

HYD 5K~20KTL-3PH

5 / 6 / 8 / 10 / 15 / 20 kW

THREE-PHASE ENERGY STORAGE INTEGRATED INVERTER



Product advantages

- Various operational modes for optimal performance
- Off-grid output can be connected to unbalanced load, three-phase separate output is supported
- Up to 2 MPPTs, allowing a flexible configuration
- Multiple parallel systems, more flexible system solutions
- Maximum two battery inputs
- Fully digital operation, enabling higher control accuracy



Model	HYD 5KTL-3PH	HYD 6KTL-3PH	HYD 8KTL-3PH	HYD 10KTL-3PH	HYD 10KTL-3PH-A	HYD 15KTL-3PH	HYD 20KTL-3PH
DC input (PV)							
Recommended Max. PV input power	7500Wp (6000Wp/6000Wp)	9000Wp (6600Wp/6600Wp)	12000Wp (6600Wp/6600Wp)	15000Wp (7500Wp/7500Wp)	15000Wp (7500Wp/7500Wp)	22500Wp (11250Wp/11250Wp)	30000Wp (15000Wp/15000Wp)
Max. input voltage	1000V						
Start-up voltage	200V						
Rated input voltage	600V						
MPPT operating voltage range	180V-960V						
Number of MPPT	2						
Max inverter back feed current to array	0A						
Max. number of input strings per MPPT	1/1			2/2			
Max. input current per MPPT	12.5/12.5 A			25/25 A			
Max. short-circuit current per MPPT	15/15 A			30/30 A			
AC output (on-grid)							
Rated output power	5000W	6000W	8000W	10000W	10000W	15000W	20000W
Rated apparent power	5000VA	6000VA	8000VA	10000VA	10000VA	15000VA	20000VA
Rated output current	7.2A	8.7A	11.6A	14.5A	14.5A	21.7A	29.0A
Rated grid voltage	3/N/PE, 230/400Vac						
Rated grid frequency	50/60Hz						
Max. output apparent power	5500VA	6600VA	8800VA	11000VA	10000VA	16500VA	22000VA
Max. current output to grid	8A	10A	13A	16A	16A	24A	32A
Max. AC current from grid	15A	17A	24A	29A	29A	44A	58A
Output Inrush current	100A/1μs						
Output fault current	80A/5μs						
Output overcurrent protection(RMS)	10A	12A	15A	18A	18A	26A	34A
Output overcurrent protection(MAX)	20.4A	22.5A	33.1A	40.7A	40.7A	61.1A	81.5A
THDi	<3%						
Power factor	1 default (+/-0.8 adjustable)						
Battery parameters							
Battery type ^[1]	Lithium-ion & Lead-acid						
Battery voltage range	180V-800V						
Number of battery input channels	1	1	1	2	2	2	2
Max. charge/discharge power	5000W	6000W	8000W	10000W	10000W	15000W	20000W
Max. charge/discharge current	25A	25A	25A	50A(25A/25A)	50A(25A/25A)	50A(25A/25A)	50A(25A/25A)
BMS communication mode	CAN, RS485						
AC output (off-grid)							
Rated output power	5000W	6000W	8000W	10000W	10000W	15000W	20000W
Rated output current	7.2A	8.7A	11.6A	14.5A	14.5A	21.7A	29.0A
Rated output voltage	3/N/PE, 230/400Vac						
Rated output frequency	50/60Hz						
Max. output apparent power	5500VA	6600VA	8800VA	11000VA	11000VA	16500VA	22000VA
Peak output apparent power, time	10000VA, 60s	12000VA, 60s	16000VA, 60s	20000VA, 60s	20000VA, 60s	22000VA, 60s	22000VA, 60s
Max. output current	8A	10A	13A	16A	16A	24A	32A
THDv(@ linear load)	<3%						
Switching time	<10ms						
Efficiency							
Max. MPPT efficiency	99.9%						
Max. efficiency	98.0%	98.0%	98.0%	98.2%	98.2%	98.2%	98.2%
European efficiency	97.5%	97.5%	97.5%	97.7%	97.7%	97.7%	97.7%
Max. efficiency of charging/discharging ^[2]	97.6%	97.6%	97.6%	97.8%	97.8%	97.8%	97.8%
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	Method (Active frequency shift)						
Surge Protection	PV: Type II, AC: Type II						
General parameters							
Protective class	Class I						
Degree of protection	IP65						
Overvoltage Category	AC III, DC II						
Operating temperature range	-30°C- 60°C						
Relative humidity range	5%-95%						
Max. operating altitude	<2000m						
Standby self-consumption ^[3]	<20W						
Topology	Transformerless						
Installation method	Wall Mounted						
Dimensions (W*H*D)	586.6*515*261.2mm						
Cooling mode	Natural			Forced airflow			
Weight	33kg			37kg			
Communication	RS485/CAN/WiFi, Optional: Ethernet/4G						
Display	LCD & Bluetooth+APP						
Standard	EN61000-6-2, EN61000-6-3, EN61000-3-2, EN61000-3-3, EN61000-3-11, EN61000-3-12, IEC62109-1, IEC62109-2, EN62040-1, AS/NZS 4777						

[1] Please refer to document "SOFAR inverter Model compatible battery list"

[2] Battery-AC maximum efficiency of battery charge and discharge

[3] Standby loss at rated input voltage

*All specifications are subject to change without notice.