

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
PV Input Data				
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. Input Current [A]		13.5 / 13.5		
Max. Short-circuit Current [A]		17 / 17		
AC Input / Output Data (On-grid)				
Max. Apparent Power [VA]	3000	3680	5000 ^[1]	6000
Rated AC Power [W]	3000	3680	5000 ^[1]	6000
Rated AC Current [A]	13	16	21.7 ^[1]	26.1
Max.AC Current [V]	13	16	21.7 ^[1]	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%		
Battery Data				
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		
EPS Output Data (With Battery)				
EPS Rated Power [W]	3000	3680	5000	6000
EPS Rated Voltage [V]		220 / 230		
EPS Rated Frequency [Hz]		50 / 60		
EPS Rated 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
Efficiency				
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%
Protection				
DC Switch		Integrated		
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		
General Data				
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		
Certifications & Standards				
Grid Regulation	AS 4777, EN 50549-1, EN 50549-PL, EN 50549-GR, IEC 61727, CEI 0-21, IEC 62116, C10 / C11, VDE0126, ORDINANCE 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.