltage [V]	550							
MPPT Voltage Range [V]	90 ~ 500							
Rated DC Voltage [V]	360							
Start Voltage [V]	100							
Max. DC Input Current [A]	16/16							
Max. DC Short Circuit Current [A]	19.2/19.2							
No. of MPPT	2							
<b>Battery Parameters</b>								
Battery Type	LiFePO4							
Battery Voltage Range [V]	85 ~ 450							
Max. Charging/ Discharging Current [A]	30/30							
Scalability	BU2-5.0-HV1/5 (up to 4 battery modules)							
<b>AC Output [On-grid]</b>								
Rated AC Power [W]	3000	3680	4000	4600	5000	5000	5500	6000
Max. Apparent Power*1 [VA]	3300	3680	4400	4600	5500	5000	5500	6000
Rated Output Current [A]@ 230Vac	13.0	16.0	17.4	20.0	21.7*2	21.7	25.0	26.1
Max. Output Current [A]	15.0	16.0	20.0	20.0	25.0	22.7	25.0	27.3
Current Inrush [A]	100.0							
Max. AC Fault Current [A]	55.0							
Max. AC Over Current Protection [A]	55.0							
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>AC Input [On-grid]</b>								
Rated AC Voltage/ Range [V]	L+N+PE, 220,230,240/180 ~ 280							
Rated Input Frequency [Hz]	50,60							
Max. Input Current [A]@ 230Vac	26.1	32.0	34.8	40.0	43.5	43.5	52.2	52.2
<b>AC Output [Back-up]</b>								
Max. Output Power [VA]	3000	3680	4000	4600	5000	5000	5500	6000
Max. Output Current [A]	13.6	16.7	18.2	20.9	22.7	22.7	25.0	27.3
Peak Output Apparent Power [VA]	3600,60s	4416,60s	4800,60s	5520,60s	6000,60s	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	97.0%							
<b>Protection</b>								
Battery Input Reverse Polarity Protection	Integrated							
Over load Protection	Integrated							
AC Short Circuit Current Protection	Integrated							
DC Surge Protection	Integrated							
AC Surge Protection	Integrated							
Anti-islanding Protection	Integrated							
AFCI Protection	Optional							
RSD Protection	Optional							
<b>Interface</b>								
PV Connection	MC4/H4							
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	-10°C to +50°C (>45°C derating)							
Cooling Method	Natural Convection							
Ambient Humidity	0-100% Non-condensing							
Altitude	4000m (>3000m Power Derating)							
Noise [dBA]	<35							
Ingress Protection	IP65							
Dimensions [H*W*D] [mm]	354*626*365							
Weight [kg]	25							
Warranty [Year]	10							
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 O-021, AS 4777.2, NBR 16149, NBR 16150 VDE-AR-N 4105, VDE 0126-1-1							

Remarks: \*1 According to C10/C11, Max. Apparent Power= Rated AC Power;

\*2 According to VDE-ARN-N 4105, Rated AC Current for HS2-5K-S2 is 20A.