



DHN-LVEH3P14~20K-G1

Three-phase Hybrid Energy Storage Inverter

The DHN-LVEH3P 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(10S)
- IP65 protection degree



Flexible

- Compatible with diesel generators
- AC couple to retrofit existing solar system
- 100% three-phase unbalanced output, 50% maximum output of rated power/phase



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
- 350A charge and discharge current
- 97.6% maximum conversion efficiency & 93% maximum charging efficiency

Technical Data

Model	DHN-LVEH3P14K-EU-G1	DHN-LVEH3P15K-EU-G1	DHN-LVEH3P16K-EU-G1	DHN-LVEH3P18K-EU-G1	DHN-LVEH3P20K-EU-G1
Battery Input Data	Lead-acid or Lithium-ion				
Battery Voltage Range (V)	40-60				
Max. Charging Current (A)	260	280	300	330	350
Max. Discharging Current (A)	260	280	300	330	350
Charging Strategy for Li-ion Battery	Self-adaption to BMS				
Number of Battery Input	2				
PV String Input Data					
Max. PV Access Power (W)	28000	30000	32000	36000	40000
Max. PV Input Power (W)	22400	24000	25600	28800	32000
Max. PV Input Voltage (V)	1000				
Start-up Voltage (V)	150				
MPPT Voltage Range (V)	150-850				
Rated PV Input Voltage (V)	550				
Max. Operating PV Input Current (A)	40+40				
Max. Input Short-Circuit Current (A)	54+54				
No. of MPP Trackers	2				
No. of Strings MPP Tracker	2+2				
AC Input/Output Data					
Rated AC Input/Output Active Power (W)	14000	15000	16000	18000	20000
Max. AC Input/Output Apparent Power (VA)	15400	16500	17600	19800	22000
Rated AC Input/Output Current (A)	21.3/20.3	22.8/21.8	24.3/23.2	27.3/26.1	30.4/29
Max. AC Input/Output Current (A)	23.4/22.4	25/24	26.7/25.6	30/28.7	33.4/31.9
Max. Continuous AC Passthrough (grid to load) (A)	70				
Peak Power (off-grid) (W)	2 times of rated power, 10s				
Power Factor Adjustment Range	0.8 leading to 0.8 lagging				
Rated Input/Output Voltage/Range (V)	220/380V, 230/400V 0.85Un-1.1Un				
Rated Input/Output Grid Frequency/Range(Hz)	50/45-55, 60/55-65				
Grid Connection Form	3L+N+PE				
Total Current Harmonic Distortion THDi	<3% (of nominal power)				
DC Injection Current	<0.5% In				
Efficiency					
Max. Efficiency	>97.6%				
Euro Efficiency	>97%				
MPPT Efficiency	>99%				
Equipment Protection					
Integrated	DC Reverse Polarity Protection, AC Output Overcurrent Protection, Thermal Protection, AC Output Overvoltage Protection, AC Output Short Circuit Protection, DC Component Monitoring, Arc Fault Circuit Interrupter (optional), Anti-islanding Protection, DC Switch, Insulation Impedance Detection, Residual Current Detection				
Surge Protection Level	TYPE II(DC), TYPE II(AC)				
Interface					
Communication Interface	RS485/RS232/CAN				
Monitor Mode	GPRS/WIFI/Bluetooth/4G/LAN(optional)				
General Data					
Operating Temperature Range (°C)	-40 to +60, >45 Derating				
Permissible Ambient Humidity	0-100%				
Permissible Altitude (m)	3000				
Noise (dB)	<60				
Ingress Protection(IP) Rating	IP 65				
Inverter Topology	Non-Isolated				
Over Voltage Category	OVC III(DC), OVC III(AC)				
Cabinet Size (WxHxD mm)	456×750×280				
Weight (kg)	51.9				
Type of Cooling	Intelligent Air Cooling				
Warranty (Years)	5 / 10 (the Warranty Period Depends the Final Installation Site of Inverter, More Info Please Refer to Warranty Policy)				
Grid Regulation	EN 50549				
Safety / EMC Standard	IEC/EN 61000-6-1/3, IEC/EN 62109-1, IEC/EN 62109-1/2				

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