

Three Phase Hybrid Storage Inverter

3-12 kW Plus Series



The three phase storage inverters plus series are designed to increase energy independence for homeowners and commercial users. The power range is from 3.0kW to 12kW, compatible with high voltage (80-600V and 120-650V) batteries.

Energy management is based on time-of-use and demand charge rate structures, significantly reduce the amount of energy purchased from public grid.

Thanks for the UPS function (switch time < 10ms), that enables the crucial loads power on during outages. Additionally, under the backup operation mode, the inverter provides you up to 150% peak output overloading.

						
SODIUM METAL CHLORIDE BATTERY Support Sodium metal chloride battery	MIN. 80V Battery Voltage Minimum 80V	MAX. 50A Max. Charge/ Discharge Current 50A	100% UNBALANCE Support Unbalance Load	Max. 1.5 PV OVERSIZE 1.5 Times PV Oversize	Max. 20A MAX. 20A _{dc} String Current Up To 20A	<10ms UPS FUNCTION Switch Time < 10ms
Support for Time-of-use Optimization 	Configurable Operation Modes 	AFCI (Optional) & Rapid Shutdown Ready 	Build in Anti-feed-in Function 	100% unbalanced output, each phase; 200% unbalanced output, each phase (≤ 10kW) 	Smart Monitoring & Remote Firmware Upgrade 	

Technical Data	AF3K-THP	AF4K-THP	AF5K-THP	AF6K-THP	AF8K-THP	AF10K-THP	AF12K-THP
PV Input							
Max. DC Input Power (kW)	5	6	7.5	9	12	15	18
Max. PV Voltage (V)				1000			
Rated DC Input Voltage (V)				620			
DC Input Voltage Range (V)				150-1000			
MPPT Voltage Range (V)				150-850			
Full MPPT Range(V)	200-850		250-850	300-850	500-850		
Start-up Voltage (V)				160			
Max. DC Input Current (A)				20x2			
Max. Short Current(A)				30x2			
No. of MPPT Tracker / Strings				2/2			
Battery Port							
Battery Nominal Voltage (V)	100	100	100	150	200	250	300
Battery Voltage Range (V)	80-600					120-650	
Max. Charge/Discharge Current (A)				50			
Max. Charge/Discharge Power (kW)	3	4	5	6	8	10	12
Charging Curve	3 Stages						
Compatible Battery Type	Li-ion / Lead-acid / Sodium metal chloride battery						
AC Grid							
Nominal AC Output Power (kW)	3	4	5	6	8	10	12
Max. AC Input/Output Power (kVA)	4.5 / 3.3	6 / 4.4	7.5 / 5.5	9 / 6.6	12 / 8.8	15 / 11	18 / 13.2
Max. AC Output Current (A)	5.3	7	8.5	10.5	13.5	17	21.5
Nominal AC Voltage (V)				230/400			
Nominal AC Frequency (Hz)				50/60			
Power Factor				1 (-0.8-0.8)			
Current THD (%)				<3%			
AC Load Output (Back-up)							
Nominal Output Power (VA)	3000	4000	5000	6000	8000	10000	12000
Nominal Output Voltage (V)				230/400			
Nominal Output Frequency (Hz)				50/60			
Nominal Output Current (A)	4.4	5.8	7.3	8.7	11.6	14.5	17.4
Peak Output Power	3300VA, 60s	4400VA, 60s	5500VA, 60s	6600VA, 60s	8800VA, 60s	11000VA, 60s	13200VA, 60s
THDV (with linear load)				<3%			
Switching Time (ms)				<10			
Efficiency							
Europe Efficiency				97.50%			
Max. Efficiency	98.00%					98.20%	98.30%
Battery Charge/Discharge Efficiency				98.00%			
Protection							
Reverse Polarity Protection				Yes			
Over Current / Voltage Protection				Yes			
Anti-islanding Protection				Yes			
AC Short-circuit Protection				Yes			
Leakage Current Detection				Yes			
Ground Fault Monitoring				Yes			
Grid Monitoring				Yes			
Enclosure Protect Level				IP65			
AC/DC surge protection				Type II			
General Data							
Dimensions (W x H x D, mm)				558 x 535 x 260 mm			
Weight (kg)				29kg			
Topology				Transformerless			
Cooling Concept				Intelligent Fan			
Relative Humidity				0-100%			
Operating Temperature Range (°C)				-25 to 60 °C			
Operating Altitude (m)				<4000			
Noise Emission (dB)				<40			
Standby Consumption (W)				<5			
Display & Communication Interfaces				LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G			
Certification & Approvals				NRS097, G98/G99, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2			
EMC				EN61000-6-2, EN61000-6-3			