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), 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

PV OVERSIZE
1.5 Times PV Oversize

MAX. 40Adc
String Current Up To 40A

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

Technical Data	AF36K-TH	AF40K-TH	AF50K-TH
PV Input			
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)		40x4	
Max. Short Current(A)		48x4	
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 / Lead-acid / Sodium metal chloride battery	
AC Grid			
Nominal AC Output Power (kW)	36	40	50
Max. AC Input/Output Power (kVA)	54 / 39.6	60 / 44	75 / 55
Max. AC Output Current (A)	60.5	67	83.5
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 (kVA)	36	40	50
Nominal Output Voltage (V)		230/400	
Nominal Output Frequency (Hz)		50/60	
Max. AC Output Current (A)	60.5	67	83.5
Peak Output Power	39.6kVA, 60s	44kVA, 60s	55kVA, 60s
THDV (with linear load)		3%	
Switching Time (ms)		<10	
Efficiency			
Europe Efficiency	98.20%	98.30%	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-ciruit Protection		Yes	
Leakage Current Detection		Yes	
Ground Fault Monitoring		Yes	
Grid Monitoring		Yes	
Enclosure Protect Level		IP66	
AC/DC surge protection		Type II	
General Data			
Dimensions (W x H x D, mm)		867 x 715 x 306 mm	
Weight (kg)		81kg	
Topology		Transformerless	
Cooling Concept		Intelligent Fan	
Relative Humidity		0-100%	
Operating Temperature Range (°C)		-25 to 60 °C	
Operating Altitude (m)		<4000	
Standby Consumption (W)		<100	
Display & Communication Interfaces		LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G	
Certification & Approvals		NRS097, G99, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2	
EMC		EN61000-6-2, EN61000-6-4	