

HYBRID INVERTER

Three Phase: HP3-37.5/40/49.9/50/60K S1

As the core of the energy storage solution, LIVOLTEK three phase hybrid inverter offers flexible and social-able solutions for both residential and commercial applications. With the ability of scalable battery storage, the high-voltage inverter facilitate powerful energy backup and also present high self-consumption with optimized built-in EMS to reduce energy cost.

⚙️ High Efficiency & Reliability

- 120% overload capacity (10s) in off-grid mode
- Supports max. 45A PV input current, compatible with high-power solar panels
- Seamless on-grid/off-grid switching time <10ms
- Supports up to 200% PV oversize, 100% three-phase unbalanced output

🛡️ Flexibility & Reliability

- Supports up to 10 units in parallel for grid-tied and off-grid operation
- Diesel generator compatibility; flexible multi-energy integration
- Dual independent battery inputs for flexible configuration
- Flexible DC/AC PV coupling for retrofits and expansion

🔒 Safe & Intelligent

- Support AFCI, Type II AC/DC surge protection
- Supports intelligent terminal temperature detection
- Intelligent load management and remote OTA



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INVERTER

Model	HP3-37K5S1	HP3-40KS1	HP3-49K9S1	HP3-50KS1	HP3-60KS1
PV Input					
Max. PV Input Power	75kWp	80kWp	99.8kWp	100kWp	120kWp
Max. PV Input Voltage			1100V		
Rated Input Voltage			600V		
MPPT Voltage Range			150 ~ 1000 V		
No. of MPPTs/Strings per MPPT			5 (2/2/2/2/2)		
Max. PV Current			45/45A/45A/45A/45A		
Max. Short Circuit Current			55A/55A/55A/55A/55A		
AC Input / Output @ On-grid					
Rated AC Output Power	37.5kW	40kW	49.9kW	50kW	60kW
Max. Apparent Output Power	37.5kVA	44kVA	49.9kVA	55kVA	66kVA
Max. AC Input Power	75kW	80kW	99.8kW	100kW	120kW
Rated AC Voltage			3W+N+PE, 380V, 400V, 415V		
AC Frequency			50 / 60Hz		
Rated Output Current	57A	60.6A	75.6A	75.8A	90.9A
Max. Output Current	57A	66.7A	75.6A	83.4A	100A
THDi (Rated Power)			< 3%		
Power Factor			~1 (Adjustable from 0.8 Leading to 0.8 Lagging)		
AC Input @ Generator					
Max. AC Input Power	75kW	80kW	99.8kW	100kW	120kW
Nominal AC Voltage			3W+N+PE, 380V, 400V, 415V		
AC Frequency			50 / 60Hz		
AC Output @ Back-up					
Rated Output Power	41.2kW	44kW	55kW	55kW	66kW
Peak Output Power (10s)			78.7kVA		
Rated Output Voltage			3W+N+PE, 220/380V, 230/400V, 240/415V		
Rated Frequency			50 / 60Hz		
Rated Output Current	62.6A	66.7A	83.4A	83.4A	100A
THDv (linear load)			< 3%		
Switch Time			< 10ms		
Battery					
Battery Type			Lithium		
Battery Voltage Range			120 ~ 900V		
Max. Charge/Discharge Current ¹			80A*2 / 80A*2		
Communication with BMS			CAN		
Efficiency					
Max. Efficiency			98.40%		
Euro Efficiency			98.00%		
Protection					
PV Reverse Polarity Protection			Support		
Anti-islanding Protection			Support		
AC Overcurrent Protection			Support		
AC Short Circuit Protection			Support		
Leakage Current Protection			Support		
DC Switch			Support		
Battery Input Reverse Polarity Protection			Support		
Surge Protection			DC Type II / AC Type II		
AFCI			Optional		
General Data					
Topology			Transformerless		
Dimension (W*H*D)			620*895*300 mm		
Weight			80kg		
Noise			<65dB		
Altitude			2000m		
Cooling			Intelligent Fan		
Protection Rating			IP66		
Mounting Method			Wall-mounted		
Operating Temperature Range			-25 to +60℃		
Ambient Humidity			0 ~ 95%RH (Non-condensing)		
Display			LED & APP		
Communication			Wi-Fi/DO/DI/RS485/CAN		
Standard	IEC61727/62116,EN50549-1/10, IEC/EN 62109-1/-2, EN61000-6-1,EN61000-6-2,EN61000-6-3, EN61000-6-4, IEC/EN 62920				

*1 Supporting parallel 160A input.