

LITHV SERIES

Experience Uninterrupted
Power with Solis Energy
Storage Inverters

LITHV-H3P (30-50)K

Three Phase | High Voltage



6 Leading Features

- Supports flexible PV connection through DC and AC coupling for retrofitting and expanding
- Supports battery reserve function in multiple scenarios
- Smart Load Prioritizing – Extending support for critical loads
- SmartLoad/GEN/INV port - Flexible connection of multiple energy sources such as Grid-tied inverter, diesel generator, wind turbines, etc.
- Seamless on grid/off grid switching time <10ms
- Support max 10 pcs in parallel mode, >6 pcs recommend Solis power distribution cabinet

8 Unique Features

- Usable PV power up to 200% inverter rated power, to improve the utilization of PV generation
- Supports max 20A PV input current, perfect match for high power PV modules
- Compatible with 100-280Ah battery modules
- Supports faster charging with battery current up to 140A
- Powerful backup overload capability – 160% overload
- Supports a wide power range of generator connections from 10kVA to 50kVA
- Supports 2 independent battery connections for flexible configuration
- 7-inch large screen uses U.S.-made ZEITLER industrial-grade components

Models	29.9K		30K		40K		50K	
Input DC (PV side)								
Recommended max. PV array size	59.8 kW		60 kW		80 kW		100 kW	
Max. usable PV input power	59.8 kW		60 kW		80 kW		96 kW	
Max. input voltage					1000 V			
Rated voltage					600 V			
Start-up voltage					180 V			
MPPT voltage range					150 - 850 V			
Max. input current	40 A / 40 A / 40 A						4 × 40 A	
Max. short circuit current	60 A / 60 A / 60 A						4 × 60 A	
MPPT number / Max. input strings number	3 / 6						4 / 8	
Battery								
Battery type					Li-ion			
Battery voltage range					150 - 800 V			
Max. charge / discharge power	32.1 kW		33 kW		44 kW		55 kW	
Max. charge / discharge current					70 A × 2 ⁽¹⁾			
Number of battery ports					2			
Max. charge / discharge power of each input	32.1 kW		33 kW		35 kW		35 kW	
Communication					CAN / RS485			
Output AC (Grid side)								
Rated output power	29.9 kW		30 kW		40 kW		50 kW	
Max. apparent output power	29.9 kVA		30 kVA		40 kVA		50 kVA	
Rated grid voltage					3/N/PE, 220 V / 380 V, 230 V / 400 V			
Rated grid frequency					50 Hz / 60 Hz			
Rated grid output current	45.4 A / 43.2 A		45.6 A / 43.3 A		60.8 A / 57.7 A		76 A / 72.2 A	
Max. output current	45.4 A / 43.2 A		45.6 A / 43.3 A		60.8 A / 57.7 A		76 A / 72.2 A	
Power factor					> 0.99 (0.8 leading - 0.8 lagging)			
THDi					< 3%			
Input AC (Grid side)								
Max. AC passthrough current	90.8 A / 86.4 A		91.2 A / 86.6 A		121.6 A / 115.4 A		152 A / 144.4 A	
Rated input voltage					3/N/PE, 220 V / 380 V, 230 V / 400 V			
Rated input frequency					50 Hz / 60 Hz			
Input Generator								
Max. input power	29.9 kW		30 kW		40 kW		50 kW	
Rated input current	45.4 A / 43.2 A		45.6 A / 43.3 A		60.8 A / 57.7 A		76 A / 72.2 A	
Rated input voltage					3/N/PE, 220 V / 380 V, 230 V / 400 V			
Rated input frequency					50 Hz / 60 Hz			
Output AC (Back-up)								
Rated output power	29.9 kW		30 kW		40 kW		50 kW	
Max. apparent output power					1.6 times of rated power, 2 s			
Back-up switch time					< 10 ms			
Rated output voltage					3/N/PE, 220 V / 380 V, 230 V / 400 V			
Rated frequency					50 Hz / 60 Hz			
Rated output current	45.4 A / 43.2 A		45.6 A / 43.3 A		60.8 A / 57.7 A		76 A / 72.2 A	
THDv (@linear load)					< 2%			
Efficiency								
Max. efficiency					97.8%			
EU efficiency					97.4%			
BAT charged by PV max. efficiency					98.5%			
BAT charged / discharged to AC max. efficiency					97.5%			
Protection								
Anti-islanding protection					Yes			
Output over current protection					Yes			
Short circuit protection					Yes			
Integrated DC switch					Yes			
DC reverse-polarity protection					Yes			
Surge protection					DC Type II / AC Type II			
Integrated AFCI 2.0					Optional			
General Data								
Dimensions (W × H × D)					530 × 880 × 290 mm			
Weight					73 kg			
Topology					Transformerless			
Self-consumption (night)					< 35 W			
Operating ambient temperature range					-25 ~ +60°C			
Relative humidity					0 - 100%			
Ingress protection					IP66			
Cooling concept					Intelligent fan-cooling			
Max. operation altitude					4000 m			
Grid connection standard					G99, VDE-AR-N 4105/VDE V 0124, EN 50549-1/EN 50549-10, VDE 0126/UTE C 15/VFR:2019, NTS 631/RD 1699/RD 244/UNE 206006/UNE 206007-1, CEI 0-21, C10/11, NRS 097-2-1, TOR, EIFS 2018.2, IEC 62116, IEC 61727, IEC 60068, IEC 61683, EN 50530, MEA, PEA,PORTARIA Nº 140, DE 21 DE MARÇO DE 2022			
Safety / EMC standard					IEC/EN 62109-1/-2, IEC/EN 61000-6-2/-4, EN 55011			
Features								
PV connection					MC4 Quick connection plug			
Battery connection					Terminal connector			
AC connection					Terminal Block			
Display					7.0" LCD display & Bluetooth + APP			
Communication					CAN, RS485, Ethernet, Optional: Wi-Fi, Cellular, LAN			

(1) Supporting parallel 140A input.

