

Three Phase Hybrid Storage Inverter

3-30 kW



The Afore AF series three phase storage inverters are designed to increase energy independence for homeowners and commercial users. The power range is from 3.0kW to 30kW, compatible with high voltage (150-800V) 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



WIDE RANGE
Voltage Range
(150-800V)



100% UNBALANCE
Support Unbalance Load



Max. 1.5
1.5 Times PV Oversize



Max. 40A
MAX. 40Adc
String Current Up To 40A



<10 ms
UPS FUNCTION
Switch Time < 10ms



INPUT
Support Generator

Support for Time-of-use Optimization

Configurable Operation Modes

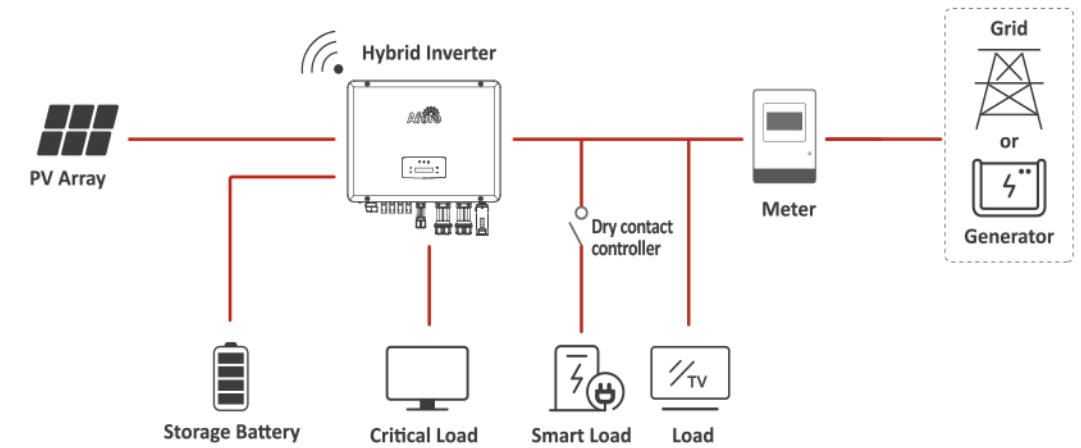
AFCI (Optional) & Rapid Shutdown Ready

Build in Anti-feed-in Function

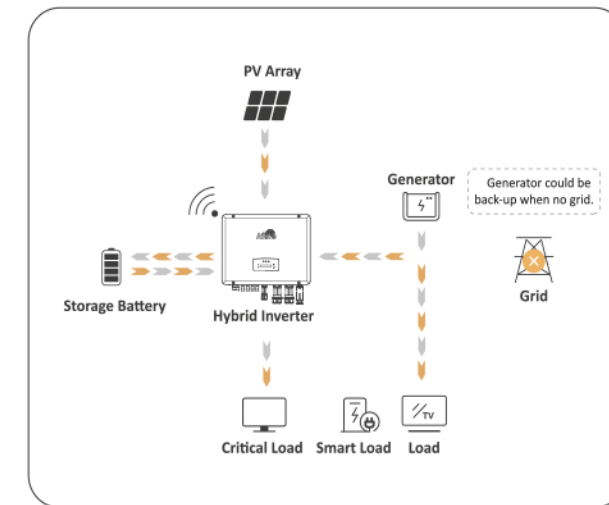
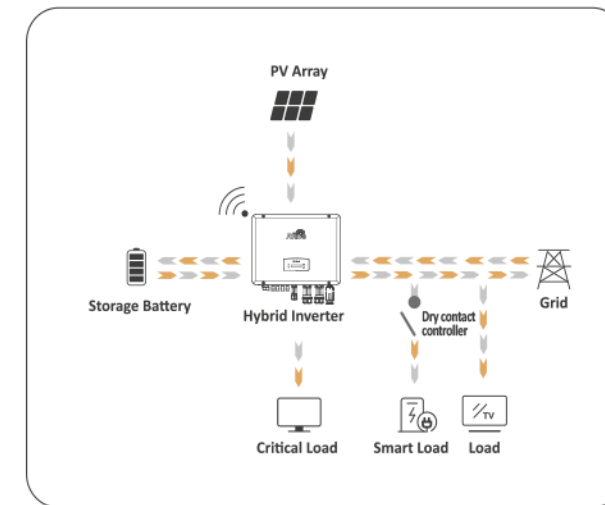
100% unbalanced output, each phase;
200% unbalanced output, each phase (≤ 10kW)

Smart Monitoring & Remote Firmware Upgrade

For New Storage System:

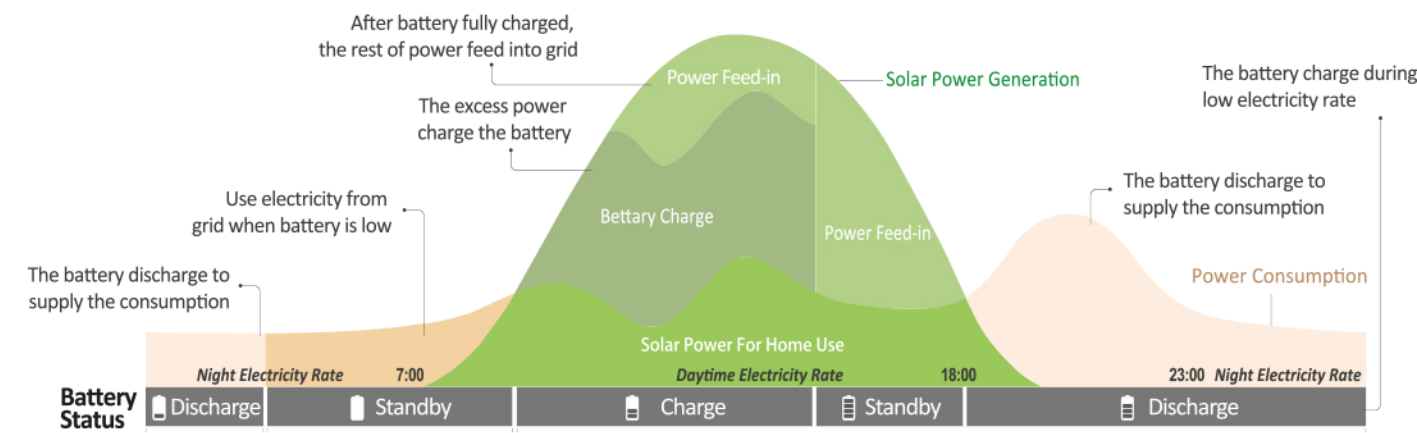


Optimizing Self-Consumption (on-grid) + Emergency Power Supply (off-grid)



Optimizing Self-Consumption Mode

With energy storage system installed, users may also be able to change from a flat rate electricity tariff to a time-of-use tariff. For the areas and regions, where peak shaving can be applied.



Technical Data		AF15K-TH		AF20K-TH		AF30K-TH	
PV Input							
Max. DC Input Power (kW)		22.5		30		45	
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)				500-850			
Start-up Voltage (V)				160			
Max. DC Input Current (A)		20+32		32x2		40x2	
Max. Short Current(A)		30+48		48x2		60x2	
No. of MPPT Tracker / Strings		2/3		2/4		2/4	
Battery Port							
Battery Nominal Voltage (V)		500		500		550	
Battery Voltage Range (V)				150-800			
Max. Charge/Discharge Current (A)		50		50		60	
Max. Charge/Discharge Power (kW)		15		20		30	
Charging Curve				3 Stages			
Compatible Battery Type				Li-ion / Lead-acid / Sodium metal chloride battery			
AC Grid							
Nominal AC Output Power (kW)		15		20		30	
Max. AC Input/Output Power (kVA)		22.5 / 16.5		30 / 22		45 / 33	
Max. AC Output Current (A)		27		32		48	
Nominal AC Voltage (V)				230/400			
Nominal AC Frenquency (Hz)				50/60			
Power Factor				1 (-0.8-0.8) adjustable			
Current THD (%)				<3%			
AC Load Output (Back-up)							
Nominal Output Power (VA)		15000		20000		30000	
Nominal Output Voltage (V)				230/400			
Nominal Output Frequency (Hz)				50/60			
Nominal Output Current (A)		21.8		29		43.5	
Peak Output Power		16500VA, 60s		22000VA, 60s		33000VA, 60s	
THDV (with linear load)				<3%			
Switching Time (ms)				<10			
Efficiency							
Europe Efficiency		97.50%		97.80%		98.10%	
Max. Efficiency		98.30%				98.50%	
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				36kg	
Topology				Transformerless			
Cooling Concept				Intelligent Fan			
Relatively 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			