

HYD-5-10K-LSP1

5 / 6 / 7.5 / 10 kW

Split-phase hybrid inverter



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High performance

- 2 MPPTs, Max. 40A DC input current per MPPT
- Support 200% overload for 10 seconds
- Max. 190A charge/discharge current



Flexible application

- Multiple inverters in parallel to build a microgrid.
- Support diesel generators



Safe and reliable

- AFCI protection integrated
- On/off grid seamless switching (4ms)

Model	HYD-5K-LSP1		HYD-6K-LSP1		HYD-7.5K-LSP1		HYD-10K-LSP1	
System Parameters								
Recommended Max. PV Power	10 kWp		12 kWp		16 kWp		20 kWp	
Max. Input Voltage					550 Vd.c.			
Start-up Voltage ^[1]					90 Vd.c.			
Rated Input Voltage					360 Vd.c.			
MPP Voltage Range					60-500 Vd.c.			
Number of MPPT					2			
Max. Number of Input Strings per MPPT	1/1		2/1				2/2	
Max. Input Current	20/20 A		40/20 A				40/40 A	
Max. Isc	25/25 A		50/25 A				50/50 A	
Battery								
Voltage Range					40-60 Vd.c.			
Number of Battery Input Channels					1			
Max. Charging Power					8 kW			
Max. Discharging Power	5 kW		6 kW		7.5 kW		10 kW	
Max. Charging Current					190 A			
Max. Discharging Current	125 A		150 A				190 A	
Battery Type ^[2]					Lead-acid or Lithium-ion			
BMS Communication					RS-485/CAN			
AC Backup								
Rated Output Voltage	L1+L2+N+PE, 120 / 240 V.a.c. (Split Phase); 127 / 220 V.a.c. (2/3 Phase); 220 V.a.c. (Single Phase)							
Rated Output Frequency	50/60 Hz							
Rated Output Power	5 kW		6 kW		7.5 kW		10 kW	
Rated Output Current	20.8/22.7/22.7 A		25.0/27.3/27.3 A		31.3/34.1/34.1A		45.5/43.5/41.7 A	
Rated Apparent Power	5 kVA		6 kVA		7.5 kVA		10 kVA	
Max. Apparent Power	5.5 kVA		6.6 kVA		7.5 kVA		11 kVA	
Max. Output Current	22.9/25.0/25.0 A		27.5/30.0/30.0 A		31.3/34.1/34.1A		50/47.8/45.8 A	
Peak Output Apparent Power ^[5]	2 times of rated power, 10s							
THDv(@ linear load)	<3%							
Switching Time ^[4]	4 ms default							
AC Generator								
Rated Input Voltage	L1+L2+N+PE, 120 / 240 V.a.c. (Split Phase); 127 / 220 V.a.c. (2/3 Phase); 220 V.a.c. (Single Phase)							
Rated Input Frequency	50/60 Hz							
Rated Input Power	5 kW		6 kW		7.5 kW		10 kW	
Rated Input Current	20.8/22.7/22.7 A		25.0/27.3/27.3 A		31.3/34.1/34.1A		45.5/43.5/41.7 A	
Rated Apparent Power	5 kVA		6 kVA		7.5 kVA		10 kVA	
Max. Apparent Power	5.5 kVA		6.6 kVA		7.5 kVA		11 kVA	
Max. Input Current	22.9/25.0/25.0 A		27.5/30.0/30.0 A		31.3/34.1/34.1A		50/47.8/45.8 A	
AC Grid								
Rated Voltage	L1+L2+N+PE, 120 / 240 V.a.c. (Split Phase); 127 / 220 V.a.c. (2/3 Phase); 220 V.a.c. (Single Phase)							
Rated Frequency	50/60 Hz							
Rated Output Power	5 kW		6 kW		7.5 kW		10 kW	
Rated Output Current	20.8/22.7/22.7 A		25.0/27.3/27.3 A		31.3/34.1/34.1A		45.5/43.5/41.7 A	
Rated Apparent Power	5 kVA		6 kVA		7.5 kVA		10 kVA	
Max. Apparent Power	5.5 kVA		6.6 kVA		7.5 kVA		11 kVA	
Max. Output Current	22.9/25.0/25.0 A		27.5/30.0/30.0 A		31.3/34.1/34.1A		50/47.8/45.8 A	
Max. Input Current ^[5]	35A		40A				50A	
THDi	<3%							
Power Factor Range	0.8 lagging - 0.8 leading							
Efficiency								
Max. MPPT Efficiency					99.9%			
Max. Efficiency					97.6%			
European Efficiency					97%			
Max. Efficiency of Charging/Discharging ^[6]					95%			
Protection								
DC Switch					Yes			
PV Reverse Connection Protection					Yes			
Battery Reverse Connection Protection					Yes			
Output Short Circuit Protection					Yes			
Output Overcurrent Protection					Yes			
Output Overvoltage Protection					Yes			
Insulation Impedance Detection					Yes			
Residual Current Detection					Yes			
Anti-island Protection					Yes			
Surge Protection ^[7]					PV: Type II, AC: Type II			
General Parameter								
Inverter Topology					Non-Isolation			
Protective Class					Class I			
IP Rating					IP66			
Overvoltage Category					AC III, DC II			
Operating Temperature Range					-30°C to +60°C (derating above +45°C)			
Relative Humidity Range					5%-95%			
Max. Operating Altitude					4000 m (derating above 2000 m)			
Standby Self-consumption ^[8]					<15 W			
Installation Method					Wall Mounted			
Dimensions(W*H*D)					410*620*255 mm			
Cooling Mode					Intelligent Airflow			
Weight					28 kg			
Communication					RS485, Optional: WiFi/4G/LAN			
Display					LCD & APP			

[1] Minimum PV voltage to start MPPT operation. [2] Please refer to document "SOFAR inverter Model compatible battery list". [3] Full sun and battery. [4] In the on-grid mode, the nominal power of the hybrid inverter is higher than the total power of the home loads. [5] Continuous AC passthrough current from grid to load. [6] Battery-AC maximum efficiency of battery charge and discharge. [7] According to EN/IEC 61643-11. [8] Standby loss at rated input voltage.

*All specifications are subject to change without notice.