HYD-8-20K-LT1

8 / 10 / 12 / 15 / 20 kW

Three-phase hybrid inverter



Robustness

- Maximum 200% PV input and 40A per MPPT
- 200% overload capability for 10 seconds
- Max. charging/discharging current of 350A

Saftey

- IP66 protection rating
- Integrated type II surge protection
- AI based AFCI protection(Optional)

Flexibility

- Multiple inverters in parallel connection
- Flexible expansion of battery power and capacity
- Integration of generators to extend backup duration

Intelligent

- UPS-level switching time < 4ms (Typical)
- Supports 100% unbalanced on both the BACKUP and GRID port
- Multi-function EMS integrated, highy utilization ratio of solar energy

www.sofarsolar.com

© As of July 2025, SOFARSOLAR Co.,Ltd. The depiction of colors and shape of the product may differ from the original. SOFAR reserves the right to make changes or improvements to the products without prior notice. Ordering information is valid for specialist retailers. All brands or logos are trademarks or registered trademarks of their respective owners. All rights, technical modifications, and errors reserved.

Model	HYD-8K-LT1	HYD-10K-LT1	HYD-12K-LT1	HYD-15K-LT1	HYD-20K-LT1
PV Input					
Recommended Max. PV Power	16 kWp	20 kWp	24 kWp	30 kWp	40 kWp
Max. Input Voltage	1000 Vd.c.				
Start-up Voltage [1]	200 Vd.c.				
Rated Input Voltage	600 Vd.c.				
MPP Voltage Range	160-950 Vd.c.				
Number of MPPT	2				
Max. Number of Input Strings per MPPT	2/2				
Max. Input Current	40/40 A				
Max. Isc	50/50 A				
Battery					
Voltage Range	40-60 Vd.c.				
Number of Battery Input Channels	1				
Max. Charging Power	12 kW			20 kW	
Max. Discharging Power	8 kW	10 kW	12 kW	15 kW	20 kW
Max. Charging Current	240 A			350 A	
Max. Discharging Current	160 A	200 A	240 A	300 A	350 A
Battery Type [2]	Lead-acid or Lithium-ion				
BMS Communication	RS-485/CAN				
AC Backup					
Rated Output Voltage	3N~+PE, 380/400/415 Va.c.				
Rated Output Frequency	50/60 Hz				
Rated Output Power	8 kW	10 kW	12 kW	15 kW	20 kW
Rated Output Current	12.1/11.6/11.1 A	15.2/14.5/13.9A	18.2/17.4/16.7 A	22.8/21.7/20.9 A	30.4/28.9/27.8A
Rated Apparent Power	8 kVA	10 kVA	12 kVA	15 kVA	20 kVA
Max. Apparent Power	8.8 kVA	11 kVA	13.2 kVA	16.5 kVA	22 kVA
Max. Output Current	13.3/12.8/12.2 A	16.7/15.9/15.3 A	20.0/19.1/18.3 A	25.1/23.8/23.0 A	33.4/31.8/30.6 A
Peak Output Apparent Power [3]	2 times of rated power, 10s				
THDv(@ linear load)	<3%				
Switching Time	4 ms default				
Asymmetric load	Yes, Supports 100% three-phase unbalanced load				
AC Generator					
Rated Input Voltage	3N~+PE, 380/400/415 Va.c.				
Rated Input Frequency	50/60 Hz				
Rated Input Power	8 kW	10 kW	12 kW	15 kW	20 kW
Rated Input Current	12.1/11.6/11.1 A	15.2/14.5/13.9A	18.2/17.4/16.7 A	22.8/21.7/20.9 A	30.4/28.9/27.8A
Rated Apparent Power	8 kVA	10 kVA	12 kVA	15 kVA	20 kVA
Max. Apparent Power	8.8 kVA	11 kVA	13.2 kVA	16.5 kVA	22 kVA
Max. Input Current	13.3/12.8/12.2 A	16.7/15.9/15.3 A	20.0/19.1/18.3 A	25.1/23.8/23.0 A	33.4/31.8/30.6 A
AC Grid					
Rated Voltage	3N~+PE, 380/400/415 Va.c.				
Rated Frequency	50/60 Hz				
Rated Output Power	8 kW	10 kW	12 kW	15 kW	20 kW
Rated Output Current	12.1/11.6/11.1 A	15.2/14.5/13.9A	18.2/17.4/16.7 A	22.8/21.7/20.9 A	30.4/28.9/27.8A
Rated Apparent Power	8 kVA	10 kVA	12 kVA	15 kVA	20 kVA
Max. Apparent Power	8.8 kVA	11 kVA	13.2 kVA	16.5 kVA	22 kVA
Max. Output Current	13.3/12.8/12.2 A	16.7/15.9/15.3 A	20.0/19.1/18.3 A	25.1/23.8/23.0 A	33.4/31.8/30.6 A
Max. Input Current [4]	40 A		45 A	50 A	60 A
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°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 [7]	<15 W				
Installation Method	Wall Mounted				
Dimensions(W×H×D)	375×680×280 mm				
Cooling Mode	Intelligent Airflow				
Weight	48 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] 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.