

HYD-3-8K-LS1-PRO

3 / 3.6 / 4 / 4.6 / 5 / 6 / 7 / 7.6 / 8 kW

Single-phase hybrid inverter



High performance

- 2 MPPTs, Max. 32A DC input current
- Supports 200% overload for 10 seconds
- Max. charging/discharging current up to 190A
- On/off grid seamless switching (4ms)



Flexible application

- Multiple inverters in parallel to build a microgrid
- Supports diesel generator
- Supports various brands of lithium batteries



Safe & Reliable

- Wide temperature range from -30°C to 60°C
- Full power output at 50°C

Model	HYD-3K-LS1-PRO	HYD-3.6K-LS1-PRO	HYD-4K-LS1-PRO	HYD-4.6K-LS1-PRO	HYD-5K-LS1-PRO	HYD-6K-LS1-PRO	HYD-7K-LS1-PRO	HYD-7.6K-LS1-PRO	HYD-8K-LS1-PRO
PV Input									
Recommended Max. PV Power	6 kWp	7.2 kWp	7.2 kWp	9.2 kWp	10 kWp	12 kWp	14 kWp	15.2 kWp	16 kWp
Max. Input Voltage					500 Vd.c				
Start-up Voltage ^[1]					90 Vd.c.				
Rated Input Voltage					360 Vd.c.				
MPP Voltage Range					60-435 Vd.c.				
Number of MPPT					2				
Max. Number of Input Strings per MPPT	1/1						2/1		
Max. Input Current	20/20 A						32/20 A		
Max. Isc	25/25 A						40/25 A		
Battery									
Voltage Range					40-60 Vd.c				
Number of Battery Input Channels					1				
Max. Charging Power					7 kW			8 kW	
Max. Discharging Power	3 kW	3.6 kW	4 kW	4.6 kW	5 kW	6 kW	7 kW	7.6kW	8kW
Max. Charging Current					175 A			190A	
Max. Discharging Current	75 A	90 A	100 A	115 A	125 A	150 A	175 A	190 A	190 A
Battery Type ^[2]					Lead-acid or Lithium-ion				
BMS Communication					RS-485/CAN				
AC Backup									
Rated Output Voltage					L+N+PE, 220/230/240 Va.c.				
Rated Output Frequency					50/60 Hz				
Rated Output Power	3 kW	3.6 kW	4 kW	4.6 kW	5 kW	6 kW	7 kW	7.6kW	8kW
Rated Output Current	13.6/13.0/12.5 A	16.4/15.7/15.0 A	18.2/17.4/16.7 A	20.9/20.0/19.2 A	22.7/21.7/20.8 A	27.3/26.1/25.0 A	31.8/30.4/29.2A	34.5/33.0/31.7A	36.4/34.8/33.3 A
Rated Apparent Power	3 kW	3.6 kW	4 kW	4.6 kW	5 kW	6 kW	7 kW	7.6kW	8kW
Max. Apparent Power	3.3 kVA	3.6 kVA	4.4 kVA	4.6 kVA	5.5 kVA	6.6 kVA	7.7 kVA	8.4 kVA	8.8 kVA
Max. Output Current	15.0/14.3/13.8 A	16.4/15.7/15.0 A	20.0/19.1/18.3 A	20.9/20.0/19.2 A	25.0/23.9/22.9 A	30.0/28.7/27.5 A	35/33.5/32.1 A	38.0/36.3/34.8 A	40.0/38.3/36.7 A
Peak Output Apparent Power ^[3]					2 times of rated power, 10s				
THDv(@ linear load)					< 3%				
Switching Time					4 ms default				
AC Smartload/Generator									
Rated Output Voltage					L+N+PE, 220/230/240 Va.c.				
Rated Output Frequency					50/60 Hz				
Rated Output Power	3 kW	3.6 kW	4 kW	4.6 kW	5 kW	6 kW	7 kW	7.6 kW	8 kW
Rated Output Current	13.6/13.0/12.5 A	16.4/15.7/15.0 A	18.2/17.4/16.7 A	20.9/20.0/19.2 A	22.7/21.7/20.8 A	27.3/26.1/25.0 A	31.8/30.4/29.2A	34.5/33.0/31.7A	36.4/34.8/33.3 A
Rated Apparent Power	3 kVA	3.6 kVA	4 kVA	4.6 kVA	5 kVA	6 kVA	7 kVA	7.6 kVA	8 kVA
Max. Apparent Power	3.3 kVA	3.6 kVA	4.4 kVA	4.6 kVA	5.5 kVA	6.6 kVA	7.7 kVA	8.4 kVA	8.8 kVA
Max. Output Current	15.0/14.3/13.8 A	16.4/15.7/15.0 A	20.0/19.1/18.3 A	20.9/20.0/19.2 A	25.0/23.9/22.9 A	30.0/28.7/27.5 A	35/33.5/32.1 A	38.0/36.3/34.8 A	40.0/38.3/36.7 A
AC Grid									
Rated Voltage					L+N+PE, 220/230/240 Va.c.				
Rated Frequency					50/60 Hz				
Rated Output Power	3 kW	3.6 kW	4 kW	4.6 kW	5 kW	6 kW	7 kW	7.6 kW	8 kW
Rated Output Current	13.6/13.0/12.5 A	16.4/15.7/15.0 A	18.2/17.4/16.7 A	20.9/20.0/19.2 A	22.7/21.7/20.8 A	27.3/26.1/25.0 A	31.8/30.4/29.2A	34.5/33.0/31.7A	36.4/34.8/33.3 A
Rated Apparent Power	3 kVA	3.6 kVA	4 kVA	4.6 kVA	5 kVA	6 kVA	7 kVA	7.6 kVA	8 kVA
Max. Apparent Power	3.3 kVA	3.6 kVA	4.4 kVA	4.6 kVA	5.5 kVA	6.6 kVA	7.7 kVA	8.4 kVA	8.8 kVA
Max. Output Current	15.0/14.3/13.8 A	16.4/15.7/15.0 A	20.0/19.1/18.3 A	20.9/20.0/19.2 A	25.0/23.9/22.9 A	30.0/28.7/27.5 A	35/33.5/32.1 A	38.0/36.3/34.8 A	40.0/38.3/36.7 A
Max. Input Current ^[4]					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					97.0%				
Max. Efficiency of Charging/Discharging ^[5]					95.0%				
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 ^[6]					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℃ - +60℃ (derating above + 45℃)				
Relative Humidity Range					5%-95%				
Max. Operating Altitude					4000 m (derating above 2000 m)				
Standby Self-consumption ^[7]					<15 W				
Installation Method					Wall Mounted				
Dimensions (W×H×D) / Weight					335×540×220 mm / 24 kg				
Cooling Mode					Intelligent Airflow				
Communication					RS485/Bluetooth, 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] Continuous AC passthrough current from grid to load. [5] Battery-AC maximum efficiency of battery charge and discharge. [6] According to EN/IEC 61643-11.
[7] Standby loss at rated input voltage.

*All specifications are subject to change without notice.