

Residential ESS

# N1 HV Series

3kW / 3.68kW / 5kW / 6kW

Single Phase, 2 MPPTs

High Voltage Hybrid Inverter



150% DC input oversizing



Charging / discharging efficiency >97%



Support VPP / FFR function



Up to 6000W charging / discharging rate



Remote firmware upgrade & work mode setting



EU standard certified by TÜV Rheinland



Model	N1-HV-3.0	N1-HV-3.68	N1-HV-5.0	N1-HV-6.0
<b>PV Input</b>				
Max. Recommended PV Power [Wp]	4500	5500	7500	9000
Max. PV Power for Single MPPT [Wp]			4500	
Max. PV Input Voltage [V]			600	
MPPT Voltage Range [V]			120 ~ 550	
Rated PV Input Voltage [V]			360	
Start-up Voltage [V]			150	
No. of MPP Trackers			2	
No. of Input Strings per Tracker			1	
Max. PV Input Current [A]			13.5 / 13.5	
Max. Short-circuit Current [A]			17 / 17	
<b>AC Output</b>				
Max. AC Output Apparent Power [VA]	3000	3680	5000 <sup>[1]</sup>	6000
Rated AC Output Power [W]	3000	3680	5000 <sup>[1]</sup>	6000
Max. AC Output Current [A]	13	16	21.7 <sup>[1]</sup>	26.1
Rated AC Output Current [A]	13	16	21.7 <sup>[1]</sup>	26.1
Rated AC Voltage / Range [V]			220 / 230 / 240; 160 ~ 290	
Grid Frequency / Range [Hz]			50 / 60; ±5	
Adjustable Power Factor [cosφ]			0.8 leading ~ 0.8 lagging	
Output THDi (@Rated Output)			< 2%	
<b>AC Input</b>				
Max. AC Input Apparent Power [VA]	3000	3680	5000	6000
Max. AC Input Current [A]	13	16	21.7	26.1
Rated AC Voltage / Range [V]			220 / 230 / 240; 160 ~ 290	
Grid Frequency / Range [Hz]			50 / 60; ±5	
<b>Battery</b>				
Battery Type			Lithium	
Battery Voltage Range [V]			80 ~ 450	
Max. Charging / Discharging Current [A]			25	
Max. Charging / Discharging Power [W]	4500 / 3000	5500 / 3680	6000 / 5000	6000 / 6000
Communication Interface			CAN	
<b>Backup Output (With Battery)</b>				
Rated Output Power [W]	3000	3680	5000	6000
Rated Output Voltage [V]			220 / 230	
Rated Frequency [Hz]			50 / 60	
Rated Output Current [A]	13	16	21.7	26.1
Output THDi (@Rated Output)			< 3%	
Automatic Switch Time [s]			< 0.5	
Peak Apparent Power, Duration [VA, s]	4500, 10	5520, 10	7500, 10	9000, 10
<b>Efficiency</b>				
Max. Efficiency	97.42%	97.45%	97.50%	97.50%
Euro Efficiency	97.15%	97.17%	97.20%	97.20%
Battery Charge / Discharge Efficiency	97.15%	97.17%	97.20%	97.20%
<b>Protection</b>				
DC Insulation Monitoring			Integrated	
Input Reverse Polarity Protection			Integrated	
Anti-island Protection			Integrated	
Residual Current Monitoring			Integrated	
Over-heat Protection			Integrated	
AC Overcurrent Protection			Integrated	
AC Short-circuit Protection			Integrated	
AC Overvoltage Protection			Integrated	
DC Surge Protection			Integrated	
AC Surge Protection			Integrated	
DC Switch			Integrated	
<b>General Data</b>				
Dimensions (W * H * D) [mm]			520 * 412 * 172	
Weight [kg]			20	
Display			LED + OLED	
Communication			CAN, RS485, USB Upgrade, Optional: WiFi, 4G, Ethernet	
Ambient Temperature Range [°C]			-30 ~ +60	
Relative Humidity			0 ~ 100%	
Operating Altitude [m]			≤ 2000	
Standby Self-consumption [W]			< 15	
Topology			Transformerless	
Cooling			Natural	
Ingress Protection			IP65	
Noise [dB]			< 35	
<b>Certifications &amp; Standards</b>				
Grid Regulation	AS 4777, EN 50549-1, EN 50549-GR, EN 50549-PL, EN 50549-IE, IEC 61727/IEC 62116, VDE 0126, UNE 217002/RD647, CEI 0-21, C10/C11, ORDINANCE No.140			
Safety Regulation	IEC 62109-1, IEC 62109-2			
EMC	EN / IEC 61000-6-1, EN / IEC 61000-6-3			

[1]: The AC output power for VDE-AR-N 4105, VDE 0126 and NRS 097-2-1 is limited to 4600VA&20A, for AS / NZS 4777.2 is limited to 4999VA & 21.7A.