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, highy utilization ratio of solar energy

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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	10kWp	12kWp	13kWp	16kWp	20kWp	20kWp	24kWp	30kWp	40kWp
Max. Input Voltage	1000Vd.c.								
Start-up Voltage [1]	200Vd.c.								
Rated Input Voltage	600Vd.c.								
MPP Voltage Range	160-950Vd.c.								
Number of MPPT	2								
Max. Number of Input Strings per MPPT	2/2								
Max. Input Current	40/40A								
Max. Isc	50/50A								
Battery									
Voltage Range	40-60Vd.c.								
Number of Battery Input Channels	1								
Max. Charging Power	12kW							20kW	
Max. Discharging Power	5kW	6kW	6.5kW	8kW	9.9kW	10kW	12kW	15kW	20kW
Max. Charging Current	240A							350A	
Max. Discharging Current	120A	135A	145A	190A	205A	210A	240A	300A	350A
Battery Type [2]	Lead-acid or Lithium-ion								
BMS Communication	RS-485/CAN								
AC Backup									
Rated Output Voltage	3N~+PE, 380/400/415Va.c.								
Rated Output Frequency	50/60Hz								
Rated Output Power	5kW	6kW	6.5kW	8kW	9.9kW	10kW	12kW	15kW	20kW
Rated Output Current	7.6/7.2/6.9A	9.1/8.7/8.3A	9.9/9.4/9.0A	12.1/11.6/11.1A	15.0/14.3/13.8A	15.2/14.5/13.9A	18.2/17.4/16.7A	22.8/21.7/20.9A	30.4/28.9/27.8A
Rated Apparent Power	5kVA	6kVA	6.5kVA	8kVA	9.9kVA	10kVA	12kVA	15kVA	20kVA
Max. Apparent Power	5.5kVA	6.6kVA	7.15kVA	8.8kVA	9.9kVA	11kVA	13.2kVA	16.5kVA	22kVA
Max. Output Current	8.3/8.0/7.6A	10/9.6/9.2A	10.9/10.3/9.9A	13.3/12.8/12.2A	15.0/14.3/13.8A	16.7/15.9/15.3A	20.0/19.1/18.3A	25.1/23.8/23.0A	33.4/31.8/30.6A
Peak Output Apparent Power [3]	2 times of rated power, 10s								
THDv(@ linear load)	< 3%								
Switching Time	4ms default								
Asymmetric load	Yes, Supports 100% three-phase unbalanced load								
AC Smartload/Generator									
Rated Output Voltage	3N~+PE, 380/400/415Va.c.								
Rated Output Frequency	50/60Hz								
Rated Output Power	5kW	6kW	6.5kW	8kW	9.9 kW	10kW	12kW	15kW	20kW
Rated Output Current	7.6/7.2/6.9A	9.1/8.7/8.3A	9.9/9.4/9.0A	12.1/11.6/11.1A	15.0/14.3/13.8A	15.2/14.5/13.9A	18.2/17.4/16.7A	22.8/21.7/20.9A	30.4/28.9/27.8A
Rated Apparent Power	5kVA	6kVA	6.5kVA	8kVA	9.9kVA	10kVA	12kVA	15kVA	20kVA
Max. Apparent Power	5.5kVA	6.6kVA	7.15kVA	8.8kVA	9.9kVA	11kVA	13.2kVA	16.5kVA	22kVA
Max. Output Current	8.3/8.0/7.6A	10/9.6/9.2A	10.9/10.3/9.9A	13.3/12.8/12.2A	15.0/14.3/13.8A	16.7/15.9/15.3A	20.0/19.1/18.3A	25.1/23.8/23.0A	33.4/31.8/30.6A
AC Grid									
Rated Voltage	3N~+PE, 380/400/415Va.c.								
Rated Frequency	50/60Hz								
Rated Output Power	5kW	6kW	6.5kW	8kW	9.9 kW	10kW	12kW	15 kW	20kW
Rated Output Current	7.6/7.2/6.9A	9.1/8.7/8.3A	9.9/9.4/9.0A	12.1/11.6/11.1A	15.0/14.3/13.8A	15.2/14.5/13.9A	18.2/17.4/16.7A	22.8/21.7/20.9 A	30.4/28.9/27.8A
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Max. Output Current	8.3/8.0/7.6A	10/9.6/9.2A	10.9/10.3/9.9A	13.3/12.8/12.2A	15.0/14.3/13.8A	16.7/15.9/15.3A	20.0/19.1/18.3A	25.1/23.8/23.0 A	33.4/31.8/30.6A
Max. Input Current [4]	35A			40A			45A	50A	60A
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 ~ +60°C (derating above + 45°C)								
Relative Humidity Range	5%-95%								
Max. Operating Altitude	4000 m (derating above 2000 m)								
Standby Self-consumption [7]	< 15W								
Installation Method	Wall Mounted								
Dimensions(W×H×D)	485×690×290mm								
Cooling Mode	Intelligent Airflow								
Weight	52kg								
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.