9 Technical Data

- The following parameters may change without notice, please refer to the user manual and Datasheet on our website.

Model	HYD-40K-T1	HYD-49.9K-T1-A	HYD-50K-T1	HYD-60K-T1
PV input				
Recommended Max. PV Power	80KWp	100KWp		120KWp
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	4			
Max. Number of Input Strings per MPPT	2/2/2/2			
Max. Input Current	40A/40A/40A/40A			
Max. Isc	50A/50A/50A/50A			
Battery				
Voltage Range	600-1000 Vd.c.			
Number of Battery Input Channels	1			
Max. Charging Power	60 kW			
Max. Discharging Power	40 kW	49.9 kW	50 kW	60 kW
Max. Charging Current	100 A			
Max. Discharging Current	64 A	79.8 A	80 A	100 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	40 kW	49.9 kW	50 kW	60 kW
Rated Output Current	60.8/57.7/55.6 A	75.8/72.0/69.4 A	76.0/72.2/69.6 A	91.2/86.6/83.5 A
Rated Apparent Power	40 kVA	49.9 kVA	50 kVA	60 kVA
Max. Apparent Power	44 kVA	49.9 kVA	55 kVA	66 kVA

Model	HYD-40K-T1	HYD-49.9K-T1-A	HYD-50K-T1	HYD-60K-T1
Max. Output Current	66.9/63.5/61.2 A	75.8/72.0/69.4 A	83.6/79.4/76.5 A	100/95.3/91.8 A
Peak Output Apparent Power[3]	1.5 times of rated power, 10s			
THDv(@ linear load)	<3%			
Switching Time[4]	4 ms			
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	40 kW	49.9 kW	50 kW	60 kW
Rated Output Current	60.8/57.7/55.6 A	75.8/72.0/69.4 A	76.0/72.2/69.6 A	91.2/86.6/83.5 A
Rated Apparent Power	40 kVA	49.9 kVA	50 kVA	60 kVA
Max. Apparent Power	44 kVA	49.9 kVA	55 kVA	66 kVA
Max. Output Current	66.9/63.5/61.2 A	75.8/72.0/69.4 A	83.6/79.4/76.5 A	100/95.3/91.8 A
AC Grid				
Rated Voltage	3(N)~+PE,380/400/415 Va.c.			
Rated Frequency	50/60 Hz			
Rated Output Power	40 kW	49.9 kW	50 kW	60 kW
Rated Output Current	60.8/57.7/55.6 A	75.8/72.0/69.4 A	76.0/72.2/69.6 A	91.2/86.6/83.5 A
Rated Apparent Power	40 kVA	49.9 kVA	50 kVA	60 kVA
Max. Apparent Power	44 kVA	49.9 kVA	55 kVA	66 kVA
Max. Output Current	66.9/63.5/61.2 A	75.8/72.0/69.4 A	83.6/79.4/76.5 A	100/95.3/91.8 A
Max. Input Current	100A			
THDi	<3%			
Power Factor Range	0.8 lagging-0.8 leading			
Efficiency				
Max. MPPT Efficiency	99.9%			
Max. Efficiency	98.2%	98.2%	98.2%	98.2%
European Efficiency	97.5%	97.5%	97.5%	97.5%
Max. Efficiency of Charging/Discharging [5]	98.2%	98.2%	98.2%	98.2%
Protection				
PV Switch	Yes			

Model	HYD-40K-T1	HYD-49.9K-T1-A	HYD-50K-T1	HYD-60K-T1
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	PV:Type I+II, AC:Type II			
General Parameters				
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)	850*660*305 mm			
Cooling Mode	Intelligent Airflow			
Weight	75 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.
[4] In the on-grid mode, the nominal power of the hybrid inverter is higher than the total power of the home loads.
[5] Battery-AC maximum efficiency of battery charge and discharge.
[6] According to EN/IEC 61643-11.
[7] Standby loss at rated input voltage.