HYD-99-166K-T1

99 / 100 / 110 / 125 / 135 / 150 / 166 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 64A 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-99K-T1-A	HYD-100K-T1	HYD-110K-T1	HYD-125K-T1	HYD-135K-T1	HYD-150K-T1	HYD-166K-T1-A
PV Input							
Recommended Max. PV Power	200kWp	200kWp	220kWp	250kWp	270kWp	300kWp	300kWp
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	6						
Max. Number of Input Strings per MPPT	4						
Max. Input Current	6 × 64A						
Max. Isc	6 × 80A						
Battery							
Voltage Range	600-1000Vd.c.						
Number of Battery Input Channels	1						
Max. Charging Power	125kW				150kW		166kW
Max. Discharging Power	99kW	100kW	110kW	125kW	135kW	150kW	166kW
Max. Charging Current	250A				300A		300A
Max. Discharging Current	200A	200A	220A	250A	250A	300A	300A
Battery Type[2]	Lithium-ion						
BMS Communication	CAN						
AC Backup							
Rated Output Voltage	3N~+PE, 380/400/415Va.c.						
Rated Output Frequency	50/60Hz						
Rated Output Power	99kW	100kW	110kW	125kW	135kW	150kW	166 kW
Rated Output Current	150.4/142.9/137.7A	151.9/144.3/139.1A	167.1/158.8/153.0A	189.9/180.4/173.9A	205.1/194.9/187.8A	227.9/216.5/208.7A	252.2/239.6/230.9A
Rated Apparent Power	99kVA	100kVA	110kVA	125kVA	135kVA	150kVA	166KVA
Max. Apparent Power	99kVA	110kVA	121kVA	137.5kVA	148.5kVA	165kVA	166KVA
Max. Output Current	150.4/142.9/137.7A	167.1/158.8/153.0A	183.8/174.7/168.3A	208.9/198.5/191.3A	225.6/214.3/206.6A	250.7/238.2/229.5A	252.2/239.6/230.9A
Power Factor Range	0.8 lagging-0.8 leading						
Peak Output Apparent Power[3]	1.2 times of rated power, 10mins 1.5 times of rated power, 10s						
THDv(@ linear load)	<3%						
Switching Time[4]	10ms						
Asymmetric load	Yes, Supports 100% three-phase unbalanced load						
AC Input/Output (Generator/Smartload)							
Rated Input/Output Voltage	3N~+PE, 380/400/415Va.c.						
Rated Input/Output Frequency	50/60Hz						
Rated Input/Output Power	99kW	100kW	110kW	125kW	135kW	150kW	166kW
Rated Input/Output Current	150.4/142.9/137.7A	151.9/144.3/139.1A	167.1/158.8/153.0A	189.9/180.4/173.9A	205.1/194.9/187.8A	227.9/216.5/208.7A	252.2/239.6/230.9A
Rated Apparent Power	99kVA	100kVA	110kVA	125kVA	135kVA	150kVA	166KVA
Max. Apparent Power	99kVA	110kVA	121kVA	137.5kVA	148.5kVA	165kVA	166KVA
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Power Factor Range	0.8 lagging-0.8 leading						
AC Grid							
Rated Voltage	3(N)~+PE, 380/400/415Va.c.						
Rated Frequency	50/60Hz						
Rated Output Power	99kW	100kW	110kW	125kW	135kW	150kW	166 kW
Rated Output Current	150.4/142.9/137.7A	151.9/144.3/139.1A	167.1/158.8/153.0A	189.9/180.4/173.9A	205.1/194.9/187.8A	227.9/216.5/208.7A	252.2/239.6/230.9A
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Max. Input Current	300A						
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%	98.2%	98.2%	98.2%
European Efficiency	97.5%	97.5%	97.5%	97.5%	97.5%	97.5%	97.5%
Max. Efficiency of Charging/Discharging[5]	98.2%	98.2%	98.2%	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[6]	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	4000m (derating above 2000m)						
Standby Self-consumption[7]	< 50W						
Installation Method	Wall Mounted						
Dimensions(W×H×D)	1100×880×385mm						
Cooling Mode	Intelligent Airflow						
Weight	150kg						
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] 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.

*All specifications are subject to change without notice.