

# 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	
<b>PV Input</b>										
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 <sup>[1]</sup>					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		
<b>Battery</b>										
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 <sup>[2]</sup>					Lead-acid or Lithium-ion					
BMS Communication					RS-485/CAN					
<b>AC Backup</b>										
Rated Output Voltage					L+N+PE, 220/230/240 V.a.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 <sup>[3]</sup>					2 times of rated power, 10s					
THDv(@ linear load)					< 3%					
Switching Time					4 ms default					
<b>AC Smartload/Generator</b>										
Rated Output Voltage					L+N+PE, 220/230/240 V.a.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	
<b>AC Grid</b>										
Rated Voltage					L+N+PE, 220/230/240 V.a.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 <sup>[4]</sup>					35A	40A	50A			
THDi					< 3%					
Power Factor Range					0.8 lagging - 0.8 leading					
<b>Efficiency</b>										
Max. MPPT Efficiency					99.9%					
Max. Efficiency					97.6%					
European Efficiency					97.0%					
Max. Efficiency of Charging/Discharging <sup>[5]</sup>					95.0%					
<b>Protection</b>										
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 <sup>[6]</sup>					PV: Type II, AC: Type II					
<b>General Parameter</b>										
Inverter Topology					Non-Isolation					
Protective Class					Class I					
IP Rating					IP66					
Overvoltage Category					AC III, DC II					
Operating Temperature Range					-30°C - +60°C (derating above + 45°C)					
Relative Humidity Range					5%-95%					
Max. Operating Altitude					4000 m (derating above 2000 m)					
Standby Self-consumption <sup>[7]</sup>					<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.