Afore

ENERGY STORAGE SYSTEM SOLUTIONS

PV SYSTEM SOLUTIONS

Afore

Afore New Energy Technology (Shanghai) Co., Ltd.

Building 7, No.333 Wanfang Rd, Minhang District,
Shanghai, China. 201112

T +86-21-54326236 F +86-21-54326136

W www.aforenergy.com E info@aforenergy.com

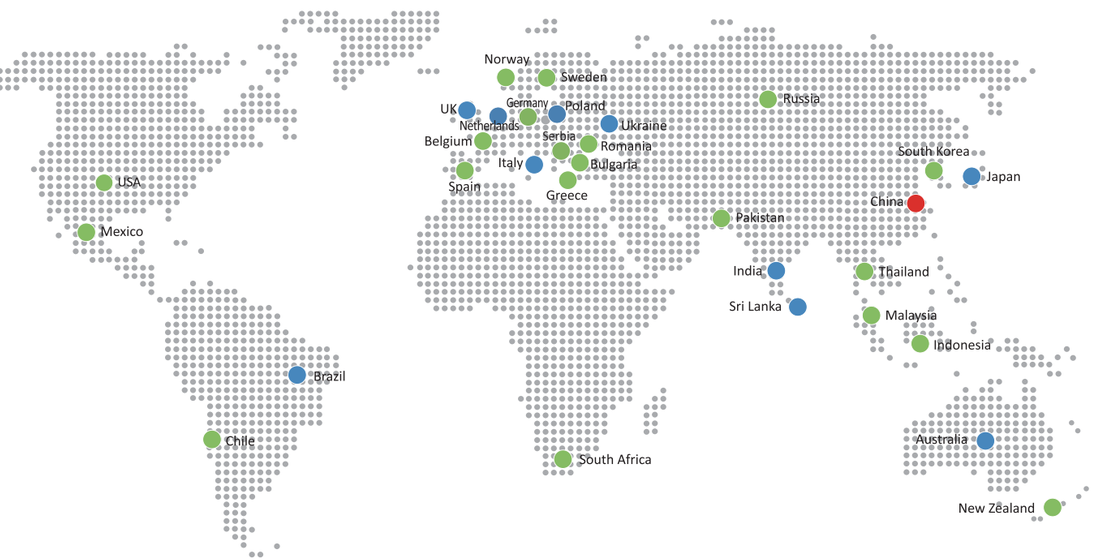
About Us

Afore is a leading PV inverter provider from China, with more than fifteen years dedicated experience in PV inverter R&D and manufacturing, Afore inverters have been installed in Europe, Australia, China, Sri Lanka, India, Japan, North America and South America, meeting the needs of global users.

We provide single and three-phase high-efficiency PV string inverters for a capacity of 1kW to 110kW, storage inverters (single phase 1-12kW, three phase 3-60kW, split phase 3-9.6kW, AC coupled), energy storage battery series (low voltage wall mounted series, high voltage stackable series) and all-in-one storage products. All of our inverters are integrated with smart monitoring system.

We offer not just good products, but also high-efficient local support to our partners and users throughout the inverter life span. Make sure the customers receive reliable returns by choosing Afore!

Global Market



Headquater Service Center Local Partner (Only the main ones are marked)

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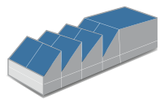
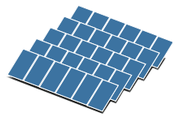
Residential System



Three Phase PV String Inverter

Residential & Small Commercial System



Three Phase PV String Inverter

Commercial System and Power Plants

Energy storage system

Residential and Commercial Storage System

Single Phase PV String Inverter
1-3 kW

Single Phase PV String Inverter
3-6 kW

Single Phase PV String Inverter
7-10 kW

Technical Data	HNS1000TL-1	HNS1500TL-1	HNS2000TL-1	HNS2500TL-1	HNS3000TL-1	HNS3000TL	HNS3600TL	HNS4000TL	HNS5000TL	HNS6000TL	HNS7000TL	HNS8000TL	HNS9000TL	HNS10000TL
PV Input Data														
Max. DC Power (W)	1500	2250	3000	3750	4200	4500	5400	6000	7000	8400	9800	11200	12600	14000
Max. DC Voltage (V)	500	500	500	500	500	600	600	600	600	600	600	600	600	600
MPPT Voltage Range (V)	50-500	50-500	50-500	50-500	50-500	70-550	70-550	70-550	70-550	70-550	70-550	70-550	70-550	70-550
MPPT Full Power Voltage Range (V)	70-500	110-500	145-500	180-500	220-500	110-550	130-550	145-550	180-550	220-550	220-550	220-550	220-550	220-550
Rated Input Voltage (V)	360					360					360			
Start-up Voltage (V)	50					70					70			
Max. Input Current (A)	14					14 x 2					14+26		26+26	
Max. Short Current (A)	18					18 x 2					18+35		35+35	
No. of MPP Tracker / No. of PV String	1/1					2/2					2/3		2/4	
Input Connector Type	MC4					MC4					MC4			
AC Output Data														
Max. Output Power (VA)	1100	1650	2200	2750	3300	3300	3960	4400	5500	6600	7700	8800	9900	11000
Nominal Output Power (W)	1000	1500	2000	2500	3000	3000	3600	4000	5000	6000	7000	8000	9000	10000
Max. Output Current (A)	6	9	12	13	15	15	17.5	20	24	28.7	33.6	38.3	45	50
Nominal Output Voltage (V)	L/N/PE, 220Vac, 230Vac, 240Vac					L/N/PE, 220Vac, 230Vac, 240Vac					L/N/PE, 220Vac, 230Vac, 240Vac			
Grid Voltage Range	180Vac-276Vac (According to local standard)					180Vac-276Vac (According to local standard)					180Vac-276Vac (According to local standard)			
Nominal Output Frequency (Hz)	50/60					50/60					50/60			
Grid Frequency Range	45-55Hz/54-66Hz (According to local standard)					45-55Hz/54-66Hz (According to local standard)					45-55Hz/54-66Hz (According to local standard)			
Output Power Factor	1 default (adjustable from 0.8 leading to 0.8 lagging)					1 default (adjustable from 0.8 leading to 0.8 lagging)					1 default (adjustable from 0.8 leading to 0.8 lagging)			
Output Current THD	<3%													
Efficiency														
Max. Efficiency	97.50%	97.80%	98.10%	98.10%	98.13%	98.20%	98.20%	98.20%	98.20%	98.20%	98.20%	98.20%	98.32%	98.40%
Euro Efficiency	96.60%	96.70%	96.80%	97.23%	97.56%	97.80%	97.82%	97.85%	97.90%	97.92%	97.95%	98.00%	98.00%	98.10%
Protection														
PV Reverse Polarity Protection	YES					YES					YES			
PV Insulation Resistance Detection	YES					YES					YES			
AC Short Circuit Protection	YES					YES					YES			
AC Over Current Protection	YES					YES					YES			
AC Over Voltage Protection	YES					YES					YES			
Anti-Islanding Protection	YES					YES					YES			
Residual Current Detection	YES					YES					YES			
Over Temperature Protection	YES					YES					YES			
Integrated DC switch	YES					YES					YES			
Surge Protection	Integrated (Type III)					Integrated (Type III)					Integrated (Type III)			
Smart IV Curve Scaning	YES					YES					YES			
Quick Arc Fault Circuit interruption	Optional					Optional					Optional			
General Data														
Dimensions (W x H x D, mm)	280 x 260 x 116					360 x 358 x 142					370 x 535 x 192			
Weight (kg)	6					10					17		18	
Protection Degree	IP65					IP66					IP66			
Enclosure Material	Aluminum					Aluminum					Aluminum			
Ambient Temperature Range (°C)	-25 - +60					-25 - +60					-25 - +60			
Humidity Range	0-100%					0-100%					0-100%			
Topology	Transformerless					Transformerless					Transformerless			
Communication Interface	RS485 / WiFi / Wire Ethernet / GPRS (optional)					RS485 / WiFi / Wire Ethernet / GPRS (optional)					RS485 / WiFi / Wire Ethernet / GPRS (optional)			
Cooling Concept	Convection					Convection					Convection		Intelligent fan cooling	
Night Power Consumption (W)	<0.2	<0.2	<1	<1	<1	<1					<1			
Max. Operation Altitude (m)	4000					4000					4000			
Certifications and Standards														
EMC Standard	EN/IEC 61000-6-2, EN/IEC 61000-6-3, EN61000-3-2, EN61000-3-3					EN/IEC 61000-6-2, EN/IEC 61000-6-3, EN61000-3-2, EN61000-3-3, EN61000-3-11, EN61000-3-12								
Safety Standard	IEC 60068, UL1741, EN62109					IEC 60068, UL1741, EN62109								
Grid-connection	IEEE1547, CSA C22, EN50549, VDE4105, VDE0126, RD1699, ABNT NBR16149 & 16150, AS4777.2, NB/T32004, G98, IEC61727					IEEE1547, CSA C22, EN50549, VDE4105, VDE0126, RD1699, ABNT NBR16149 & 16150, AS4777.2, NB/T32004, G99, IEC61727								

Three Phase PV String Inverter

3-25 kW

ATON SERIES

Smart | Safety | Efficient

The Afore BNT Series Three-phase string inverters are designed for residential and small commercial PV system applications, rating from 3kW to 25kW. All models have unibody housings with aluminum structure which is anodized, increasing durability and effectively prevents corrosion. Equipped with external inductors, the unibody housings can ensure efficient heat dissipation, which significantly improves the reliability and extends the life of the inverters.

Communication implements are via the Wi-Fi module (can be changed to Ethernet / GPRS). Check the system status anytime and anywhere via online portal or APP.

- Quick Arc Fault circuit interruption（Optional）
- WIFI standard
- Compact design
- Multiple intelligent protections
- Compatible with bifacial modules
- String level monitoring

MPPT Range
Wide MPPT Range

PV OVERSIZE
1.5 Times PV Oversize

DC 1100V
Max. DC 1100V

UNIBODY
One-piece
Aluminum Housing

PROTECTION
Build-in SPD Type II

SMART
Smart IV Curve Scanning

UPDATE
Remote Firmware Update

Technical Data	BNT003KTL	BNT004KTL	BNT005KTL	BNT006KTL	BNT008KTL	BNT010KTL
PV Input Data						
Max. DC Power (W)	5100	6000	7500	9000	12000	15000
Max. DC Voltage (V)	1100					
MPPT Voltage Range (V)	150 - 1000					
MPPT Full Power Voltage Range (V)	200 - 850			250 - 850	300 - 850	500 - 850
Rated Input Voltage (V)	620					
Start-up Voltage (V)	150					
Max. Input Current (A)	15 x 2					
Max. Short Current (A)	25 x 2					
No. of MPP Tracker / No. of PV String	2/2					
Input Connector Type	MC4					
AC Output Data						
Max. Output Power (VA)	3300	4400	5500	6600	8800	11000
Nominal Output Power (W)	3000	4000	5000	6000	8000	10000
Max. Output Current (A)	5.3	7	8.5	10.5	13.5	17
Nominal Output Voltage (V)	3P+N+PE /3P+PE 230/400					
Grid Voltage Range	260Vac-519Vac (according to local standard)					
Nominal Output Frequency (Hz)	50/60					
Grid Frequency Range	45-55Hz/55-65Hz(according to local standard)					
Output Power Factor	1 default (adjustable from 0.8 leading to 0.8 lagging)					
Output Current THD	<3%					
Efficiency						
Max. Efficiency	98.30%					98.70%
Euro Efficiency	97.61%	97.65%	98.00%	98.05%		98.23%
Protection						
PV Reverse Polarity Protection	YES					
PV Insulation Resistance Detection	YES					
AC Short Circuit Protection	YES					
AC Over Current Protection	YES					
AC Over Voltage Protection	YES					
Anti-Islanding Protection	YES					
Residual Current Detection	YES					
Over Temperature Protection	YES					
Integrated DC switch	YES					
Surge Protection	Integrated (Type II)					
Smart IV Curve Scaning	YES					
Quick Arc Fault Circuit Interruption	Optional					
General Data						
Dimensions (W x H x D, mm)	370 x 535 x 192					
Weight (kg)	16					
Protection Degree	IP66					
Enclosure Material	Aluminum					
Ambient Temperature Range (°C)	-25 to 60					
Humidity Range	0 -100%					
Topology	Transformerless					
Communication Interface	RS485 / WiFi / Wire Ethernet / GPRS (optional) / Sunspec					
Cooling Concept	Convection				Intelligent fan cooling	
Night Power Consumption (W)	<1					
Max. Operation Altitude (m)	≤4000					
Certifications and Standards						
EMC Standard	EN/IEC 61000-6-2, EN/IEC 61000-6-3, EN61000-3-2, EN61000-3-3					
Safety Standard	IEC 60068, UL1741, EN62109					
Grid-connection	IEEE1547, CSA C22, EN50549, VDE4105, VDE0126, RD1699, ABNT NBR16149 & 16150, AS4777.2, NB/T32004, G98, IEC61727					

Technical Data	BNT012KTL	BNT013KTL	BNT015KTL	BNT017KTL	BNT020KTL	BNT025KTL
PV Input Data						
Max. DC Power (W)	18000	19500	22500	25500	30000	37500
Max. DC Voltage (V)	1100					
MPPT Voltage Range (V)	150 - 1000					
MPPT Full Power Voltage Range (V)	500 - 850					
Rated Input Voltage (V)	620					
Start-up Voltage (V)	150					
Max. Input Current (A)	15 x 2		20 + 32		32 x 2	
Max. Short Current (A)	25 x 2		30 + 48		48 x 2	
No. of MPP Tracker / No. of PV String	2/2		2/3		2/4	
Input Connector Type	MC4					
AC Output Data						
Max. Output Power (VA)	13200	14300	16500	18700	22000	27500
Nominal Output Power (W)	12000	13000	15000	17000	20000	25000
Max. Output Current (A)	21.5	22	27	30	32	40
Nominal Output Voltage (V)	3P+N+PE /3P+PE 230/400					
Grid Voltage Range	260Vac-519Vac (according to local standard)					
Nominal Output Frequency (Hz)	50/60					
Grid Frequency Range	45-55Hz/55-65Hz(according to local standard)					
Output Power Factor	1 default (adjustable from 0.8 leading to 0.8 lagging)					
Output Current THD	<3%					
Efficiency						
Max. Efficiency	98.70%				98.75%	
Euro Efficiency	98.23%				98.35%	
Protection						
PV Reverse Polarity Protection	YES					
PV Insulation Resistance Detection	YES					
AC Short Circuit Protection	YES					
AC Over Current Protection	YES					
AC Over Voltage Protection	YES					
Anti-Islanding Protection	YES					
Residual Current Detection	YES					
Over Temperature Protection	YES					
Integrated DC switch	YES					
Surge Protection	Integrated (Type II)					
Smart IV Curve Scaning	YES					
Quick Arc Fault Circuit Interruption	Optional					
General Data						
Dimensions (W x H x D, mm)	370 x 535 x 192					
Weight (kg)	16	17			19	
Protection Degree	IP66					
Enclosure Material	Aluminum					
Ambient Temperature Range (°C)	-25 to 60					
Humidity Range	0 -100%					
Topology	Transformerless					
Communication Interface	RS485 / WiFi / Wire Ethernet / GPRS (optional) / Sunspec					
Cooling Concept	Intelligent fan cooling					
Night Power Consumption (W)	<1					
Max. Operation Altitude (m)	≤4000					
Certifications and Standards						
EMC Standard	EN/IEC 61000-6-2, EN/IEC 61000-6-3, EN61000-3-2, EN61000-3-3, EN61000-3-11, EN61000-3-12					
Safety Standard	IEC 60068, UL1741, EN62109					
Grid-connection	IEEE1547, CSA C22, EN50549, VDE4105, VDE0126, RD1699, ABNT NBR16149 & 16150, AS4777.2, NB/T32004, G99, IEC61727					

Three Phase PV String Inverter

30-60 kW

The Afore BNT Series Three-phase string inverters are designed for commercial and power plant PV system applications, rating from 30kW to 60kW. All models with aluminum housing which is anodized, increasing durability and effectively prevents corrosion. Equipped with external inductors, ensure efficient heat dissipation, which significantly improves the reliability and extends the life of the inverters.

The inverter menu is activated by sensor touch buttons. Communication implements are via the Wi-Fi module (which can be changed to Ethernet / GPRS). Check the system status anytime and anywhere via online portal or APP.

MAX. 20Adc
String Current Up To 20A

PV OVERSIZE
Max. 1.5 Time
PV Oversize Input

PROTECTION
Multiple Intelligent Protections

ANTI-FLOW
Anti-Feed-in Function

Wi-Fi
Wi-Fi Standard, Ethernet/GPRS Optional

CONFIGURATION
Quick & Easy Config. via Wi-Fi

MODBUS
MODBUS Communication Ready

- MPPT efficiency > 99.9%
- Intelligent Temperature Control System
- Active and reactive power compensation, adjust power factor
- IP 68 Cooling Fan
- Type II DC & AC lightning protection
- AC output 1.1x continuous operation

Technical Data	BNT030KTL	BNT036KTL	BNT040KTL	BNT050KTL	BNT060KTL
PV Input Data					
Max. DC Power (W)	45000	54000	60000	75000	90000
Max. DC Voltage (V)	1100				
MPPT Voltage Range (V)	200 - 1000				
MPPT Full Power Voltage Range (V)	500 - 850				
Rated Input Voltage (V)	620				
Start-up Voltage (V)	200				
Max. Input Current (A)	38 x 2	38 x 3		40 x 3	38 x 4
Max. Short Current (A)	48 x 2	48 x 3		48 x 3	48 x 4
No. of MPP Tracker / No. of PV String	2/5	3/6		3/7	4/8
Input Connector Type	MC4				
AC Output Data					
Max. Output Power (VA)	33000	39600	44000	55000	66000
Nominal Output Power (W)	30000	36000	40000	50000	60000
Max. Output Current (A)	48	60	65	80	96
Nominal Output Voltage (V)	3P+N+PE /3P+PE 230/400				
Grid Voltage Range	260Vac-519Vac (according to local standard)				
Nominal Output Frequency (Hz)	50/60				
Grid Frequency Range	45-55Hz/55-65Hz (according to local standard)				
Output Power Factor	1 default (adjustable from 0.8 leading to 0.8 lagging)				
Output Current THD	<3%				
Efficiency					
Max. Efficiency	98.50%	98.65%	98.65%	98.80%	99.00%
Euro Efficiency	98.10%	98.20%	98.25%	98.45%	98.50%
Protection					
PV Reverse Polarity Protection	YES				
PV Insulation Resistance Detection	YES				
AC Short Circuit Protection	YES				
AC Over Current Protection	YES				
AC Over Voltage Protection	YES				
Anti-Islanding Protection	YES				
Residual Current Detection	YES				
Over Temperature Protection	YES				
Integrated DC switch	YES				
Surge Protection	Integrated (Type II)				
Smart IV Curve Scaning	YES				
Quick Arc Fault Circuit Interruption	Optional				
General Data					
Dimensions (W x H x D, mm)	450 x 485 x 210	710 x 470 x 236			
Weight (kg)	26	44			51
Protection Degree	IP66				
Enclosure Material	Aluminum				
Ambient Temperature Range (°C)	-25 to 60				
Humidity Range	0-100%				
Topology	Transformerless				
Communication Interface	RS485 / WiFi / Wire Ethernet / GPRS (optional) / Sunspec				
Cooling Concept	Intelligent Fan Cooling				
Night Power Consumption (W)	<1				
Max. Operation Altitude (m)	≤4000				
Certifications and Standards					
EMC Standard	EN/IEC 61000-6-2, EN/IEC 61000-6-3, EN61000-3-11, EN61000-3-12				
Safety Standard	IEC 60068, UL1741, EN62109				
Grid-connection	IEEE1547, CSA C22, EN50549, VDE4105, VDE0126, RD1699, ABNT NBR16149 & 16150, AS4777.2, NB/T32004, G99, IEC61727				

Three Phase PV String Inverter

70-110 kW

The Afore BNT Series Three-phase string inverters are designed for commercial and power plant PV system applications, rating from 70kW to 110kW. All models with aluminum housing which is anodized, increasing durability and effectively prevents corrosion. Equipped with external inductors, ensure efficient heat dissipation, which significantly improves the reliability and extends the life of the inverters.

The inverter menu is activated by sensor touch buttons. Communication implements are via the Wi-Fi module (which can be changed to Ethernet / GPRS). Check the system status anytime and anywhere via online portal or APP.

SMART
Intelligent string monitoring, Smart I-V curve scan

PROTECTION
Type II DC & AC Lighting Protection

MAX. 38Adc
String Current Up to 38A

PV OVERSIZE
>1.5 Time PV Oversize Input

POWER FACTOR
Active and Reactive Power Compensation

ANTI-FLOW
Anti-Feed-in Function

- IP68 Cooling Fan
- Compatible with 210 Solar Panel & bifacial module
- Arc Fault Circuit Interrupter (AFCI) (Optional)
- AC output 1.1x continuous operation
- Multiple Intelligent Protections
- Remote firmware upgrade with simple operation
- DC side supports “Y" connector
- Supports aluminium wire access to reduce cost

Technical Data	BNT070KTL	BNT075KTL	BNT080KTL	BNT090KTL	BNT100KTL	BNT110KTL
PV Input Data						
Max. DC Power (kW)	105	112.5	120	135	150	165
Max. DC Voltage (V)	1100					
MPPT Voltage Range (V)	200 - 1000					
MPPT Full Power Voltage Range (V)	500 - 850					
Rated Input Voltage (V)	620					
Start-up Voltage (V)	300					
Max. Input Current (A)	38 x 6					
Max. Short Current (A)	48 x 6					
No. of MPP Tracker / No. of PV String	6/12					
Input Connector Type	MC4					
AC Output Data						
Max. Output Power (kVA)	77	82.5	88	99	110	110
Nominal Output Power (kW)	70	75	80	90	100	110
Max. Output Current (A)	111	120	127	143	158	159.5
Nominal Output Voltage (V)	3P+N+PE /3P+PE 230/400					
Grid Voltage Range	260Vac-519Vac (according to local standard)					
Nominal Output Frequency (Hz)	50/60					
Grid Frequency Range	45-55Hz/55-66Hz(according to local standard)					
Output Power Factor	1 default (adjustable from 0.8 leading to 0.8 lagging)					
Output Current THD	<3%					
Efficiency						
Max. Efficiency	99.00%					
Euro Efficiency	98.30%				98.40%	
Protection						
PV Reverse Polarity Protection	YES					
PV Insulation Resistance Detection	YES					
AC Short Circuit Protection	YES					
AC Over Current Protection	YES					
AC Over Voltage Protection	YES					
Anti-Islanding Protection	YES					
Residual Current Detection	YES					
Over Temperature Protection	YES					
Integrated DC switch	YES					
Surge Protection	Integrated (Type II)					
Smart IV Curve Scaning	YES					
Quick Arc Fault Circuit Interruption	Optional					
General Data						
Dimensions (W x H x D, mm)	983 x 610 x 318					
Weight (kg)	78					
Protection Degree	IP66					
Enclosure Material	Aluminum					
Ambient Temperature Range (°C)	-25 to 60					
Humidity Range	0-100%					
Topology	Transformerless					
Communication Interface	RS485 / WiFi / Wire Ethernet / GPRS (optional) / Sunspec					
Cooling Concept	Intelligent fan cooling					
Night Power Consumption (W)	<1					
Max. Operation Altitude (m)	≤4000					
Certifications and Standards						
EMC Standard	EN/IEC 61000-6-2, EN/IEC 61000-6-4, EN61000-3-11, EN61000-3-12					
Safety Standard	IEC 60068, UL1741, EN62109					
Grid-connection	IEEE1547, CSA C22, EN50549, VDE4105, VDE0126, RD1699, ABNT NBR16149 & 16150, AS4777.2, NB/T32004, G99, IEC61727					

Single Phase Hybrid Storage Inverter

1-3.6 kW

The Afore AF low voltage series storage Inverters are designed to increase energy independence for homeowners. The power range is from 1kW to 3.6kW, compatible with low voltage (40-60V) batteries.

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

The Afore energy storage inverter features Smart Electricity Pricing & Automation, an energy management tool based on real-time electricity pricing strategies. It continuously monitors electricity price fluctuations and dynamically adjusts device operation accordingly. Operating 24/7 fully automatically without the need for manual intervention, it helps users optimize their electricity usage and reduce energy costs.

AI EMS
Electricity Pricing & Automation

PV OVERSIZE
1.5 Times PV Oversize

MPPT CHANNELS
Up to 2 MPPT Channels

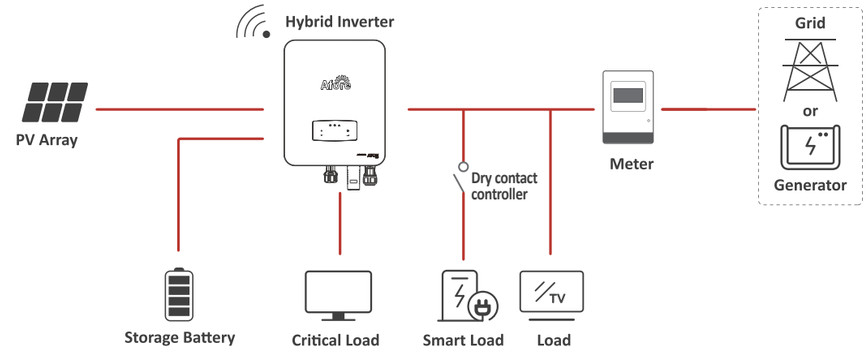
UPS FUNCTION
Switch Time < 10ms

PARALLEL
Max.6 Parallel Stacking

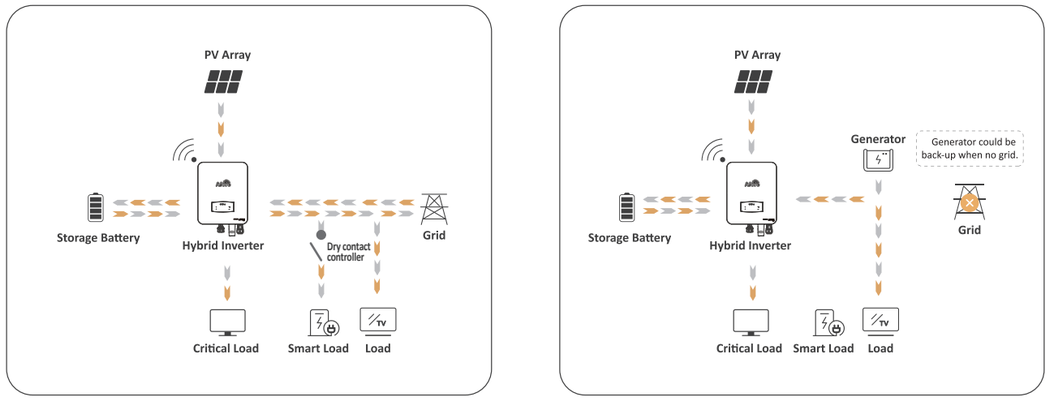
INPUT
Support Generator

- Support for Time-of-use Optimization
- Configurable Operation Modes
- AFCI (Optional) & Rapid Shutdown Ready
- Build in Anti-feed-in Function
- Compact Size and Easy Installation
- Smart Monitoring & Remote Firmware Upgrade

For New Storage System:

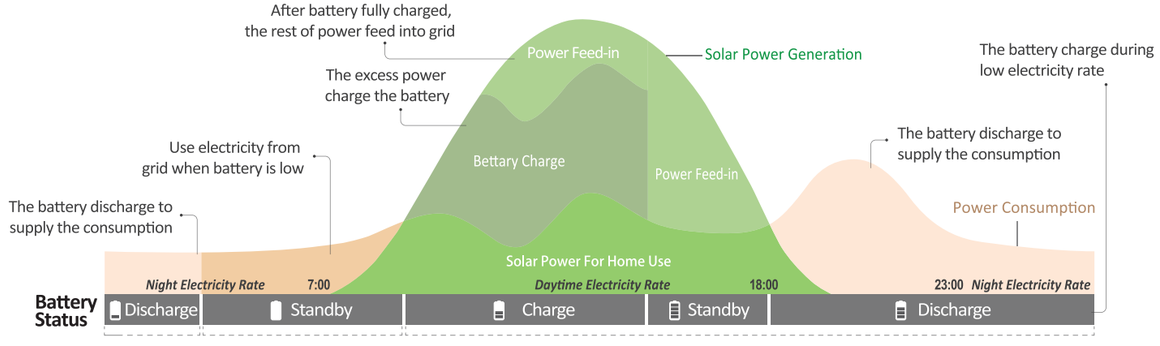


Optimizing Self-Consumption (on-grid) + Emergency Power Supply (off-grid)



Optimizing Self-Consumption Mode

With home energy storage installed, home owners 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	AF1K-SL-1	AF1.5K-SL-1	AF2K-SL-1	AF2.5K-SL-1
PV Input				
Max. Input Power (kW)	1.5	2.3	3.0	3.8
Max. PV Voltage (V)	550			
MPPT Range (V)	80 - 500			
Full MPPT Range (V)	80 - 500	90 - 500	120 - 500	150 - 500
Normal Voltage (V)	360			
Startup Voltage (V)	100			
Max. Input Current (A)	18.5 x 1			
Max. Short Current (A)	26 x 1			
No. of MPP Tracker / No. of PV String	1 / 1			
Battery Port				
Max. Charge/Discharge Power (kW)	1.0	1.5	2.0	2.5
Max. Charge/Discharge Current (A)	25	40	50	63
Battery Normal Voltage (V)	51.2			
Battery Voltage Range (V)	40 - 60			
Battery Type	Li-ion / Lead-acid etc.			
AC Grid				
Max Continuous Current (A)	5.0	7.0	10.0	12.0
Max Continuous Power (kVA)	1.0	1.5	2.0	2.5
Nominal Grid Current (A)	4.6 / 4.4	6.9 / 6.6	9.1 / 8.7	11.4 / 10.9
Nominal Grid Voltage (V)	198 to 242 @ 220 / 207 to 253 @ 230			
Nominal Grid Frequency (Hz)	50 / 60			
Power Factor	1 default (adjustable from 0.8 leading to 0.8 lagging)			
Current THD (%)	< 3			
AC Load Output				
Max Continuous Current (A)	5.0	7.0	10.0	12.0
Max Continuous Power (kVA)	1.0	1.5	2.0	2.5
Max Peak Current (A) (10min)	6.9 / 6.6	10.5 / 10.0	13.7 / 13.1	17.3 / 16.6
Max Peak Power (kVA) (10min)	1.5	2.3	3.0	3.8
Nominal AC Voltage L-N (V)	220 / 230			
Nominal AC Frequency (Hz)	50 / 60			
Switching Time (ms)	Seamless			
Voltage THD (%)	< 3			
Efficiency				
CEC Efficiency (%)	97.0			
Max. Efficiency (%)	97.6			
PV to Bat. Efficiency (%)	98.1			
Bat. between AC Efficiency (%)	96.8			
Protection				
PV Reverse Polarity Protection	Yes			
Over Current/Voltage Protection	Yes			
Anti-Islanding Protection	Yes			
AC Short Circuit Protection	Yes			
Residual Current Detection	Yes			
Ground Fault Monitoring	Yes			
Insulation Resister Detection	Yes			
PV Arc Detection	Yes			
Enclosure Protect Level	IP65 / NEMA4X			
AC/DC surge protection	Type II			
General Data				
Dimensions (W x H x D, mm)	370 x 535 x 192			
Weight (kg)	17			
Topology	Transformerless			
Cooling	Natural Convection			
Relative Humidity	0 - 100 %			
Operating Temperature Range (°C)	- 25 to 60			
Operating Altitude (m)	< 4000			
Standby Consumption (W)	< 10			
Mounting	Wall Bracket			
Communication with RSD	SUNSPEC			
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G, Sunspec			
Certification & Approvals	NRS097, G98, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2, IEC62477-1			
EMC	EN61000-6-2, EN61000-6-3			

Technical Data	AF3K-SL-1	AF3.6K-SL-1	AF3K-SL	AF3.6K-SL
PV Input				
Max. Input Power (kW)	4.5	5.4	4.5	5.4
Max. PV Voltage (V)	550			
MPPT Range (V)	80 - 500			
Full MPPT Range (V)	170 - 500	210 - 500	90 - 500	110 - 500
Normal Voltage (V)	360			
Startup Voltage (V)	100			
Max. Input Current (A)	18.5 x 1		18.5 x 2	
Max. Short Current (A)	26 x 1		26 x 2	
No. of MPP Tracker / No. of PV String	1 / 1		2 / 2	
Battery Port				
Max. Charge/Discharge Power (kW)	3.0	3.6	3.0	3.6
Max. Charge/Discharge Current (A)	80			
Battery Normal Voltage (V)	51.2			
Battery Voltage Range (V)	40 - 60			
Battery Type	Li-ion / Lead-acid etc.			
AC Grid				
Max Continuous Current (A)	14.0	17.0	14.0	17.0
Max Continuous Power (kVA)	3.0	3.6	3.0	3.6
Nominal Grid Current (A)	13.7 / 13.1	16.4 / 15.7	13.7 / 13.1	16.4 / 15.7
Nominal Grid Voltage (V)	198 to 242 @ 220 / 207 to 253 @ 230			
Nominal Grid Frequency (Hz)	50 / 60			
Power Factor	1 default (adjustable from 0.8 leading to 0.8 lagging)			
Current THD (%)	< 3			
AC Load Output				
Max Continuous Current (A)	14.0	17.0	14.0	17.0
Max Continuous Power (kVA)	3.0	3.6	3.0	3.6
Max Peak Current (A) (10min)	20.5 / 19.6	24.6 / 23.5	20.5 / 19.6	24.6 / 23.5
Max Peak Power (kVA) (10min)	4.5	5.4	4.5	5.4
Nominal AC Voltage L-N (V)	220 / 230			
Nominal AC Frequency (Hz)	50 / 60			
Switching Time (ms)	Seamless			
Voltage THD (%)	< 3			
Efficiency				
CEC Efficiency (%)	97.0			
Max. Efficiency (%)	97.6			
PV to Bat. Efficiency (%)	98.1			
Bat. between AC Efficiency (%)	96.8			
Protection				
PV Reverse Polarity Protection	Yes			
Over Current/Voltage Protection	Yes			
Anti-Islanding Protection	Yes			
AC Short Circuit Protection	Yes			
Residual Current Detection	Yes			
Ground Fault Monitoring	Yes			
Insulation Resister Detection	Yes			
PV Arc Detection	Yes			
Enclosure Protect Level	IP65 / NEMA4X			
AC/DC surge protection	Type II			
General Data				
Dimensions (W x H x D, mm)	370 x 535 x 192			
Weight (kg)	17			
Topology	Transformerless			
Cooling	Natural Convection			
Relative Humidity	0 - 100 %			
Operating Temperature Range (°C)	- 25 to 60			
Operating Altitude (m)	< 4000			
Standby Consumption (W)	< 10			
Mounting	Wall Bracket			
Communication with RSD	SUNSPEC			
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G, Sunspec			
Certification & Approvals	NRS097, G98, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2, IEC62477-1			
EMC	EN61000-6-2, EN61000-6-3			

Single Phase Hybrid Storage Inverter

4-6 kW Plus Series

The Afore AF low voltage series storage Inverters are designed to increase energy independence for homeowners. The power range is from 4kW to 6kW, compatible with low voltage (40-60V) batteries.

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

The Afore energy storage inverter features Smart Electricity Pricing & Automation, an energy management tool based on real-time electricity pricing strategies. It continuously monitors electricity price fluctuations and dynamically adjusts device operation accordingly. Operating 24/7 fully automatically without the need for manual intervention, it helps users optimize their electricity usage and reduce energy costs.

AI EMS
Electricity Pricing & Automation

MAX. 120A
Max. Charge/ Discharge Current 120A

PV OVERSIZE
1.5 Times PV Oversize

MPPT CHANNELS
Up to 2 MPPT Channels

UPS FUNCTION
Switch Time < 10ms

PARALLEL
Max.6 Parallel Stacking

- Support for Time-of-use Optimization
- Configurable Operation Modes
- AFCI (Optional) & Rapid Shutdown Ready
- The charging and discharging power of the battery is greater
- Build in Anti-feed-in Function
- Compact Size and Easy Installation
- Smart Monitoring & Remote Firmware Upgrade
- Off-grid mode, with a larger load capacity, the maximum load can be 6KVA

Technical Data	AF4K-SLP	AF4.6K-SLP	AF5K-SLP	AF5.5K-SLP	AF6K-SLP
PV Input					
Max. Input Power (kW)	6	6.9	7.5	8.3	9
Max. PV Voltage (V)			550		
MPPT Range (V)			80 - 500		
Full MPPT Range (V)	120 - 500	130 - 500	150 - 500	160 - 500	170 - 500
Normal Voltage (V)			360		
Startup Voltage (V)			100		
Max. Input Current (A)			18.5 x 2		
Max. Short Current (A)			26 x 2		
No. of MPP Tracker / No. of PV String			2 / 2		
Battery Port					
Max. Charge/Discharge Power (kW)	4.0	4.6	5.0	5.5	6.0
Max. Charge/Discharge Current (A)			120		
Battery Normal Voltage (V)			51.2		
Battery Voltage Range (V)			40 - 60		
Battery Type			Li-ion / Lead-acid etc.		
AC Grid					
Max Continuous Current (A)	19.0	22.0	23.0	26.0	28.0
Max Continuous Power (kVA)	4.0	4.6	5.0	5.5	6.0
Nominal Grid Current (A)	18.2 / 17.4	21.0 / 20.0	22.8 / 21.8	25.0 / 24.0	27.3 / 26.1
Nominal Grid Voltage (V)			198 to 242 @ 220 / 207 to 253 @ 230		
Nominal Grid Frequency (Hz)			50 / 60		
Power Factor			1 default (adjustable from 0.8 leading to 0.8 lagging)		
Current THD (%)			< 3		
AC Load Output					
Max Continuous Current (A)	19.0	22.0	23.0	26.0	28.0
Max Continuous Power (kVA)	4.0	4.6	5.0	5.5	6.0
Max Peak Current (A) (10min)	27.3 / 26.1	31.4 / 30	34.1 / 32.7	37.8 / 36.1	41.0 / 39.2
Max Peak Power (kVA) (10min)	6.0	6.9	7.5	8.3	9.0
Nominal AC Voltage L-N (V)			220 / 230		
Nominal AC Frequency (Hz)			50 / 60		
Switching Time (ms)			Seamless		
Voltage THD (%)			< 3		

Efficiency	
CEC Efficiency (%)	97.0
Max. Efficiency (%)	97.6
PV to Bat. Efficiency (%)	98.1
Bat. between AC Efficiency (%)	96.8
Protection	
PV Reverse Polarity Protection	Yes
Over Current/Voltage Protection	Yes
Anti-Islanding Protection	Yes
AC Short Circuit Protection	Yes
Residual Current Detection	Yes
Ground Fault Monitoring	Yes
Insulation Resister Detection	Yes
PV Arc Detection	Yes
Enclosure Protect Level	IP65 / NEMA4X
AC/DC surge protection	Type II
General Data	
Dimensions (W x H x D, mm)	370 x 535 x 192
Weight (kg)	20.5
Topology	Transformerless
Cooling	Intelligent Fan
Relative Humidity	0 - 100 %
Operating Temperature Range (°C)	- 25 to 60
Operating Altitude (m)	< 4000
Standby Consumption (W)	< 10
Mounting	Wall Bracket
Communication with RSD	SUNSPEC
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G, Sunspec
Certification & Approvals	NRS097, G99, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2, IEC62477-1
EMC	EN61000-6-2, EN61000-6-3

Single Phase Hybrid Storage Inverter

7-12 kW

The Afore AF low voltage series storage Inverters are designed to increase energy independence for homeowners. The power range is from 7kW to 12kW, compatible with low voltage (40-60V) batteries.

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

The Afore energy storage inverter features Smart Electricity Pricing & Automation, an energy management tool based on real-time electricity pricing strategies. It continuously monitors electricity price fluctuations and dynamically adjusts device operation accordingly. Operating 24/7 fully automatically without the need for manual intervention, it helps users optimize their electricity usage and reduce energy costs.

AI EMS
Electricity Pricing & Automation

MAX. 370A
Max. Charge/ Discharge Current 370A

PV OVERSIZE
1.5 Times PV Oversize

MPPT CHANNELS
Up to 2 MPPT Channels

UPS FUNCTION
Switch Time < 10ms

PARALLEL
Max.6 Parallel Stacking

INPUT
Support Generator

- Higher Yields
- Support for Time-of-use Optimization
- Configurable Operation Modes
- AFCI (Optional) & Rapid Shutdown Ready
- Build in Anti-feed-in Function
- Compact Size and Easy Installation
- Smart Monitoring & Remote Firmware Upgrade

Technical Data	AF7K-SL	AF8K-SL	AF9K-SL	AF10K-SL	AF11K-SL	AF12K-SL
PV Input						
Max. Input Power (kW)	10.5	12	13.5	15	16.5	18
Max. PV Voltage (V)	950					
MPPT Range (V)	80 - 900					
Full MPPT Range (V)	180 - 850	200 - 850	225 - 850	250 - 850	275 - 850	300 - 850
Normal Voltage (V)	650					
Startup Voltage (V)	100					
Max. Input Current (A)	26 + 18.5					
Max. Short Current (A)	32 + 25					
No. of MPP Tracker / No. of PV String	2 / 2					
Battery Port						
Max. Charge/Discharge Power (kW)	10.5	12	13.5	15	16.5	18
Max. Charge/Discharge Current (A)	220	250	280	310	340	370
Normal Charge/Discharge Current(A)	180	200	230	250	275	300
Battery Normal Voltage (V)	51.2					
Battery Voltage Range (V)	40 - 60					
Battery Type	Li-ion / Lead-acid etc.					
AC Grid						
Max Continuous Current (A)	32	37	41	46	50	55
Max Continuous Power (kVA)	7	8	9	10	11	12
Nominal Grid Current (A)	32 / 31	37 / 35	41 / 39	46 / 44	50 / 48	55 / 52
Nominal Grid Voltage (V)	220 / 230					
Nominal Grid Frequency (Hz)	50 / 60					
Power Factor	1 default (adjustable from 0.8 leading to 0.8 lagging)					
Current THD (%)	< 3					
AC Load Output						
Max Continuous Current (A)	32	37	41	46	50	55
Max Continuous Power (kVA)	7	8	9	10	11	12
Max Peak Current (A) (60s)	48 / 46	55.5 / 52.5	61.5 / 58.5	68 / 66	75 / 72	82 / 78
Max Peak Power (kVA) (60s)	10.5	12	13.5	15	16.5	18
Nominal AC Voltage L-N (V)	220 / 230					
Nominal AC Frequency (Hz)	50 / 60					
Switching Time (ms)	Seamless					
Voltage THD (%)	< 3					
Efficiency						
CEC Efficiency (%)	96.8					
Max. Efficiency (%)	98.1					
Protection						
PV Reverse Polarity Protection	Yes					
Bat. Reverse Polarity Protection	Yes					
Over Current/Voltage Protection	Yes					
Anti-Islanding Protection	Yes					
AC Short Circuit Protection	Yes					
Residual Current Detection	Yes					
Ground Fault Monitoring	Yes					
PV Arc Detection	Yes					
Enclosure Protect Level	IP66					
AC/DC surge protection	Type II					
General Data						
Dimensions (W x H x D, mm)	600 x 400 x 250					
Weight (kg)	30					
Topology	Transformerless					
Cooling	Intelligent Fan					
Relative Humidity	0 - 100 %					
Operating Temperature Range (°C)	-25 - 60					
Operating Altitude (m)	< 3000					
Standby Consumption (W)	< 10					
Mounting	Wall Bracket					
Communication with RSD	SUNSPEC					
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G, Sunspec					

Single Phase Hybrid Storage Inverter

8-12 kW

The Afore AF low voltage series storage Inverters are designed to increase energy independence for homeowners. The power range is from 8kW to 12kW, compatible with low voltage (40-60V) batteries.

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

The Afore energy storage inverter features Smart Electricity Pricing & Automation, an energy management tool based on real-time electricity pricing strategies. It continuously monitors electricity price fluctuations and dynamically adjusts device operation accordingly. Operating 24/7 fully automatically without the need for manual intervention, it helps users optimize their electricity usage and reduce energy costs.

AI EMS
Electricity Pricing & Automation

MAX. 240A
Max. Charge/ Discharge Current 240A

PV OVERSIZE
1.5 Times PV Oversize

MPPT CHANNELS
Up to 3 MPPT Channels

UPS FUNCTION
Switch Time < 10ms

PARALLEL
Max.6 Parallel Stacking

INPUT
Support Generator

- Higher Yields
- Support for Time-of-use Optimization
- Configurable Operation Modes
- AFCI (Optional) & Rapid Shutdown Ready
- Colorful touch LCD, User-friendly
- Build in Anti-feed-in Function
- Compact Size and Easy Installation
- Smart Monitoring & Remote Firmware Upgrade

Technical Data	AF8K-SLP	AF9K-SLP	AF10K-SLP	AF11K-SLP	AF12K-SLP
PV Input					
Max. Input Power (kW)	12	13.5	15	16.5	18
Max. PV Voltage (V)			550		
MPPT Range (V)			80 - 500		
Full MPPT Range (V)	150 - 500	170 - 500	190 - 500	210 - 500	230 - 500
Normal Voltage (V)			360		
Startup Voltage (V)			100		
Max. Input Current (A)			18.5 x 3		
Max. Short Current (A)			26 x 3		
No. of MPP Tracker / No. of PV String			3 / 1+1+2		
Battery Port					
Max. Charge/Discharge Power (kW)	8.0	9.0	10	11	12
Max. Charge/Discharge Current (A)	200	240	240	240	240
Battery Normal Voltage (V)			51.2		
Battery Voltage Range (V)			40 - 60		
Battery Type			Li-ion / Lead-acid etc.		
AC Grid & Diesel Gen (Optional)					
Max Continuous Current (A)	37	41	46	50	55
Max Continuous Power (kVA)	8.0	9.0	10	11	12
Nominal Grid Current (A)	36.4 / 34.8	41 / 39.2	45.5 / 43.5	50 / 47.9	54.6 / 52.2
Nominal Grid Voltage (V)			198 to 242 @ 220 / 207 to 253 @ 230		
Nominal Grid Frequency (Hz)			50 / 60		
Power Factor			1 default (adjustable from 0.8 leading to 0.8 lagging)		
Current THD (%)			< 3		
AC Load Output					
Max Continuous Current (A)	37	41	46	50	55
Max Continuous Power (kVA)	8	9	10	11	12
Max Peak Current (A) (10min)	55.5	61.5	69	75	82.5
Max Peak Power (kVA) (10min)	12	13.5	15	16.5	18
Nominal AC Voltage L-N (V)			220 / 230		
Nominal AC Frequency (Hz)			50 / 60		
Switching Time (ms)			Seamless		
Voltage THD (%)			< 3		
Efficiency					
European Efficiency (%)			96.8		
Max. Efficiency (%)			98.1		
Protection					
PV Reverse Polarity Protection			Yes		
Bat. Reverse Polarity Protection			Yes		
Over Current/Voltage Protection			Yes		
Anti-Islanding Protection			Yes		
AC Short Circuit Protection			Yes		
Residual Current Detection			Yes		
Ground Fault Monitoring			Yes		
PV Arc Detection			Yes		
Enclosure Protect Level			IP66		
General Data					
Dimensions (W x H x D, mm)			785 x 614 x 258		
Weight (kg)			51		
Topology			Transformerless		
Cooling			Intelligent Fan		
Relative Humidity			0 - 100 %		
Operating Temperature Range (°C)			- 25 to 60 (Derating 45)		
Operating Altitude (m)			< 4000		
Standby Consumption (W)			< 30		
Mounting			Wall Bracket		
Communication with RSD			SUNSPEC		
Display & Communication Interfaces			LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G, Sunspec		
Certification & Approvals			CE, IEC62116, IEC61727, IEC61683, IEC60068		
EMC			EN61000-6-2, EN61000-6-3		

Wall Mounted Energy Storage Battery

A sleek and space-saving solution for your energy storage needs. With its compact design and easy installation, it seamlessly blends into any environment. Whether in your home, office, or commercial space, our wall-mounted unit provides reliable and efficient energy storage, empowering you to optimize energy usage and reduce waste.

- Space Saving
- Fast Installation
- Efficient Performance
- Safe and Reliable
- Real-time Monitoring
- Durability
- Intelligent BMS
- Cost Effective
- Fire Suppression

Model	AF5000W-LF	AF10000W-LG
Parameter		
Nominal Voltage(Vdc)	51.2	51.2
Nominal Capacity(Wh)	5120	10240
Working Voltage Range(Vdc)	44.8-56.16	44.8-56.16
Charge Voltage(Vdc)	58.4	58.4
Nominal Charge/Discharge Current(A)	50	100
Max.Charge/Discharge Current(A)	100	200
Peak Current(A)	200@3sec	400@3sec
Parallel Connection	≤ 16 pcs	
Cycle Life	6000 @ 80% DOD, 25°C / 0.5C	
Structure		
Dimension(mm)	520*470*142	800*590*142
Weight(kg)	47.2	93.5
IP Rating	IP65	
Installation	Wall mounted/Floor stand	
Working Environment		
Charge Working Temperature(°C)	0-55	
Discharge Working Temperature(°C)	-20~60	
Altitude(M)	<2500	
Humidity(RH)	5-95% (w/o condensing)	
Communication		
Communication Port	RS485, CAN	
Display	SOC status indicator, LED indicator	
Certification		
CB, IEC62619, UL1973, UKCA, CE-EMC, CE-GPSD, EN62619; UN38.3, MSDS		

Three Phase Hybrid Storage Inverter

7-12 kW (LV Battery Supported)

The Afore AF low voltage series storage Inverters are designed to increase energy independence for homeowners. The power range is from 7kW to 12kW, compatible with low voltage (40-60V) batteries.

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

The Afore energy storage inverter features Smart Electricity Pricing & Automation, an energy management tool based on real-time electricity pricing strategies. It continuously monitors electricity price fluctuations and dynamically adjusts device operation accordingly. Operating 24/7 fully automatically without the need for manual intervention, it helps users optimize their electricity usage and reduce energy costs.

AI EMS
Electricity Pricing & Automation

MAX. 370A
Max. Charge/ Discharge Current 370A

100% UNBALANCE
Support Unbalance Load

MPPT CHANNELS
Up to 2 MPPT Channels

UPS FUNCTION
Switch Time < 10ms

PARALLEL
Max.6 Parallel Stacking

INPUT
Support Generator

- Higher Yields
- Support for Time-of-use Optimization
- Configurable Operation Modes
- AFCI (Optional) & Rapid Shutdown Ready
- 48V low voltage battery, transformer isolation design
- Build in Anti-feed-in Function
- Compact Size and Easy Installation
- Smart Monitoring & Remote Firmware Upgrade

Technical Data	AF7K-TL	AF8K-TL	AF9K-TL	AF10K-TL	AF11K-TL	AF12K-TL
PV Input						
Max. Input Power (kW)	10.5	12	13.5	15	16.5	18
Max. PV Voltage (V)	950					
MPPT Range (V)	80 - 900					
Full MPPT Range (V)	180 - 850	200 - 850	225 - 850	250 - 850	275 - 850	300 - 850
Normal Voltage (V)	650					
Startup Voltage (V)	100					
Max. Input Current (A)	26 + 18.5					
Max. Short Current (A)	32 + 25					
No. of MPP Tracker / No. of PV String	2 / 2					
Battery Port						
Max. Charge/Discharge Power (kW)	10.5	12	13.5	15	16.5	18
Max. Charge/Discharge Current (A)	220	250	280	310	340	370
Normal Charge/Discharge Current(A)	180	200	230	250	275	300
Battery Normal Voltage (V)	51.2					
Battery Voltage Range (V)	40 - 60					
Battery Type	Li-ion / Lead-acid etc.					
AC Grid						
Max Continuous Current (A)	11	12	14	15	17	18
Max Continuous Power (kVA)	7	8	9	10	11	12
Nominal Grid Current (A)	11 / 10.5	12 / 11.5	14 / 13	15 / 14.5	17 / 16	18 / 17.5
Nominal Grid Voltage (V)	380 / 400					
Nominal Grid Frequency (Hz)	50 / 60					
Power Factor	1 default (adjustable from 0.8 leading to 0.8 lagging)					
Current THD (%)	< 3					
AC Load Output						
Max Continuous Current (A)	11	12	14	15	17	18
Max Continuous Power (kVA)	7	8	9	10	11	12
Max Peak Current (A) (60s)	22 / 21	24 / 23	28 / 26	30 / 29	34 / 32	36 / 35
Max Peak Power (kVA) (60s)	10.5	12	13.5	15	16.5	18
Nominal AC Voltage L-N (V)	380 / 400					
Nominal AC Frequency (Hz)	50 / 60					
Switching Time (ms)	Seamless					
Voltage THD (%)	< 3					
Efficiency						
CEC Efficiency (%)	96.8					
Max. Efficiency (%)	98.1					
Protection						
PV Reverse Polarity Protection	Yes					
Bat. Reverse Polarity Protection	Yes					
Over Current/Voltage Protection	Yes					
Anti-Islanding Protection	Yes					
AC Short Circuit Protection	Yes					
Residual Current Detection	Yes					
Ground Fault Monitoring	Yes					
PV Arc Detection	Yes					
Enclosure Protect Level	IP66					
AC/DC surge protection	Type II					
General Data						
Dimensions (W x H x D, mm)	600 x 400 x 250					
Weight (kg)	30					
Topology	Transformerless					
Cooling	Intelligent Fan					
Relative Humidity	0 - 100 %					
Operating Temperature Range (°C)	-25 - 60					
Operating Altitude (m)	< 3000					
Standby Consumption (W)	< 10					
Mounting	Wall Bracket					
Communication with RSD	SUNSPEC					
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G, Sunspec					

Three Phase Hybrid Storage Inverter

3-15 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 15kW, compatible with high voltage (80-600V) 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.

The Afore energy storage inverter features Smart Electricity Pricing & Automation, an energy management tool based on real-time electricity pricing strategies. It continuously monitors electricity price fluctuations and dynamically adjusts device operation accordingly. Operating 24/7 fully automatically without the need for manual intervention, it helps users optimize their electricity usage and reduce energy costs.

AI EMS
Electricity Pricing & Automation

WIDE RANGE
Voltage Range (80-600V)

PV OVERSIZE
1.5 Times PV Oversize

MAX. 18.5Adc
String Current Up To 18.5A

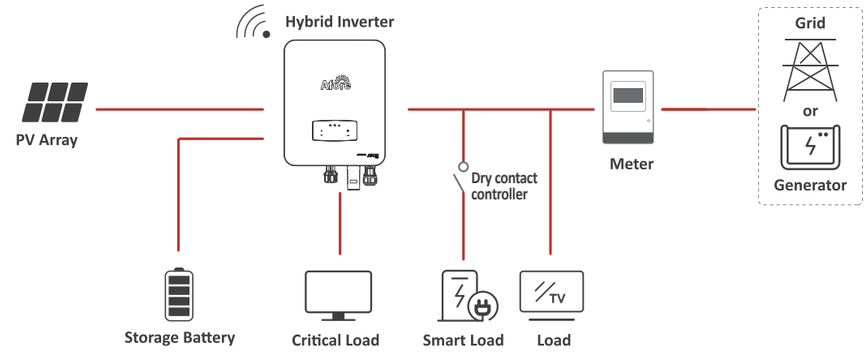
UPS FUNCTION
Switch Time < 10ms

COMPACT
Compact Design

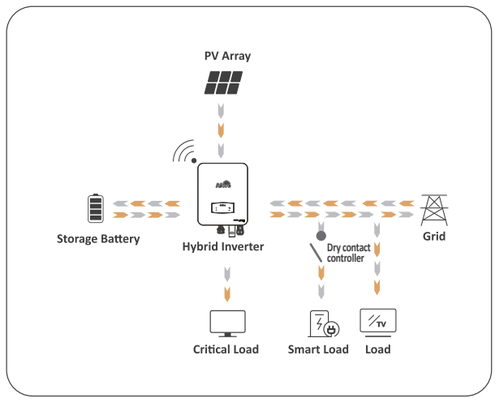
GENERATOR
Generator Backup Support

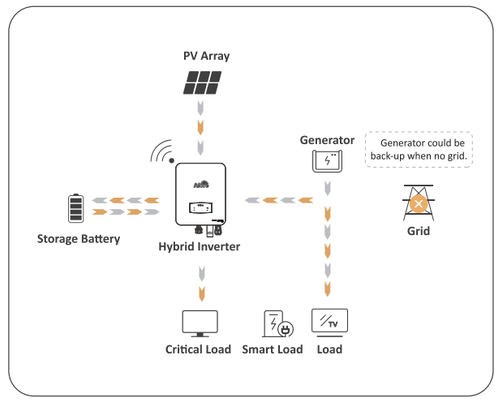
- Support for Time-of-use Optimization
- Configurable Operation Modes
- AFCI (Optional) & Rapid Shutdown Ready
- Build in Anti-feed-in Function
- 100% unbalanced output, each phase
- Smart Monitoring & Remote Firmware Upgrade

For New Storage System:



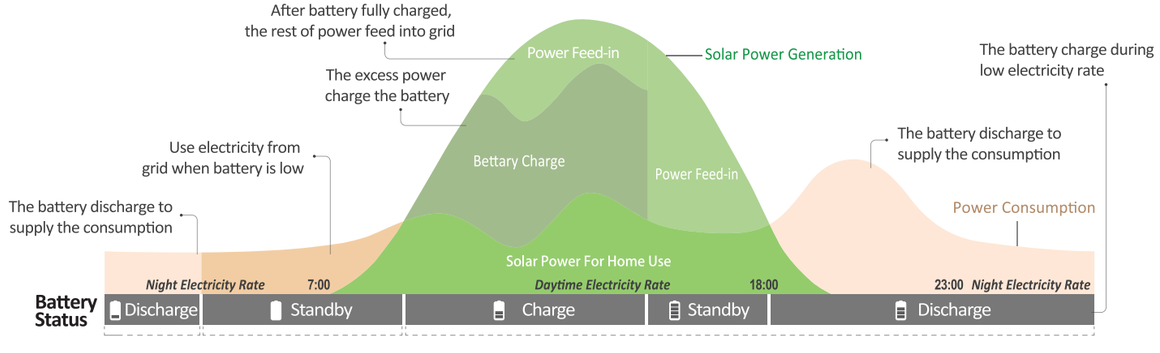
Optimizing Self-Consumption (on-grid) + Emergency Power Supply (off-grid)





Optimizing Self-Consumption Mode

With home energy storage installed, home owners 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	AF3K-MTH	AF4K-MTH	AF5K-MTH	AF6K-MTH
PV Input				
Max. DC Input Power (kW)	5	6	7.5	9
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
Start-up Voltage (V)	160			
Max. DC Input Current (A)	18.5x2			
Max. Short Current(A)	25 x2			
No. of MPPT Tracker / Strings	2/2			
Battery Port				
Battery Nominal Voltage (V)	350	350	350	350
Battery Voltage Range (V)	80-600			
Max. Charge/Discharge Current (A)	30			
Max. Charge/Discharge Power (kW)	3	4	5	6
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
Max. AC Input/Output Power (kVA)	4.5 / 3.3	6 / 4.4	7.5 / 5.5	9 / 6.6
Max. AC Output Current (A)	5.3	7	8.5	10.5
Nominal AC Voltage (V)	3P+N+PE/3P+PE 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)	3	4	5	6
Nominal Output Voltage (V)	3P+N+PE/3P+PE 230/400			
Nominal Output Frequency (Hz)	50/60			
Nominal Output Current (A)	4.4	5.8	7.3	8.7
Peak Output Power	3.3kVA, 60s	4.4kVA, 60s	5.5kVA, 60s	6.6kVA, 60s
THDV (with linear load)	<3%			
Switching Time (ms)	<10			
Efficiency				
Europe Efficiency				
Max. Efficiency	98.00%			
Battery Charge/Discharge Efficiency				
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)	370 x 598.5 x 192mm			
Weight (kg)	22kg			
Topology	Transformerless			
Cooling Concept	Natural Convection			
Relatively Humidity	0-100%			
Operating Temperature Range (°C)	-25 to 60 °C			
Operating Altitude (m)	<4000			
Standby Consumption (W)	<5			
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G, Sunspec			
Certification & Approvals	NRS097, G98/G99, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2, IEC62477-1			
EMC	EN61000-6-2, EN61000-6-3			

Technical Data	AF8K-MTH	AF10K-MTH	AF12K-MTH	AF15K-MTH
PV Input				
Max. DC Input Power (kW)	12	15	18	22.5
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)	300-850	500-850		
Start-up Voltage (V)	160			
Max. DC Input Current (A)	18.5x2			
Max. Short Current(A)	25 x2			
No. of MPPT Tracker / Strings	2/2			
Battery Port				
Battery Nominal Voltage (V)	350	350	450	500
Battery Voltage Range (V)	80-600			
Max. Charge/Discharge Current (A)	30			
Max. Charge/Discharge Power (kW)	8	10	12	15
Charging Curve	3 Stages			
Compatible Battery Type	Li-ion / Lead-acid / Sodium metal chloride battery			
AC Grid				
Nominal AC Output Power (kW)	8	10	12	15
Max. AC Input/Output Power (kVA)	12 / 8.8	15 / 11	18 / 13.2	22.5 / 16.5
Max. AC Output Current (A)	13.5	17	21.5	27
Nominal AC Voltage (V)	3P+N+PE/3P+PE 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)	8	10	12	15
Nominal Output Voltage (V)	3P+N+PE/3P+PE 230/400			
Nominal Output Frequency (Hz)	50/60			
Nominal Output Current (A)	11.6	14.5	17.4	21.8
Peak Output Power	8.8kVA, 60s	11kVA, 60s	13.2kVA, 60s	16.5kVA, 60s
THDV (with linear load)	<3%			
Switching Time (ms)	<10			
Efficiency				
Europe Efficiency				
Max. Efficiency	98.20%		98.30%	
Battery Charge/Discharge Efficiency				
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)	370 x 598.5 x 192mm			
Weight (kg)	22kg			
Topology	Transformerless			
Cooling Concept	Intelligent Fan			
Relatively Humidity	0-100%			
Operating Temperature Range (°C)	-25 to 60 °C			
Operating Altitude (m)	<4000			
Standby Consumption (W)	<5			
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G, Sunspec			
Certification & Approvals	NRS097, G98/G99, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2, IEC62477-1			
EMC	EN61000-6-2, EN61000-6-3			

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.

The Afore energy storage inverter features Smart Electricity Pricing & Automation, an energy management tool based on real-time electricity pricing strategies. It continuously monitors electricity price fluctuations and dynamically adjusts device operation accordingly. Operating 24/7 fully automatically without the need for manual intervention, it helps users optimize their electricity usage and reduce energy costs.

AI EMS
Electricity Pricing & Automation

BATTERY
Support Sodium metal chloride battery

WIDE RANGE
Voltage Range (150-800V)

100% UNBALANCE
Support Unbalance Load

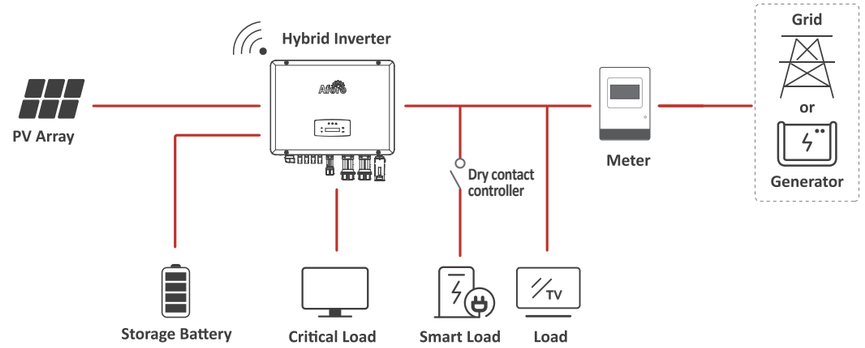
MAX. 40Adc
String Current Up To 40A

UPS FUNCTION
Switch Time < 10ms

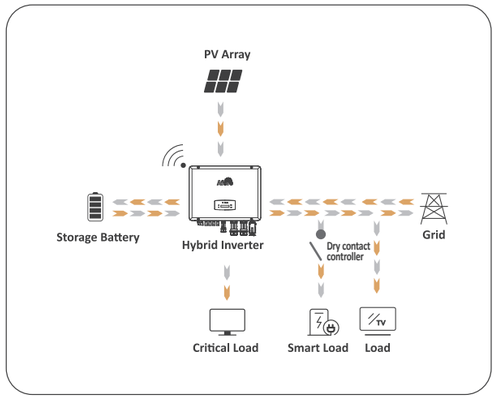
INPUT
Support Generator

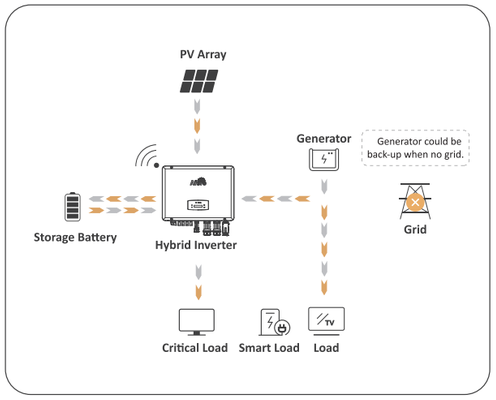
- Support for Time-of-use Optimization
- Configurable Operation Modes
- AFCI (Optional) & Rapid Shutdown Ready
- Build in Anti-feed-in Function
- 100% unbalanced output, each phase; 200% unbalanced output, each phase (≤ 10kW)
- Smart Monitoring & Remote Firmware Upgrade

For New Storage System:



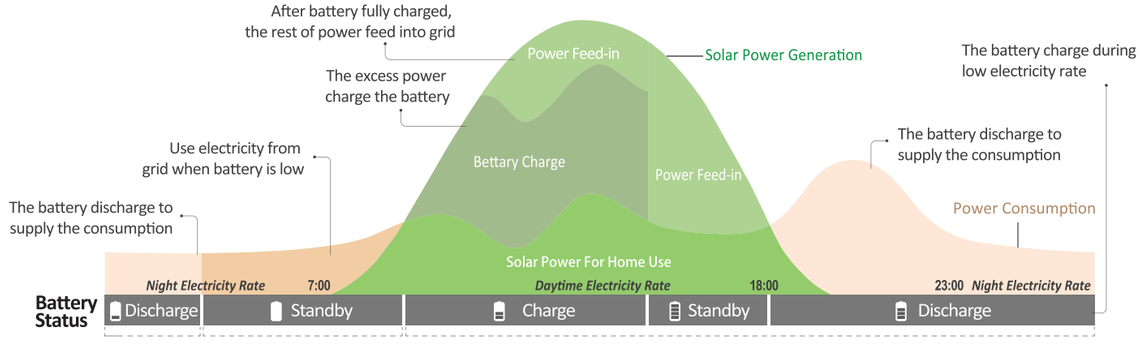
Optimizing Self-Consumption (on-grid) + Emergency Power Supply (off-grid)





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	AF3K-TH	AF4K-TH	AF5K-TH	AF6K-TH	AF8K-TH	AF10K-TH
PV Input						
Max. DC Input Power (kW)	5	6	7.5	9	12	15
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)	200	200	200	250	300	400
Battery Voltage Range (V)	150-800					
Max. Charge/Discharge Current (A)	30					
Max. Charge/Discharge Power (kW)	3	4	5	6	8	10
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
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
Max. AC Output Current (A)	5.3	7	8.5	10.5	13.5	17
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)	3	4	5	6	8	10
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
Peak Output Power	3.3kVA, 60s	4.4kVA, 60s	5.5kVA, 60s	6.6kVA, 60s	8.8kVA, 60s	11kVA, 60s
THDV (with linear load)	<3%					
Switching Time (ms)	<10					
Efficiency						
Europe Efficiency	97.50%					
Max. Efficiency	98.00%				98.20%	
Battery Charge/Discharge Efficiency	98.00%					
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	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	Natural Convection				Intelligent Fan	
Relatively Humidity	0-100%					
Operating Temperature Range (°C)	-25 to 60 °C					
Operating Altitude (m)	<4000					
Standby Consumption (W)	<5					
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G, Sunspec					
Certification & Approvals	NRS097, G98, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2, IEC62477-1					
EMC	EN61000-6-2, EN61000-6-3					

Technical Data	AF12K-TH	AF15K-TH	AF17K-TH	AF20K-TH	AF25K-TH	AF30K-TH
PV Input						
Max. DC Input Power (kW)	18	22.5	25.5	30	37.5	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)	20x2	20+32	32x2		40x2	
Max. Short Current(A)	30x2	30+48	48x2		60x2	
No. of MPPT Tracker / Strings	2/2	2/3	2/4		2/4	
Battery Port						
Battery Nominal Voltage (V)	450	500	400	500	500	550
Battery Voltage Range (V)	150-800					
Max. Charge/Discharge Current (A)	30	50	50	50	60	60
Max. Charge/Discharge Power (kW)	12	15	17	20	25	30
Charging Curve	3 Stages					
Compatible Battery Type	Li-ion / Lead-acid / Sodium metal chloride battery					
AC Grid						
Nominal AC Output Power (kW)	12	15	17	20	25	30
Max. AC Input/Output Power (kVA)	18 / 13.2	22.5 / 16.5	25.5 / 18.7	30 / 22	37.5 / 27.5	45 / 33
Max. AC Output Current (A)	21.5	27	30	32	40	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 (kVA)	12	15	17	20	25	30
Nominal Output Voltage (V)	230/400					
Nominal Output Frequency (Hz)	50/60					
Nominal Output Current (A)	17.4	21.8	24.7	29	36.3	43.5
Peak Output Power	13.2kVA, 60s	16.5kVA, 60s	18.7kVA, 60s	22kVA, 60s	27.5kVA, 60s	33kVA, 60s
THDV (with linear load)	<3%					
Switching Time (ms)	<10					
Efficiency						
Europe Efficiency	97.50%		97.80%		98.00%	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-ciruit 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					
Standby Consumption (W)	<5					
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G, Sunspec					
Certification & Approvals	NRS097, G99, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2, IEC62477-1					
EMC	EN61000-6-2, EN61000-6-3					

Three Phase Hybrid Storage Inverter

3-12 kW Plus Series

The Afore 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.

The Afore energy storage inverter features Smart Electricity Pricing & Automation, an energy management tool based on real-time electricity pricing strategies. It continuously monitors electricity price fluctuations and dynamically adjusts device operation accordingly. Operating 24/7 fully automatically without the need for manual intervention, it helps users optimize their electricity usage and reduce energy costs.

AI EMS
Electricity Pricing & Automation

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. 20Adc
String Current Up To 20A

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 Frenquency (Hz)	50/60						
Power Factor	1（-0.8-0.8 adjustable）						
Current THD (%)	<3%						
AC Load Output (Back-up)							
Nominal Output Power (kVA)	3	4	5	6	8	10	12
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	3.3kVA, 60s	4.4kVA, 60s	5.5kVA, 60s	6.6kVA, 60s	8.8VA, 60s	11VA, 60s	13.2kVA, 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-ciruit 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	Natural Convection				Intelligent Fan		
Relative Humidity	0-100%						
Operating Temperature Range (°C)	-25 to 60 °C						
Operating Altitude (m)	<4000						
Standby Consumption (W)	<5						
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G, Sunspec						
Certification & Approvals	NRS097, G98/G99, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2, IEC62477-1						
EMC	EN61000-6-2, EN61000-6-3						

Three Phase Hybrid Storage Inverter

36-60 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 60kW, 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.

The Afore energy storage inverter features Smart Electricity Pricing & Automation, an energy management tool based on real-time electricity pricing strategies. It continuously monitors electricity price fluctuations and dynamically adjusts device operation accordingly. Operating 24/7 fully automatically without the need for manual intervention, it helps users optimize their electricity usage and reduce energy costs.

AI EMS
Electricity Pricing & Automation

BATTERY
Support Sodium metal chloride battery

WIDE RANGE
Voltage Range (150-800V)

100% UNBALANCE
Support Unbalance Load

MAX. 40Adc
String Current Up To 40A

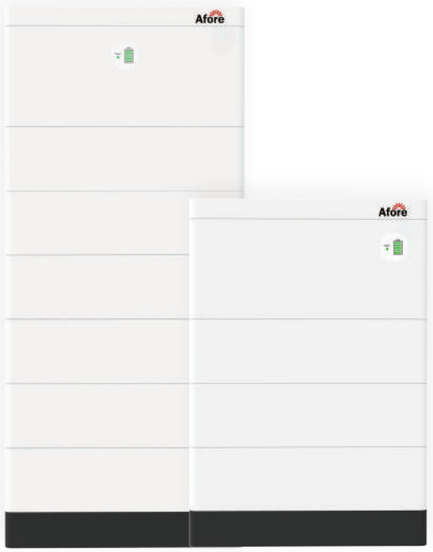
UPS FUNCTION
Switch Time < 10ms

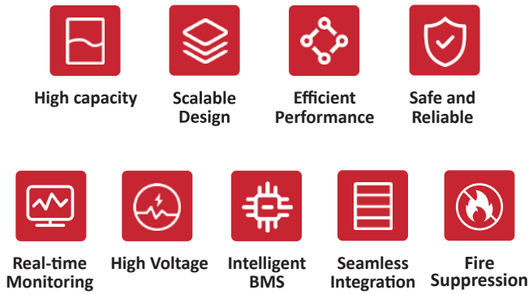
INPUT
Support Generator

- 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	AF45K-TH	AF50K-TH	AF60K-TH
PV Input					
Max. DC Input Power (kW)	54	60	67.5	75	90
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	45	50	60
Charging Curve			3 Stages		
Compatible Battery Type			Li-ion / Lead-acid / Sodium metal chloride battery		
AC Grid					
Nominal AC Output Power (kW)	36	40	45	50	60
Max. AC Input/Output Power (kVA)	54 / 39.6	60 / 44	67.5 / 49.5	75 / 55	90 / 66
Max. AC Output Current (A)	60.5	67	75.5	83.5	96
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	45	50	60
Nominal Output Voltage (V)			230/400		
Nominal Output Frequency (Hz)			50/60		
Max. AC Output Current (A)	60.5	67	75.5	83.5	96
Peak Output Power	39.6kVA, 60s	44kVA, 60s	49.5kVA, 60s	55kVA, 60s	66kVA, 60s
THDV (with linear load)			3%		
Switching Time (ms)			<10		
Efficiency					
Europe Efficiency	98.20%	98.30%	98.30%	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, Sunspec		
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		

High Voltage Stackable Energy Storage Battery

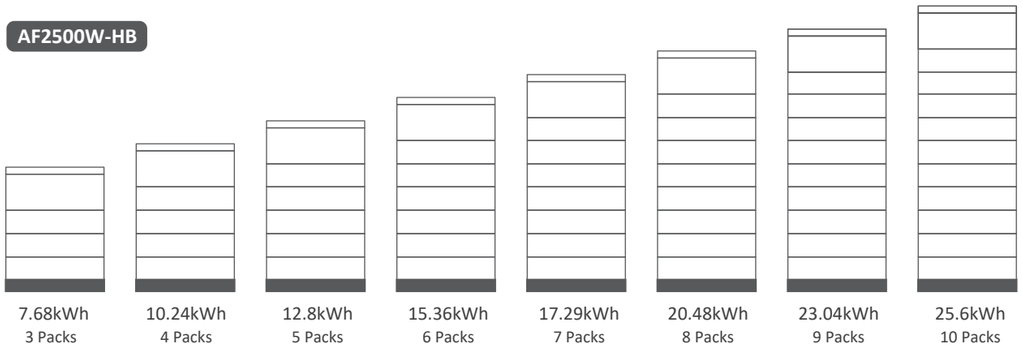




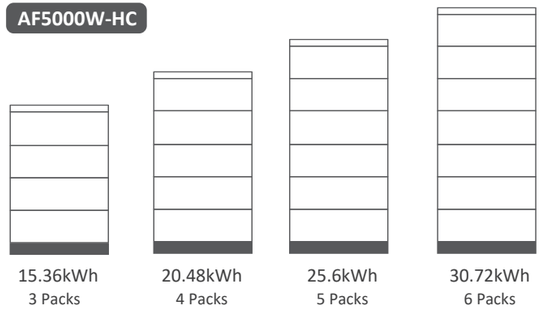
Power up your energy storage game with compact size, lightweight design, and effortless installation of standardized modules, leveraging the advantages of high voltage. Effortlessly customize battery combinations to meet your energy storage needs.

Thermal Aerosol Fire Suppression Device

The energy storage system is equipped with a breakthrough aerosol fire suppression device, boasting ultra-high efficiency and reliability. Its compact size, rapid response, and eco-friendly features make it ideal for enclosed spaces like battery compartments. Invest in our ESS today for top-of-the-line fire protection technology to ensure the safety of personnel and property.



- Higher Conversion Efficiency
- Increased Independence from the Grid
- Better Suitable for Peaking Applications
- Greater Flexibility
- Lower Cost, Larger System
- Faster Charging and Discharging
- Energy Savings



Model	AF2500W-HB	AF5000W-HC
Parameter		
Nominal Voltage(Vdc)	51.2	51.2
Nominal Capacity(Wh)	2560	5120
Working Voltage Range(Vdc)	129.6-516.6	129.6-350.4
Charge Voltage(Vdc)	56.16	56.16
Nominal Charge/Discharge Current(A)	25	50
Max.Charge/Discharge Current(A)	50	100
Peak Current(A)	100@3sec	200@3sec
Series Connection	3-10 pcs	3-6 pcs
Cycle Life	6000 @ 80% DOD, 25°C / 0.5C	
Structure		
Power Module Dimensions(mm)/Weight(kg)	600*210*250 /14	610*225*250 /15
Battery Module Dimensions(mm)/Weight(kg)	600*210*160 /27	610*225*250 /52
Lampstand Module Dimensions(mm)/Weight(kg)	600*210*90 /5	610*225*90 /5.5
Top Cap Module Dimensions(mm)/Weight(kg)	600*210*50 /2.5	610*225*50 /3
IP Rating	IP65	
Installation	Stacked	
Working Environment		
Charge Working Temperature(°C)	0-55	
Discharge Working Temperature(°C)	-20~60	
Altitude(M)	<2500	
Humidity(RH)	5-95% (w/o condensing)	
Communication		
Communication Port	RS485, CAN	
Display	SOC status indicator, LED indicator	
Certification		
CB, IEC62619, CE-EMC, CE-GPSD, UKCA, UL1973, UL9540A, EN62040, IEC62040; UN38.3, MSDS		

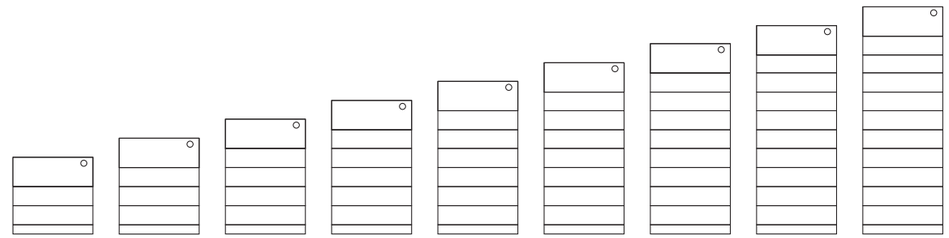
High Voltage Stackable Energy Storage Battery

The AF2500W-HQ is a household solar lithium battery. Its intelligent Battery Management System (BMS) can monitor and optimize the battery performance in real-time, extend the battery's service life, and support remote control through a mobile app, which makes it convenient for you to keep track of the energy situation at home at any time. It is easy to install, and the stackable design saves space. In case of an emergency, it can serve as a mobile power source to supply electricity to household appliances, and it is capable of adapting to various scenarios.

- Stackable products
- Longer Life and Safer
- Remote upgrade
- Flexible and Expandable
- Real-time Monitoring
- Intelligent BMS
- Cost Effective
- Fire Suppression

Model AF2500W-HQ

TechnicalSpecification

Number oflayers	2	3	4	5	6	7	8	9	10
Picture									
Energy	5.12kWh	7.68kWh	10.24kWh	12.8kWh	15.36kWh	17.29kWh	20.48kWh	23.04kWh	25.6kWh
Nominal voltage	102.4V	153.6V	204.8V	256V	307.2V	358.4V	409.6V	460.8V	512V
Dimension (L*W*H)mm	650*210*700	650*210*880	650*210*1060	650*210*1240	650*210*142	650*210*1600	650*210*1780	650*210*1960	650*210*2140
Weight(KG)	69	93	117	141	165	189	213	237	261

Single module Technical Specification

Module	51.2V 50Ah,2.56kWh
Dimension(L*W*H)	High-voltage box: 650*210*250mm, battery: 650*210*180mm, base: 650*210*90mm
Weight	High - voltage box: 14 kg, battery: 24 kg, base: 7 kg.
Rated voltage	51.2V
Rated capacity	50Ah
Electric quantity	2.56kWh
Recommended charging current	25A
Maximum continuous charging/dischargingcurrent	50A
Display method	LED display
Communication	RS485/RS232/CAN
Charging temperature	0°C~45°C
Discharge temperature	-20°C~55'°C
Environment	Indoors/under the outdoor eaves
Relative humidity	5%~95%
Cooling	Natural convection
Cell technology	Lithium-iron phosphate (LiFePO4)
Life cycle	6000 times @80%DOD， 25°C/0.5C
IP Rating	IP65
Certificates	UN38.3, MSDS, MSR, CB, CE-EMC, UKCA, CE-GPSD, UL1973, UL9540A

High Voltage Stackable Energy Storage Battery

The AF5000W-HR has a more compact and lightweight single module, plug-in stacking method, only simple and easy installation steps, easy to customize the battery module to meet the energy storage needs. It is equipped with an intelligent BMS, which not only monitors in real time, optimizes battery performance and prolongs life, but also supports remote control via mobile phone APP, so that you can always know the dynamics of home energy. Ensure worry-free power consumption of home appliances and easily cope with various scenarios. There are also multiple protections such as overcharge, over-discharge, short circuit, high and low temperature, which protect the safety of battery operation in all directions and build a safety line for the whole family's power consumption. It is a reliable energy choice for your home.

Stackable products

Longer Life and Safer

Remote upgrade

Flexible and Expandable

Real-time Monitoring

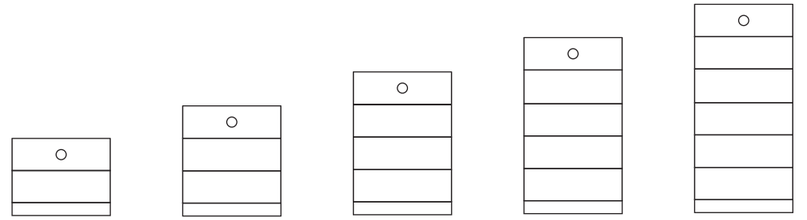
Intelligent BMS

Cost Effective

Fire Suppression

Model AF5000W-HR

TechnicalSpecification

Number oflayers	1	2	3	4	5
Picture					
Energy	5.12KWh	10.24KWh	15.36KWh	20.48KWh	25.6KWh
Nominal voltage	89.6-116.8V	179.2-233.6V	268.8-350.4V	358.4-467.2V	448-584V
Dimension (L*W*H)mm	575*275*696	575*275*986	575*275*1276	575*275*1566	575*275*1856
Weight(KG)	59.5	94.5	129.5k	164.5	199.5

Single module Technical Specification

Module	102.4V 50Ah, 5.12kWh
Dimension(L*W*H)	High-voltage box: 575*275*258mm, battery: 575*275*290mm, base: 575*275*148mm
Weight	High - voltage box: 16 kg, battery: 35 kg, base: 8.5 kg.
Rated voltage	102.4V
Rated capacity	50Ah
Electric quantity	5.12KWh
Recommended charging current	25A
Maximum continuous charging/dischargingcurrent	50A
Charging temperature	0°C~45°C
Discharge temperature	-20°C~55'°C
Environment	Indoors/under the outdoor eaves
Altitude	3000m
Relative humidity	5%~95%
Cooling	Natural convection
Cell technology	Lithium-iron phosphate (LiFePO4)
Life cycle	6000 times @80%DOD(25°C)
IP Rating	IP65
Communication	CAN/RS485
Extended functions	Single-pack hot aerosol fire extinguishing device (standard) / heating function (optional)
Certificates	IEC/EN 62619, IEC61000, UN 38.3, MSDS

Split Phase Hybrid Storage Inverter

3-9.6 kW

The Afore AF series storage inverters are designed to increase energy independence for homeowners. The power range is from 3.0kW to 9.6kW, compatible with high voltage (80-495V) 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 it enables the crucial loads power on during outages. Additionally, under the backup operation mode, the inverter provides you up to 150% peak output overloading.

The Afore energy storage inverter features Smart Electricity Pricing & Automation, an energy management tool based on real-time electricity pricing strategies. It continuously monitors electricity price fluctuations and dynamically adjusts device operation accordingly. Operating 24/7 fully automatically without the need for manual intervention, it helps users optimize their electricity usage and reduce energy costs.

AI EMS
Electricity Pricing & Automation

PV OVERSIZE
1.5 Times PV Oversize

MPPT CHANNELS
Up to 3 MPPT Channels

UPS FUNCTION
Switch Time < 10ms

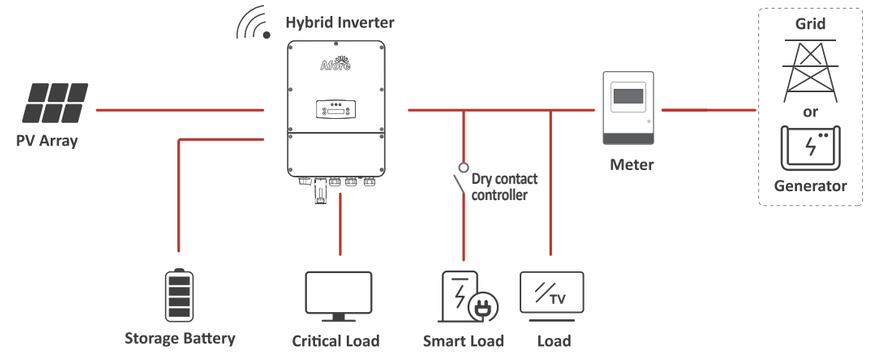
PARALLEL
Max.6 Parallel Stacking

INPUT
Support Generator

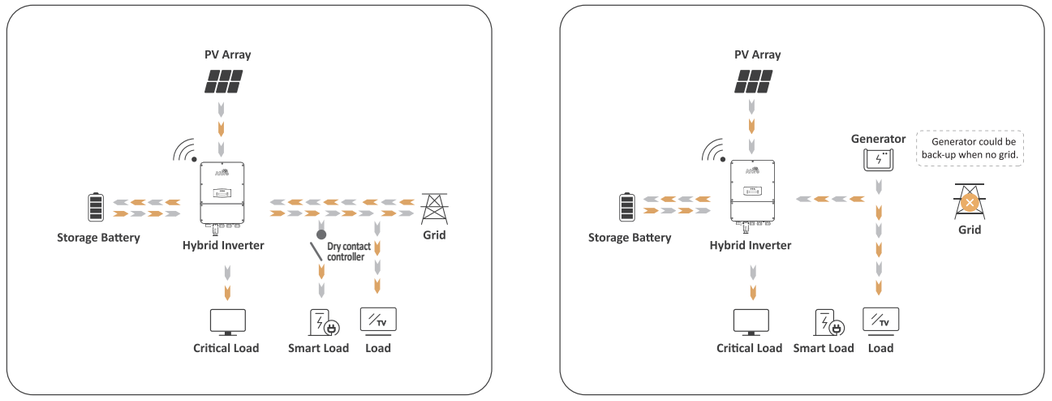
SPLIT-PHASE
Support Split-phase (120/240Vac) Grid

- Support for Time-of-use Optimization
- Configurable Operation Modes
- AFCI (Optional) & Rapid Shutdown Ready
- Build in Anti-feed-in Function
- Compact Size and Easy Installation
- Smart Monitoring & Remote Firmware Upgrade

For New Storage System:

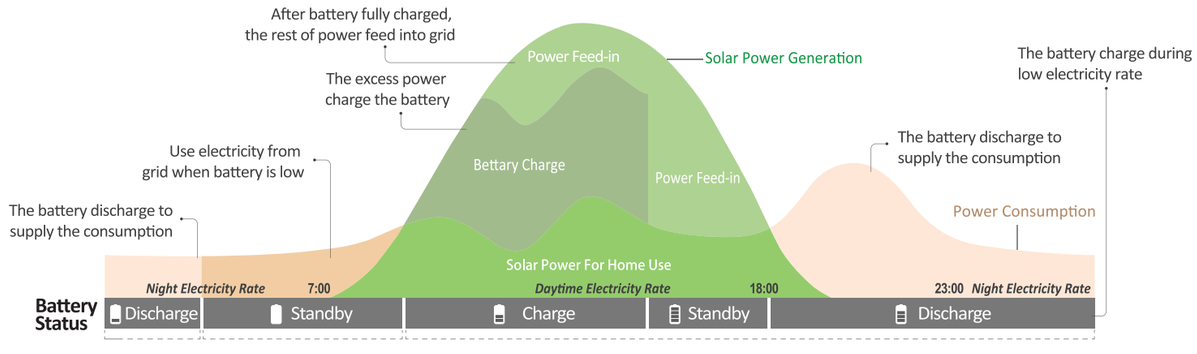


Optimizing Self-Consumption (on-grid) + Emergency Power Supply (off-grid)



Optimizing Self-Consumption Mode

With home energy storage installed, home owners 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.

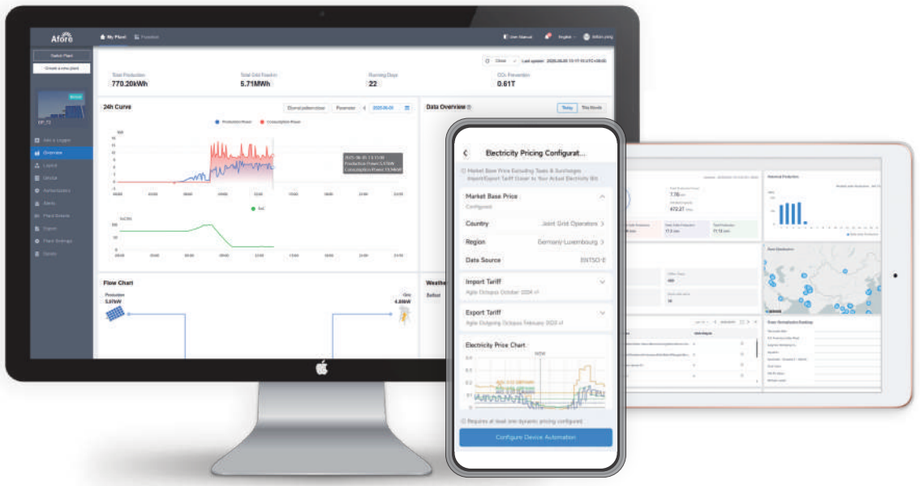


Technical Data	AF3K-DH	AF3.6K-DH	AF4K-DH	AF4.6K-DH	AF5K-DH	AF5.5K-DH
PV Input						
Max. Input Power (kW)	4.5	5.4	6.0	6.9	7.5	8.3
Max. PV Voltage (V)	600					
MPPT Range (V)	80 - 550					
Full MPPT Range (V)	110 - 550	135 - 550	150 - 550	170 - 550	185 - 550	200 - 550
Normal Voltage (V)	360					
Startup Voltage (V)	100					
Max. Input Current (A)	15.5 x 2					
Max. Short Current (A)	26.0 x 2					
No. of MPP Tracker / No. of PV String	2 / 2					
Battery Port						
Max. Charge/Discharge Power (kW)	4.5 / 4.5	5.4 / 5.4	6.0 / 6.0	6.9 / 6.9	7.5 / 7.5	8.3 / 8.3
Max. Charge/Discharge Current (A)	50					
Battery Normal Voltage (V)	230					
Battery Voltage Range (V)	80 - 495					
Battery Type	Li-ion / Lead-acid etc.					
AC Grid						
Max Continuous Current (A)	15	17.5	19.5	22.5	24.5	27
Max Continuous Power (kVA)	3.0	3.6	4.0	4.6	5.0	5.5
Nominal Grid Current (A)	12.5 / 14.5	15.0 / 17.4	17.0 /19.3	19.5 / 22.2	20.9 / 24.1	23.0 / 26.5
Nominal Grid Voltage (V)	211 to 264 @ 240 / 183 to 229 @ 208					
Nominal Grid Frequency (Hz)	60					
Power Factor	1 default (adjustable from 0.8 leading to 0.8 lagging)					
Current THD (%)	< 3					
Gen Input & AC Load Output						
Max. Continuous Current (A)	15	17.5	19.5	22.5	24.5	27
Max. Continuous Power (kVA)	3.0	3.6	4.0	4.6	5.0	5.5
Max. Peak Current (A) (10min)	18.8 / 21.7	22.5 / 26.0	25 / 28.9	28.8 / 33.2	31.3 / 36.1	34.6 / 39.9
Max. Peak Power (kVA) (10min)	4.5 / 4.5	5.4 / 5.4	6.0 / 6.0	6.9 / 6.9	7.5 / 7.5	8.3 / 8.3
Nominal AC Voltage L-L (V)	240 / 208					
Nominal AC Voltage L-N (V)	120 / 104					
Nominal AC Frequency (Hz)	60					
Switching Time (ms)	< 10					
Voltage THD (%)	< 3					
Efficiency						
CEC Efficiency (%)	97.0					
Max. Efficiency (%)	97.6					
PV to Bat. Efficiency (%)	98.1					
Bat. between AC Efficiency (%)	96.8					
Protection						
PV Reverse Polarity Protection	Yes					
Bat. Reverse Polarity Protection	Yes					
Over Current/Voltage Protection	Yes					
Anti-Islanding Protection	Yes					
AC Short Circuit Protection	Yes					
Residual Current Detection	Yes					
Ground Fault Monitoring	Yes					
Insulation Resister Detection	Yes					
PV Arc Detection	Yes					
Rapid Shut Down	Yes					
Protection Degree	NEMA4X					
AC/DC surge protection	Type II					
General Data						
Dimensions (W x H x D)	400 x 600 x 229 mm / 15.7 x 23.6 x 9.0 in					
Weight	25 kg / 55 lbs					
Topology	Tranformerless					
Cooling	Intelligent Fan					
Relative Humidity	0 - 100 %					
Operating Temperature Range	- 25 to 60 °C / - 77 to 140 °F					
Operating Altitude	< 4000 m / < 13123 ft					
Standby Consumption (W)	< 10					
Mounting	Wall Bracket					
Communication with RSD	SUNSPEC					
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G, Sunspec					
Certification & Approvals	UL 1741 SA, UL 1741, UL1699B, UL 1998, IEEE1547, IEEE1547A, IEEE1547.1, CSA 22.2 No.107, Rule21, HECO Rule 14					
EMC	FCC part15 CLASS B					

Technical Data	AF6K-DH	AF7K-DH	AF7.6K-DH	AF8K-DH	AF8.6K-DH	AF9.6K-DH
PV Input						
Max. Input Power (kW)	9.0	10.5	11.4	12.0	12.9	15.0
Max. PV Voltage (V)	600					
MPPT Range (V)	80 - 550					
Full MPPT Range (V)	220 - 550	170 - 550	185 - 550	195 - 550	210 - 550	235 - 550
Normal Voltage (V)	360					
Startup Voltage (V)	100					
Max. Input Current (A)	15.5 x 2	15.5 x 3				
Max. Short Current (A)	26.0 x 2	26.0 x 3				
No. of MPP Tracker / No. of PV String	2 / 2	3 / 3				
Battery Port						
Max. Charge/Discharge Power (kW)	9.0 / 9.0	10.5 / 10.3	11.4 / 10.3	11.5 / 10.3	11.5 / 10.3	11.5 / 10.3
Max. Charge/Discharge Current (A)	50					
Battery Normal Voltage (V)	230					
Battery Voltage Range (V)	80 - 495					
Battery Type	Li-ion / Lead-acid etc.					
AC Grid						
Max Continuous Current (A)	29.0	34.0	37	39	41.5	46.5
Max Continuous Power (kVA)	6.0	7.0	7.6	8.0	8.6	9.6
Nominal Grid Current (A)	25.0 /28.9	29.2 / 33.7	31.7 / 36.6	33.4 /38.5	35.9 / 41.4	40.0 / 46.2
Nominal Grid Voltage (V)	211 to 264 @ 240 / 183 to 229 @ 208					
Nominal Grid Frequency (Hz)	60					
Power Factor	1 default (adjustable from 0.8 leading to 0.8 lagging)					
Current THD (%)	< 3					
Gen Input & AC Load Output						
Max. Continuous Current (A)	29.0	34.0	37	39	41.5	46.5
Max. Continuous Power (kVA)	6.0	7.0	7.6	8.0	8.6	9.6
Max. Peak Current (A) (10min)	37.5 / 43.3	43.8 / 49.5	47.5 / 49.5	47.9 / 49.5	47.9 / 49.5	47.9 / 49.5
Max. Peak Power (kVA) (10min)	9.0 / 9.0	10.5 / 10.3	11.4 / 10.3	11.5 / 10.3	11.5 / 10.3	11.5 / 10.3
Nominal AC Voltage L-L (V)	240 / 208					
Nominal AC Voltage L-N (V)	120 / 104					
Nominal AC Frequency (Hz)	60					
Switching Time (ms)	< 10					
Voltage THD (%)	< 3					
Efficiency						
CEC Efficiency (%)	97.0					
Max. Efficiency (%)	97.6					
PV to Bat. Efficiency (%)	98.1					
Bat. between AC Efficiency (%)	96.8					
Protection						
PV Reverse Polarity Protection	Yes					
Bat. Reverse Polarity Protection	Yes					
Over Current/Voltage Protection	Yes					
Anti-Islanding Protection	Yes					
AC Short Circuit Protection	Yes					
Residual Current Detection	Yes					
Ground Fault Monitoring	Yes					
Insulation Resister Detection	Yes					
PV Arc Detection	Yes					
Rapid Shut Down	Yes					
Protection Degree	NEMA4X					
AC/DC surge protection	Type II					
General Data						
Dimensions (W x H x D)	400 x 600 x 229 mm / 15.7 x 23.6 x 9.0 in					
Weight	25 kg / 55 lbs					
Topology	Tranformerless					
Cooling	Intelligent Fan					
Relative Humidity	0 - 100 %					
Operating Temperature Range	- 25 to 60 °C / - 77 to 140 °F					
Operating Altitude	< 4000 m / < 13123 ft					
Standby Consumption (W)	< 10					
Mounting	Wall Bracket					
Communication with RSD	SUNSPEC					
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G, Sunspec					
Certification & Approvals	UL 1741 SA, UL 1741, UL1699B, UL 1998, IEEE1547, IEEE1547A, IEEE1547.1, CSA 22.2 No.107, Rule21, HECO Rule 14					
EMC	FCC part15 CLASS B					

Monitoring

AI—Electricity Pricing & Automation



Electricity Pricing & Automation is an energy management tool based on real-time electricity price strategy. It monitors electricity price fluctuations in real time and dynamically adjusts the operating status of equipment.

It runs automatically 24 hours a day, 7 days a week without manual intervention. It helps users optimize electricity usage and reduce electricity costs.

Electricity Pricing & Automation

Failure Alarm

PV Sytem Information Push

Multiple Systems In One Account

PC Browser Andriod And Ios

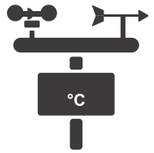
Real-time/ Historical Data Monitoring And Analysis

System Income Calculation

Wi-Fi / Ethernet / GPRS Data Sticker

Power Plant Data Logger

Zero injection Smart Meter(optional)



Weather Station

Global Projects