



DHN-LVEH1P3~8K-G1

Single-phase Hybrid Energy Storage Inverter

The DHN-LVEH1P series hybrid inverter can simultaneously meet the requirements of both photovoltaic and energy storage systems. It integrates on-grid and off-grid functionalities, bidirectional power control, and intelligent management, enabling autonomous energy dispatch. Its modern design aligns with the concept of smart homes, making it an ideal choice for residential applications. This series is compatible with various batteries and pairs seamlessly with the DHN-LVWES battery series, offering multiple charging and discharging power options to ensure safe and reliable power supply for households.



Safety

- Intelligent AI - DC Arc fault protection
- Supports 2 times overload in short-time
- IP65 protection degree



Flexible

- Compatible with diesel generators
- AC couple to retrofit existing solar system
- Max. 10 pcs parallel for on&off-grid operation, support multiple batteries parallel



Smart

- 4ms backup power switching
- Colored LCD touchscreen for intuitive setup & real-time monitoring
- Supports the setting of 6 time periods for battery charging/discharging



High Efficiency

- Supports 1.6 times DC overloading
- 180A charge and discharge current
- 97.6% maximum conversion efficiency & 95% maximum charging efficiency

Technical Data

Model	DHN-LVEH1P3K-EU-G1 DHN-LVEH1P3K-BR-G1	DHN-LVEH1P3.6K-EU-G1 DHN-LVEH1P3.6K-BR-G1	DHN-LVEH1P5K-EU-G1 DHN-LVEH1P5K-BR-G1	DHN-LVEH1P6K-EU-G1 DHN-LVEH1P6K-BR-G1	DHN-LVEH1P7K-EU-G1 DHN-LVEH1P7K-BR-G1	DHN-LVEH1P7.5K-EU-G1 DHN-LVEH1P7.5K-BR-G1	DHN-LVEH1P8K-EU-G1 DHN-LVEH1P8K-BR-G1
Battery Input Data							
Battery Type	Lead-acid/Li-Ion						
Battery Voltage Range (V)	40~60						
Max. Charging Current (A)	70	80	112	135	157	169	180
Max. Discharging Current (A)	70	80	112	135	157	169	180
Charging Strategy for Li-ion Battery	Self-adaption to BMS						
Number of Battery Input	1						
PV String Input Data							
Max. PV Input Power (W)	4800	5760	8000	9600	11200	12000	12800
Max. PV Input Voltage (V)	500						
Start-up Voltage (V)	120						
MPPT Voltage Range (V)	120~425						
Rated PV Input Voltage(V)	370						
Max. Operating PV Input Current (A)	20		20+20				
Max. Input Short-Circuit Current (A)	23						
No. of MPP Trackers/No. of Strings MPP Tracker	1/1		2/1+1				
AC Input/Output Data							
Rated AC Input/Output Active Power (W)	3000	3600	5000	6000	7000	7500	8000
Max. AC Input/Output Apparent Power (VA)*	3300	3960	5500	6600	7700	8250	8800
Rated AC Input/Output Current (A)	13.6/13	16.4/15.7	22.8/21.8	27.3/26.1	31.8/30.4	34.1/32.6	36.4/34.8
Max. AC Input/Output Current (A)*	15/14.3	18/17.3	25/24	30/28.7	35/33.5	37.5/35.9	40/38.3
Max. Continuous AC Passthrough (grid to load)(A)	27	33	46	54	54	54	54
Peak Power (off-grid) (W)	2 times of rated power for 10s						
Power Factor Adjustment Range	0.8 leading to 0.8 lagging						
Rated Input/Output Voltage/Range (V)	220/230 0.85Un~1.1Un						
Rated Input/Output Grid Frequency/Range(Hz)	50/45~55, 60/55~65						
Grid Connection Form	L+N+PE						
Total Current Harmonic Distortion THDi	<2% (of nominal power)						
DC Injection Current	<0.5% In						
Efficiency							
Max. Efficiency	97.60%						
Euro Efficiency	96.50%						
MPPT Efficiency	99%						
Equipment Protection							
Integrated	DC Polarity Reverse Connection Protection, AC Output Overcurrent Protection, Thermal Protection, AC Output Overvoltage Protection, AC Output Short Circuit Protection, DC Component Monitoring, Overvoltage Load Drop Protection, Ground Fault Current Monitoring, Arc Fault Circuit Interrupter (optional), Power Network Monitoring, Island Protection Monitoring, Earth Fault Detection, DC Input Switch, DC Terminal Insulation Impedance Monitoring, Residual Current (RCD) Detection, Surge protection level						
Surge Protection Level	TYPE III(DC), TYPE III(AC)						
Interface							
Communication Interface	RS485/CAN						
Monitor Mode	WIFI						
General Data							
Operating Temperature Range (°C)	-40 to +60						
Permissible Ambient Humidity	0~100%						
Permissible Altitude (m)	3000						
Ingress Protection(IP) Rating	IP65						
Inverter Topology	Non-Isolated						
Over Voltage Category	OVC III(DC), OVC III(AC)						
Cabinet Size (WxHxD mm)	330*563*223						
Weight (kg)	23.7				24.9		
Type of Cooling	Natural cooling				Intelligent Air Cooling		
Warranty	5 Years/10 Years the Warranty Period Depends the Final Installation Site of Inverter, More Info Please Refer to Warranty Policy						
Safety / EMC Standard	IEC/EN 61000-6-1:2019, IEC/EN 61000-6-3:2021, IEC/EN 62109-1:2010, IEC/EN 62109-2:2011, IEC 63027:2023						

Note: *It is only implemented under specific safety regulations and working conditions.

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