

HYD-5-20K-LT1

5 / 6 / 6.5 / 8 / 9.9 / 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



Safety

- 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, highly utilization ratio of solar energy

Model	HYD-5K-LT1	HYD-6K-LT1	HYD-6.5K-LT1	HYD-8K-LT1	HYD-9.9K-LT1-A	HYD-10K-LT1	HYD-12K-LT1	HYD-15K-LT1	HYD-20K-LT1
PV Input									
Recommended Max. PV Power	10 kWp	12 kWp	13 kWp	16 kWp	20 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	5 kW	6 kW	6.5 kW	8 kW	9.9 kW	10 kW	12 kW	15 kW	20 kW
Max. Charging Current					240 A			350 A	
Max. Discharging Current	120 A	135 A	145 A	190 A	205 A	210 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 V.a.c.								
Rated Output Frequency	50/60 Hz								
Rated Output Power	5 kW	6 kW	6.5 kW	8 kW	9.9 kW	10 kW	12 kW	15 kW	20 kW
Rated Output Current	7.6/7.2/6.9 A	9.1/8.7/8.3 A	9.9/9.4/9.0 A	12.1/11.6/11.1 A	15.0/14.3/13.8 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	5 kVA	6 kVA	6.5 kVA	8 kVA	9.9 kVA	10 kVA	12 kVA	15 kVA	20 kVA
Max. Apparent Power	5.5 kVA	6.6 kVA	7.15 kVA	8.8 kVA	9.9 kVA	11 kVA	13.2 kVA	16.5 kVA	22 kVA
Max. Output Current	8.3/8.0/7.6 A	10/9.6/9.2 A	10.9/10.3/9.9 A	13.3/12.8/12.2 A	15.0/14.3/13.8 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 V.a.c.								
Rated Input Frequency	50/60 Hz								
Rated Input Power	5 kW	6 kW	6.5 kW	8 kW	9.9 kW	10 kW	12 kW	15 kW	20 kW
Rated Input Current	7.6/7.2/6.9 A	9.1/8.7/8.3 A	9.9/9.4/9.0 A	12.1/11.6/11.1 A	15.0/14.3/13.8 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	5 kVA	6 kVA	6.5 kVA	8 kVA	9.9 kVA	10 kVA	12 kVA	15 kVA	20 kVA
Max. Apparent Power	5.5 kVA	6.6 kVA	7.15 kVA	8.8 kVA	9.9 kVA	11 kVA	13.2 kVA	16.5 kVA	22 kVA
Max. Input Current	8.3/8.0/7.6 A	10/9.6/9.2 A	10.9/10.3/9.9 A	13.3/12.8/12.2 A	15.0/14.3/13.8 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 V.a.c.								
Rated Frequency	50/60 Hz								
Rated Output Power	5 kW	6 kW	6.5 kW	8 kW	9.9 kW	10 kW	12 kW	15 kW	20 kW
Rated Output Current	7.6/7.2/6.9 A	9.1/8.7/8.3 A	9.9/9.4/9.0 A	12.1/11.6/11.1 A	15.0/14.3/13.8 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
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Max. Input Current ^[4]	35 A			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℃ to + 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)					485×690×290 mm				
Cooling Mode					Intelligent Airflow				
Weight					52 kg				
Communication					RS485, Optional: Wi-Fi/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.