

SLA RESS - Hybrid Inverter Specification

Product Model	SLA-HB-S1-6kW1P	SLA-HB-S1-5kW1P	SLA-HB-S1-3.8kW1P
PV Input			
Maximum PV Array Power [String1/String2] (W)	3750/3750		
Maximum DC Voltage (V)	600 ^[1]		
Rated DC Operating Voltage (V)	360		
MPPT Voltage Range (V)	100 - 540		
MPPT Voltage Range for Rated Power (V)	225 - 480	185 - 480	141 - 480
Startup Voltage (V)	120		
Maximum Input Current [A/B] (A)	15 / 15		
Maximum Short-Circuit Current [A/B] (A)	18 / 18		
Number of MPP Tracks/String per MPP Tracker	2 / 1		
Battery Side			
Battery Type	Lithium Ion		
Battery Voltage Range (V)	85 ^[2] - 400		
Battery Voltage Range for Nominal Power (V)	250 - 400	225 - 400	170 - 400
Recommended Battery Voltage (V)	300		
Maximum Charge/Discharge Current (A)	25 / 25		
Communication Interface	RS485 / CAN		
Reverse Connect Protection	Yes		
AC Grid Side			
Rated AC Output Power (W)	6000 ^[3]	5000 ^[3]	3800
Maximum Output Power (W)	6000 ^[3]	5000 ^[3]	3800
Rated Apparent Power Output to Utility Grid (VA)	6000 ^[3]	5000 ^[3]	3800
Max. Apparent Power Output to Utility Grid (VA)	6000 ^[3]	5000 ^[3]	3800
Rated Apparent Power from Utility Grid (VA)	6000	5000	3800
Max. Apparent Power from Utility Grid (VA)	6000	6000	6000
Rated Grid AC Voltage (V)	L/N/PE 230		
Grid AC Voltage Range (V)	180 - 280		
Rated Grid Frequency (Hz)	50		
AC Grid Frequency Range (Hz)	50 ± 5		
Maximum Output AC Current to Utility Grid (A)	26.1	21.7	16.5
Rated Output AC Current to Utility Grid (A)	26.1	21.7	16.5
Maximum Input AC Current from Utility Grid (A)	26.1	26.1	26.1
Rated Input AC Current from Utility Grid (A)	26.1	21.7	16.5
Power Factor	~ 1 (Adjustable from 0.8 Leading to 0.8 Lagging)		
Total Harmonic Distortion (%)	< 3 at Rated Power		< 5 at Rated Power
Emergency Power Supply (EPS) Side			
Back-up Nominal Apparent Power (VA)	6000	5000	3800
Nominal Power (W)	6000	5000	3800
Max. Output Apparent Power without Grid (VA)	7500 at <10 Seconds		
Max. Output Apparent Power with Grid (VA)	7500 at <10 Seconds		
Nominal Output AC Voltage (V)	L/N/PE 230 V		
Nominal Output Frequency (Hz)	50		
Rated Output Current (A)	26.1	21.7	16.5
Maximum Output Current (A)	26.1	21.7	16.5
Maximum Output Overcurrent Protection (A)	32.6 at 10 Seconds		
Switching from Grid Connected Mode to Stand-Alone Mode (ms)	< 20		
Output Total Harmonic Distortion (%)	<5 at Linear Load		
Efficiency			
MPPT Efficiency (%)	99.9		
Euro Efficiency (%)	95.2	95.2	95.0
Maximum Efficiency (%)	96.8	96.7	96.5
Battery Charge/Discharge Efficiency (%)	97.6 (PV - Battery), 96.0 (Battery – AC)	97.6 (PV – Battery), 96.0 (Battery – AC)	97.6 (PV – Battery), 95.4 (Battery – AC)

Environment Limit	
Ingress Protection	IP65
Protection Class	Class I
Pollution Degree	PD3
Over Voltage Category	III (Mains), II (DC)
Operating Temperature Range (°C)	-20 ~ +60 (derating at +45)
Operation Altitude (m)	< 2000
Humidity	0% – 95%
Cooling Method	Natural Ventilation
User Interface	LED, APP, Touch Button
Communication with BMS	CAN / RS485
Communication with Meter	RS485
Communication with Portal	Wi-Fi
Typical Noise Emission (dB)	< 40
Dimension WxHxD (mm)	800 x 450 x 160
Weight (kg)	34
Topology	Non-isolated
Method for Anti-Islanding	Active Frequency Drift (AFD)
Self-Consumption at Night (W)	< 25
DC Connector	MC4 (4 ~ 6 mm ²)
AC Connector	Quick Plug
Storage Temperature	-40 ~ 85
Standard Warranty	120 Months
Standard Certification	
Safety	IEC/EN 62109-1&2, IEC 62477
EMC	IEC 61000-6-1, IEC 61000-6-3
Environment	IEC 60529, IEC 60068
Efficiency	IEC 61683
Certificates	AS/NZS 4777.2, VDE4105

Remarks

- [1] The MPPT board may get damaged if PV port exceeds this voltage. The full power operation voltage should be less than 480V, and the range 480V-540V is for limited power operation.
- [2] Battery port boot voltage must be greater than 95V.
- [3] The grid feed in power for VDE4105 is limited to 4600VA.