

Three Phase Hybrid Storage Inverter

36-50 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 36kW to 50kW, 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), 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-ION BATTERY
Support sodium-ion battery

WIDE RANGE
Voltage Range (150-800V)

100% UNBALANCE
Support Unbalance Load

Max. 1.5
1.5 Times PV Oversize

Max. 40A
String Current Up to 40A

<10 ms
UPS FUNCTION
Switch Time < 10ms

INPUT
Support Generator

- Support 280AH, 315AH battery system
- Support for Time-of-use Optimization
- Configurable Operation Modes
- AFCI (Optional) & Rapid Shutdown Ready
- 2 times AC Oversize
- Build in Anti-feed-in Function
- 100% unbalanced output, each phase
- Smart Monitoring & Remote Firmware Upgrade

PV Input	AF36K-TH		AF40K-TH	AF50K-TH
Max. DC Input Power (kW)	54		60	75
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)			40×4	
Max. Short Current(A)			48×2	
No. of MPPT Tracker / Strings			4/8	
Battery Port				
Battery Nominal Voltage (V)			500	
Battery Voltage Range (V)			150 - 800	
Max. Charge/Discharge Current (A)			120	
Max. Charge/Discharge Power (kW)	36		40	50
Charging Curve	3 Stages			
Compatible Battery Type	Li-ion / Sodium-ion battery			
AC Grid	AF36K-TH	AF40K-TH		AF50K-TH
Nominal AC Output Power (kW)	36	40		50
Max. AC Input/Output Power (KVA)	72 / 39.6	80 / 44		100/ 55
Max. AC Output Current (A)	60.06	66.77		83.38
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)	36000	44000		55000
Nominal Output Voltage (V)	230/400			
Nominal Output Frequency (Hz)	50/60			
Nominal Output Current (A)	52.2	58		72.5
Peak Output Power	39600VA, 60s	44000VA, 60s		55000VA, 60s
THDV (with linear load)	3 %			
Switching Time (ms)	<10			
Efficiency	AF36K-TH	AF40K-TH		AF50K-TH
Europe Efficiency	98.20%			98.30%
Max. Efficiency			98.60 %	
Battery Charge/Discharge Efficiency			99.00 %	
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			
General Data	AF36K-TH	AF40K-TH		AF50K-TH
Dimensions (W x H x D, mm)	975 x 610 x 310 mm			
Weight (kg)	70kg			
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)	<60			
Standby Consumption (W)	<100			
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G			
Certification & Approvals	NR5097, G98/G99, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2			
EMC	EN61000-6-2, EN61000-6-3			