

HYD-29.9/30/40/49.9/50K-T1

29.9 / 30 / 40 / 49.9 / 50 kW

THREE PHASE HYBRID INVERTER



Product advantages

- Up to 4 MPPT with AFCI and Input Current per MPPT is up to 40A, making it ideal for all high-power PVmodules and more security.
- Up to 110% continuous grid-connected overload output.
- Generator-compatible to extend backup duration during grid power outage.
- Supports 100% three-phase unbalanced and Half-Wave Loads on Backup Port.
- Multiple parallel systems, more flexible system solutions.
- IP66 protection degree, suitable for outdoor installation.



Model		HYD-29.9/ 30/40/49.9/50K-T1					
Inverter Module		HYD-29.9K-T1-A		HYD-30K-T1	HYD-40K-T1	HYD-49.9K-T1-A	HYD-50K-T1
PV Input							
Recommended Max. PV Power		60 kWp		80 kWp		100 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				4			
Max. Number of Input Strings per MPPT				2/2/2/2			
Max. Input Current				40/40/40/40 A			
Max. Isc				50/50/50/50 A			
Battery							
Voltage Range				600-1000 Vd.c.			
Number of Battery Input Channels				1			
Max. Charging Power				50 kW			
Max. Discharging Power		29.9 kW	30 kW	40 kW	49.9 kW	50 kW	
Max. Charging Current				80 A			
Max. Discharging Current		47.8 A	48 A	64 A	79.8 A	80 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		29.9 kW	30 kW	40 kW	49.9 kW	50 kW	
Rated Output Current		45.4/43.2/41.6 A	45.6/43.3/41.7 A	60.8/57.7/55.6 A	75.8/72.0/69.4 A	76.0/72.2/69.6 A	
Rated Apparent Power		29.9 kVA	30 kVA	40 kVA	49.9 kVA	50 kVA	
Max. Apparent Power		29.9 kVA	33 kVA	44 kVA	49.9 kVA	55 kVA	
Max. Output Current		45.4/43.2/41.6A	50.1/47.6/45.9 A	66.9/63.5/61.2 A	75.8/72.0/69.4 A	83.6/79.4/76.5 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 Generator							
Rated Voltage				3N--PE.380/400/415 Va.c.			
Rated Frequency				50/60 Hz			
Rated Output Power		29.9 kW	30 kW	40 kW	49.9 kW	50 kW	
Rated Output Current		45.4/43.2/41.6 A	45.6/43.3/41.7 A	60.8/57.7/55.6 A	75.8/72.0/69.4 A	76.0/72.2/69.6 A	
Rated Apparent Power		29.9 kVA	30 kVA	40 kVA	49.9 kVA	50 kVA	
Max. Apparent Power		29.9 kVA	33 kVA	44 kVA	49.9 kVA	55 kVA	
Max. Output Current		45.4/43.2/41.6A	50.1/47.6/45.9 A	66.9/63.5/61.2 A	75.8/72.0/69.4 A	83.6/79.4/76.5 A	
AC Grid							
Rated Voltage				3N--PE.380/400/415 Va.c.			
Rated Frequency				50/60 Hz			
Rated Output Power		29.9 kW	30 kW	40 kW	49.9 kW	50 kW	
Rated Output Current		45.4/43.2/41.6 A	45.6/43.3/41.7 A	60.8/57.7/55.6 A	75.8/72.0/69.4 A	76.0/72.2/69.6 A	
Rated Apparent Power		29.9 kVA	30 kVA	40 kVA	49.9 kVA	50 kVA	
Max. Apparent Power		29.9 kVA	33 kVA	44 kVA	49.9 kVA	55 kVA	
Max. Output Current		45.4/43.2/41.6A	50.1/47.6/45.9 A	66.9/63.5/61.2 A	75.8/72.0/69.4 A	83.6/79.4/76.5 A	
Max. Input Current				100 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%	
European Efficiency		97.0%	97.0%	97.5%	97.5%	97.5%	
Max. Efficiency of Charging/Discharging ^[4]		98.0%	98.0%	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℃ to +60℃ (derating above +45℃)			
Relative Humidity Range				5%-95%			
Max. Operating Altitude				4000 m (derating above 2000 m)			
Standby Self-consumption ^[6]				<15 W			
Installation Method				Wall Mounted			
Dimensions(W*H*D)				850*650*315mm			
Cooling Mode				Intelligent Airflow			
Weight				65 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.