HYD-14.9-30K-T1

14.9 / 15 / 20 / 25 / 29.9 / 30 kW

Three-phase hybrid inverter



Simplicity

- Light weight and convenient transportation
- LCD and App for easy commissioning

Safety

- IP66 protection rating
- DC SPD type I+II, AC SPD type II
- AI based AFCI protection

Flexibility

- Multiple inverters in parallel connection
- Supports intelligent control of non critical loads

Robustness

- Maximum 200% PV input, and 40A per MPPT
- Supports 100% unbalanced loads
- 150% overload capability for 10 seconds
- Integration of generators to extend backup duration

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Model	HYD-14.9K-T1-A	HYD-15K-T1	HYD-20K-T1	HYD-25K-T1	HYD-29.9K-T1-A-PLUS	HYD-30K-T1-PLUS
PV Input						
Recommended Max. PV Power	30 kWp	30 kWp	40 kWp	50 kWp	60 kWp	60 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	3					
Max. Number of Input Strings per MPPT	2/2/2					
Max. Input Current	40/40/40 A					
Max. Isc	50/50/50 A					
Battery						
Voltage Range	600-1000 Vd.c.					
Number of Battery Input Channels	1					
Max. Charging Power	30 kW					
Max. Discharging Power	14.9 kW	15 kW	20 kW	25 kW	29.9 kW	30 kW
Max. Charging Current	50 A					
Max. Discharging Current	23.8 A	24 A	32 A	40 A	47.8 A	50 A
Battery Type[2]	Lithium-ion					
BMS Communication	CAN					
AC Backup						
Rated Output Voltage	3N~+PE, 380/400/415 Va.c.					
Rated Output Frequency	50/60 Hz					
Rated Output Power	14.9 kW	15 kW	20 kW	25 kW	29.9 kW	30 kW
Rated Output Current	22.6/21.5/20.7 A	22.8/21.7/20.9 A	30.4/28.9/27.8 A	38.0/36.1/34.8 A	45.4/43.2/41.6 A	45.6/43.3/41.7 A
Rated Apparent Power	14.9 kVA	15 kVA	20 kVA	25 kVA	29.9 kVA	30 kVA
Max. Apparent Power	14.9 kVA	16.5 kVA	22 kVA	27.5 kVA	29.9 kVA	33 kVA
Max. Output Current	22.6/21.5/20.7 A	25.1/23.8/23.0 A	33.4/31.8/30.6 A	41.8/39.7/38.3 A	45.4/43.2/41.6 A	50.0/47.6/45.9 A
Peak Output Apparent Power[3]	1.5 times of rated power, 10s					
THDv(@ linear load)	< 3%					
Switching Time	10 ms default					
Asymmetric load	Yes, Supports 100% three-phase unbalanced load					
AC Smartload/Generator						
Rated Output Voltage	3N~+PE, 380/400/415 Va.c.					
Rated Output Frequency	50/60 Hz					
Rated Output Power	14.9 kW	15 kW	20 kW	25 kW	29.9 kW	30 kW
Rated Output Current	22.6/21.5/20.7 A	22.8/21.7/20.9 A	30.4/28.9/27.8 A	38.0/36.1/34.8 A	45.4/43.2/41.6 A	45.6/43.3/41.7 A
Rated Apparent Power	14.9 kVA	15 kVA	20 kVA	25 kVA	29.9 kVA	30 kVA
Max. Apparent Power	14.9 kVA	16.5 kVA	22 kVA	27.5 kVA	29.9 kVA	33 kVA
Max. Output Current	22.6/21.5/20.7 A	25.1/23.8/23.0 A	33.4/31.8/30.6 A	41.8/39.7/38.3 A	45.4/43.2/41.6 A	50.0/47.6/45.9 A
AC Grid						
Rated Voltage	3(N)~+PE, 380/400/415 Va.c.					
Rated Frequency	50/60 Hz					
Rated Output Power	14.9 kW	15 kW	20 kW	25 kW	29.9 kW	30 kW
Rated Output Current	22.6/21.5/20.7 A	22.8/21.7/20.9 A	30.4/28.9/27.8 A	38.0/36.1/34.8 A	45.4/43.2/41.6 A	45.6/43.3/41.7 A
Rated Apparent Power	14.9 kVA	15 kVA	20 kVA	25 kVA	29.9 kVA	30 kVA
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Max. Output Current	22.6/21.5/20.7 A	25.1/23.8/23.0 A	33.4/31.8/30.6 A	41.8/39.7/38.3 A	45.4/43.2/41.6 A	50.0/47.6/45.9 A
Max. Input Current	80 A					
THDi	< 3%					
Power Factor Range	0.8 lagging - 0.8 leading					
Efficiency						
Max. MPPT Efficiency	99.9%					
Max. Efficiency	98.0%	98.0%	98.2%	98.2%	98.2%	98.2%
European Efficiency	97.0%	97.0%	97.5%	97.5%	97.5%	97.5%
Max. Efficiency of Charging/ Discharging[4]	98.0%	98.0%	98.2%	98.2%	98.2%	98.2%
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[5]	PV: Type I+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[6]	<10 W					
Installation Method	Wall Mounted					
Dimensions (W×H×D)	680×525×325 mm					
Cooling Mode	Intelligent Airflow					
Weight	40 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.
[4] Battery-AC maximum efficiency of battery charge and discharge. [5] According to EN/IEC 61643-11. [6] Standby loss at rated input voltage.

*All specifications are subject to change without notice.