



ENERGY STORAGE SYSTEM SOLUTIONS PV SYSTEM SOLUTIONS



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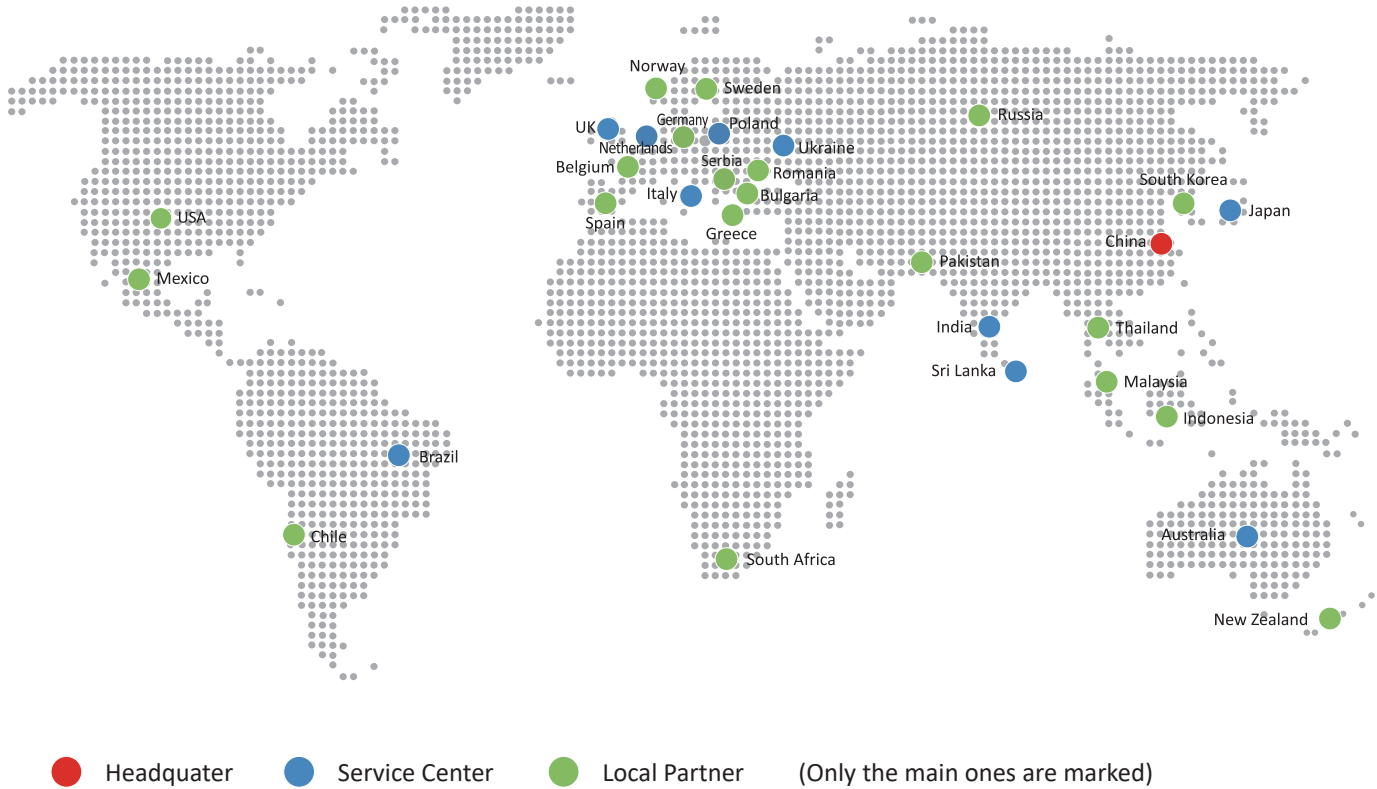
| About Us

Afore is a leading PV inverter provider from China, with more than fourteen years dedicated experience in PV inverter R&D and manufacturing, Afore inverters have been installed in Europe, Australia, China, Indian, 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 1-6kW, three phase 3-50kW, 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

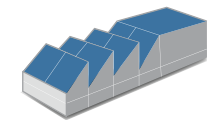


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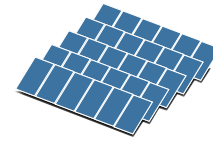
Single Phase PV String Inverter

Residential System
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Three Phase PV String Inverter

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Three Phase PV String Inverter

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Energy storage system

Residential and Commercial Storage System
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Wall Mounted Energy Storage Battery (5/10/15kWh)

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High Voltage Stackable Energy Storage Battery (7.68-30.72kWh)

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	HNS4950TL*1	HNS5000TL	HNS6000TL	HNS7000TL	HNS8000TL	HNS9000TL	HNS10000TL		
PV Input Data																	
Max. DC Power (W)	1500	2250	3000	3750	4200	4500	5400	6000	7000	7000	8400	9800	11200	12600	14000		
Max. DC Voltage (V)	500	500	500	500	500	600	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	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	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*2	1650*2	2200*2	2750*2	3300*2	3300*2	3960*2	4400*2	4950	5500*2	6600*2	7700	8800	9900	11000		
Nominal Output Power (W)	1000	1500	2000	2500	3000	3000	3600	4000	4950	5000	6000	7000	8000	9000	10000		
Max. Output Current (A)	6	9	12	13	15	15	17.5	20	24	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%	98.20%	98.32%	98.40%		
Euro Efficiency	96.60%	96.70%	96.80%	97.23%	97.56%	97.80%	97.82%	97.85%	97.90%	97.90%	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 Scanning	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					358 x 360 x 142					370 x 510 x 192			370 x 535 x 192			
Weight (kg)	6					10					17			18			
Protection Degree	IP65					IP65					IP65						
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			
Noise Emission (db)	<21					<28					<40						
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, EN61000-3-11, EN61000-3-12									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/G99, IEC61727									IEEE1547, CSA C22, EN50549, VDE4105, VDE0126, RD1699, ABNT NBR16149 & 16150, AS4777.2, NB/T32004, G98/G99, IEC61727							

*1. HNS4950TL model is exclusive for Belgium

*2. For Belgium Max. Output Power(VA) HNS1000TL-1 is 1000; HNS1500TL-1 is 1500; HNS2000TL-1 is 2000; HNS2500TL-1 is 2500; HNS3000TL-1 is 3000; HNS3000TL is 3000; HNS3600TL is 3600; HNS4000TL is 4000; HNS5000TL is 5000; HNS6000TL is 6000

Three Phase PV String Inverter

3-25 kW



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 Scanning				YES		
Quick Arc Fault Circuit Interruption				Optional		
General Data						
Dimensions (W x H x D, mm)	370 x 510 x 167			370 x 510 x 192		
Weight (kg)				16		
Protection Degree				IP65		
Enclosure Material				Aluminum		
Ambient Temperature Range (°C)				-25 to 60		
Humidity Range				0 -100%		
Topology				Transformerless		
Communication Interface				RS485 / WiFi / Wire Ethernet / GPRS (optional)		
Cooling Concept				Convection	Intelligent fan cooling	
Noise Emission (db)				<30		
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, G98/G99, IEC61727					

* For Belgium Max. Output Power(VA) BNT003KTL is 3000; BNT004KTL is 4000; BNT005KTL is 5000; BNT006KTL is 6000; BNT008KTL is 8000; BNT010KTL is 10000;

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 Scanning	YES					
Quick Arc Fault Circuit Interruption	Optional					
General Data						
Dimensions (W x H x D, mm)	370 x 510 x 192			370 x 535 x 192		
Weight (kg)	16	17	19			
Protection Degree	IP65					
Enclosure Material	Aluminum					
Ambient Temperature Range (°C)	-25 to 60					
Humidity Range	0 -100%					
Topology	Transformerless					
Communication Interface	RS485 / WiFi / Wire Ethernet / GPRS (optional)					
Cooling Concept	Intelligent fan cooling					
Noise Emission (db)	<40				<51	
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, G98/G99, IEC61727					

* For Belgium Max. Output Power(VA) BNT012KTL is 12000; BNT013KTL is 13000; BNT015KTL is 15000; BNT017KTL is 17000; BNT020KTL is 20000; BNT025KTL is 25000.

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.
20A

MAX. 20Adc
String Current Up To 20A

Max.
1.5

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 x2	38 x3	40 x3	38 x4	
Max. Short Current (A)	48 x2	48 x3	48 x3	48 x4	
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 Scanning	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	IP65				
Enclosure Material	Aluminum				
Ambient Temperature Range (°C)	-25 to 60				
Humidity Range	0 -100%				
Topology	Transformerless				
Communication Interface	RS485 / WiFi / Wire Ethernet / GPRS (optional)				
Cooling Concept	Intelligent Fan Cooling				
Noise Emission (db)	<51			<55	
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, G98/G99, IEC61727				

* For Belgium Max. Output Power(VA) BNT030KTL is 30000; BNT036KTL is 36000; BNT040KTL is 40000; BNT050KTL is 50000; BNT060KTL is 60000.

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. 38A
String Current Up to 38A



>1.5
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 (W)	105000	112500	120000	135000	150000	165000
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 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 (VA)	77000	82500	88000	99000	110000	110000
Nominal Output Power (W)	70000	75000	80000	90000	100000	110000
Max. Output Current (A)	111	120	127	143	158	158
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 Scanning	YES					
Quick Arc Fault Circuit Interruption	Optional					
General Data						
Dimensions (W x H x D, mm)	979 x 610 x 310					
Weight (kg)	72				76	
Protection Degree	IP65					
Enclosure Material	Aluminum					
Ambient Temperature Range (°C)	-25 to 60					
Humidity Range	0 -100%					
Topology	Transformerless					
Communication Interface	RS485 / WiFi / Wire Ethernet / GPRS (optional)					
Cooling Concept	Intelligent fan cooling					
Noise Emission (db)	<55				<60	
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, G98/G99, IEC61727					

Single Phase Hybrid Storage Inverter

1-6 kW



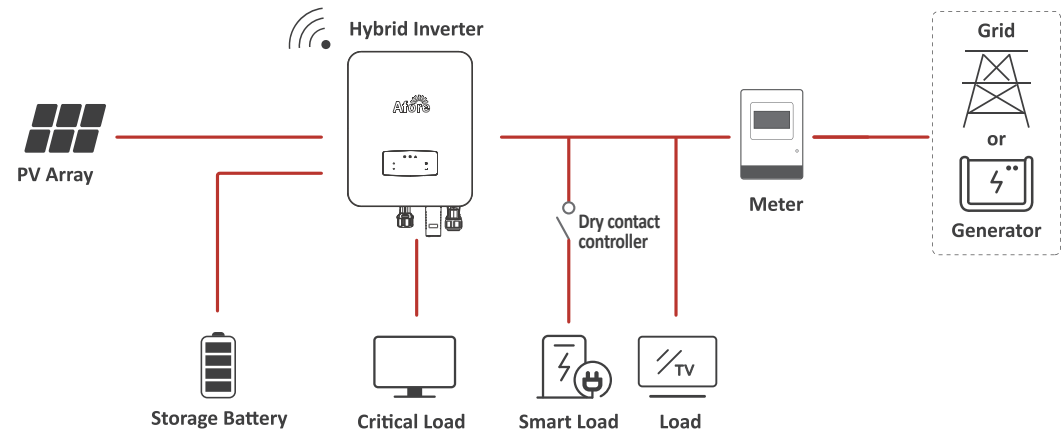
The Afore AF low voltage series storage Inverters are designed to increase energy independence for homeowners. The power range is from 1kW to 6kW, compatible with low voltage (40-60V) batteries.

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.

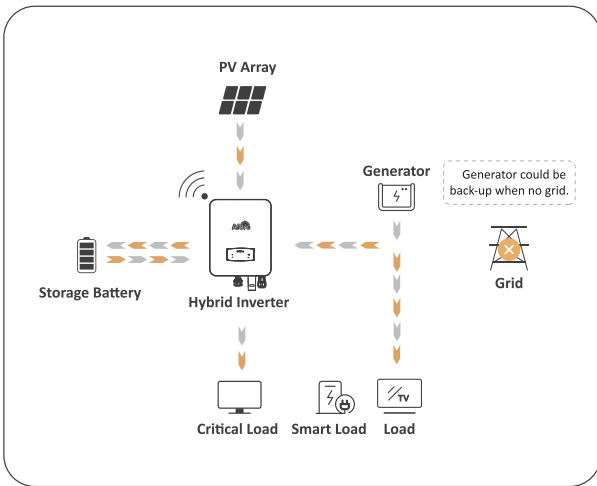
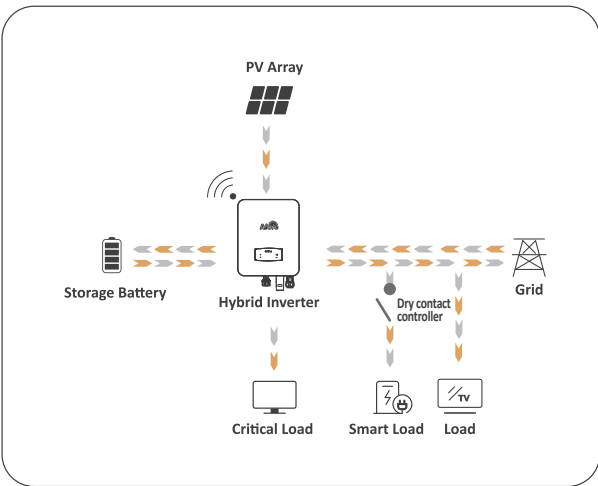
Thanks for the UPS function (switch time < 10ms), that enables the crucial loads power on during outages. Additionally, under the backup operation mode, the inverter provides you up to 150% peak output overloading.

The AF low voltage series storage inverters are integrated with Arc Fault Circuit Interrupter (AFCI) and rapid shutdown.

For New Storage System:

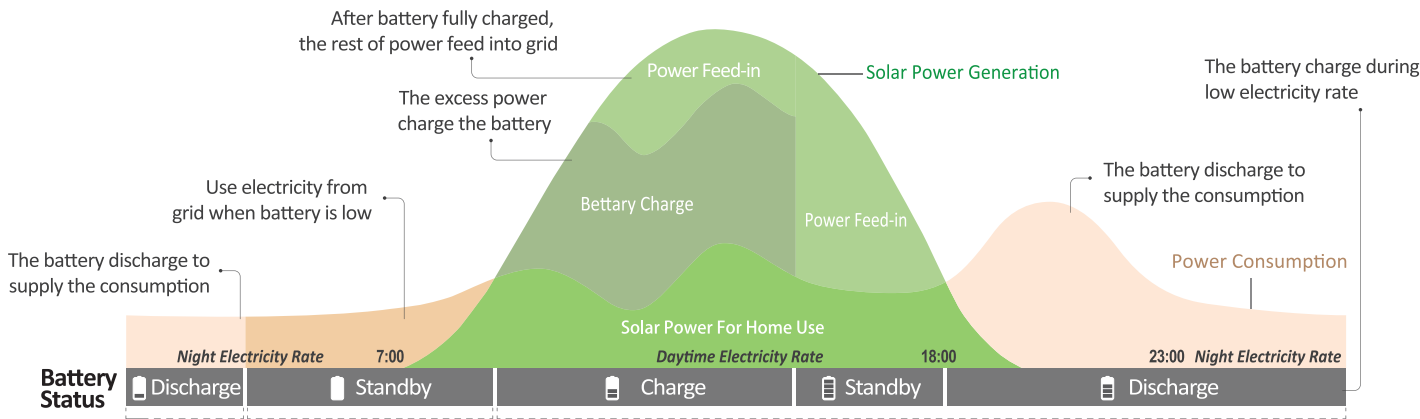


Optimizing Self-Consumption (on-grid) + Emergency Power Supply (off-grid)



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.



Max. 1.5

PV OVERSIZE

1.5 Times PV Oversize

2 MPPT

MPPT CHANNELS

Up to 2 MPPT Channels

<10 ms

UPS FUNCTION

Switch Time < 10ms

PARALLEL

Max.6 Parallel Stacking

INPUT

Support Generator

Support for Time-of-use Optimization

Configurable Operation Modes

Arc Fault Circuit Interrupter (AFCI) (Optional)

Build in Anti-feed-in Function

Compact Size and Easy Installation

Smart Monitoring & Remote Firmware Upgrade

Technical Data	AF1K-SL-1	AF1.5K-SL-1	AF2K-SL-1	AF2.5K-SL-1	AF3K-SL-1	AF3.6K-SL-1
PV Input						
Max. Input Power (kW)	1.5	2.3	3.0	3.8	4.5	5.4
Max. PV Voltage (V)	550					
MPPT Range (V)	80 - 500					
Full MPPT Range (V)	80 - 500	90 - 500	120 - 500	150 - 500	170 - 500	210 - 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	3.0	3.6
Max. Charge/Discharge Current (A)	25	40	50	63	80	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)	5.0	7.0	10.0	12.0	14.0	17.0
Max Continuous Power (kVA)	1.0	1.5	2.0	2.5	3.0	3.6
Nominal Grid Current (A)	4.6 / 4.4	6.9 / 6.6	9.1 / 8.7	11.4 / 10.9	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	0.999 (Adjustable from 0.8 overexcited to 0.8 underexcited)					
Current THD (%)	< 3					
AC Load Output						
Max Continuous Current (A)	5.0	7.0	10.0	12.0	14.0	17.0
Max Continuous Power (kVA)	1.0	1.5	2.0	2.5	3.0	3.6
Max Peak Current (A) (10min)	6.9 / 6.6	10.5 / 10.0	13.7 / 13.1	17.3 / 16.6	20.5 / 19.6	24.6 / 23.5
Max Peak Power (kVA) (10min)	1.5	2.3	3.0	3.8	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					
General Data						
Dimensions (W x H x D, mm)	370 x 535 x 192					
Weight (kg)	18.5					
Topology	Transformerless					
Cooling	Intelligent Fan					
Relative Humidity	0 - 100 %					
Operating Temperature Range (°C)	- 25 to 60					
Operating Altitude (m)	< 4000					
Noise Emission (dB)	< 25					
Standby Consumption (W)	< 10					
Mounting	Wall Bracket					
Communication with RSD	SUNSPEC					
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G					
Certification & Approvals	NRS097, G98, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2					
EMC	EN61000-6-2, EN61000-6-3					

Technical Data	AF3K-SL	AF3.6K-SL	AF4K-SL	AF4.6K-SL	AF5K-SL	AF5.5K-SL	AF6K-SL
PV Input							
Max. Input Power (kW)	4.5	5.4	6.0	6.9	7.5	8.3	9.0
Max. PV Voltage (V)	550						
MPPT Range (V)	80 - 500						
Full MPPT Range (V)	90 - 500	110 - 500	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)	3.0	3.6	4.0	4.6	4.8	4.8	4.8
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	19.0	22.0	23.0	26.0	28.0
Max Continuous Power (kVA)	3.0	3.6	4.0	4.6	5.0	5.5	6.0
Nominal Grid Current (A)	13.7 / 13.1	16.4 / 15.7	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	0.999 (Adjustable from 0.8 overexcited to 0.8 underexcited)						
Current THD (%)	< 3						
AC Load Output							
Max Continuous Current (A)	14.0	17.0	19.0	22.0	23.0	26.0	28.0
Max Continuous Power (kVA)	3.0	3.6	4.0	4.6	5.0	5.5	6.0
Max Peak Current (A) (10min)	20.5 / 19.6	24.6 / 23.5	27.3 / 26.1	31.4 / 30	34.1 / 32.7	37.8 / 36.1	41.0 / 39.2
Max Peak Power (kVA) (10min)	4.5	5.4	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						
General Data							
Dimensions (W x H x D, mm)	370 x 535 x 192						
Weight (kg)	18.5	:	:	:	:	20.5	:
Topology	Transformerless						
Cooling	Intelligent Fan						
Relative Humidity	0 - 100 %						
Operating Temperature Range (°C)	- 25 to 60						
Operating Altitude (m)	< 4000						
Noise Emission (dB)	< 25						
Standby Consumption (W)	< 10						
Mounting	Wall Bracket						
Communication with RSD	SUNSPEC						
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						

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 AF low voltage series storage inverters are integrated with Arc Fault Circuit Interrupter (AFCI) and rapid shutdown.



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



Max. 1.5
1.5 Times PV Oversize



2 MPPT
MPPT CHANNELS
Up to 2 MPPT Channels



<10 ms
UPS FUNCTION
Switch Time < 10ms



PARALLEL
Max.6 Parallel Stacking



Support for Time-of-use Optimization



Configurable Operation Modes



Arc Fault Circuit Interrupter (AFCI) (Optional)



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	0.999 (Adjustable from 0.8 overexcited to 0.8 underexcited)				
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				
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				
Noise Emission (dB)	< 25				
Standby Consumption (W)	< 10				
Mounting	Wall Bracket				
Communication with RSD	SUNSPEC				
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G				
Certification & Approvals	NRS097, G98, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2				
EMC	EN61000-6-2, EN61000-6-3				

Low Voltage Stackable Energy Storage Battery



With its modular design, the Multi-functional Energy Storage System offers endless possibilities. Customize the system to meet your specific needs by easily adding or removing energy storage units. Experience the freedom and control of managing your energy consumption with this state-of-the-art system.



High Capacity



Scalable Design



Efficient Performance



Safe and Reliable



Real-time Monitoring



Durability



Intelligent BMS



Seamless Integration

Model	AF2500W-LD	AF5000W-LE
Parameter		
Nominal Voltage(Vdc)	51.2	51.2
Nominal Capacity(Wh)	2560	5120
Working Voltage Range(Vdc)	44.8-56.16	44.8-56.16
Charge Voltage(Vdc)	58.4	58.4
Nominal Charge/Discharge Current(A)	25	50
Max.Charge/Discharge Current(A)	50	100
Peak Current(A)	100@3sec	200@3sec
Parallel Connection	≤ 10 pcs	≤ 6 pcs
Cycle Life	6000 @ 80% DOD, 25°C / 0.5C	
Structure		
Dimension(mm)	600*210*180	600*210*300
Weight(kg)	29	50.5
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; UN38.3, MSDS		



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

Model	AF5000W-LF	AF10000W-LG	AF15000W-LH
Parameter			
Nominal Voltage(Vdc)	51.2	51.2	51.2
Nominal Capacity(Wh)	5120	10240	15360
Working Voltage Range(Vdc)	44.8-56.16	44.8-56.16	44.8-56.16
Charge Voltage(Vdc)	58.4	58.4	58.4
Nominal Charge/Discharge Current(A)	50	100	100
Max.Charge/Discharge Current(A)	100	200	200
Peak Current(A)	200@3sec	400@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	856*820*176
Weight(kg)	47.2	93.5	140.7
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

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.

WIDE RANGE
Voltage Range
(80-600V)

PV OVERSIZE
1.5 Times PV Oversize

MAX. 18.5A
String Current Up To 18.5A

UPS FUNCTION
Switch Time < 10ms

COMPACT
Compact Design

EMS PORT READY
External EMS Support

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

Technical Data	AF3K-MTH	AF4K-MTH	AF5K-MTH	AF6K-MTH	AF8K-MTH	AF10K-MTH	AF12K-MTH	AF15K-MTH
PV Input								
Max. DC Input Power (kW)	5	6	7.5	9	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)	200-850		250-850		300-850		500-850	
Start-up Voltage (V)	160							
Max. DC Input Current (A)	18.5 x 2							
Max. Short Current(A)	25 x 2							
No. of MPPT Tracker / Strings	2/2							
Battery Port								
Battery Nominal Voltage (V)	350	350	350	350	350	350	450	500
Battery Voltage Range (V)	80-600							
Max. Charge/Discharge Current (A)	30							
Max. Charge/Discharge Power (kW)	3	4	5	6	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)	3	4	5	6	8	10	12	15
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	22.5 / 16.5
Max. AC Output Current (A)	5.3	7	8.5	10.5	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 (VA)	3000	4000	5000	6000	8000	10000	12000	15000
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	11.6	14.5	17.4	21.8
Peak Output Power	3300VA, 60s	4400VA, 60s	5500VA, 60s	6600VA, 60s	8800VA, 60s	11000VA, 60s	13200VA, 60s	16500VA, 60s
THDV (with linear load)	<3%							
Switching Time (ms)	<10							
Efficiency								
Europe Efficiency	97.50%							
Max. Efficiency	98.00%				98.20%		98.30%	
Battery Charge/Discharge Efficiency	98.00%							
Protection								
Reverse Polarity Protection	Yes							
Over Current / Voltage Protection	Yes							
Anti-islanding Protection	Yes							
AC Short-circuit Protection	Yes							
Leakage Current Detection	Yes							
Ground Fault Monitoring	Yes							
Grid Monitoring	Yes							
Enclosure Protect Level	IP65							
General Data								
Dimensions (W x H x D, mm)	370 x 598.5 x 192mm							
Weight (kg)	22kg							
Topology	Transformerless							
Cooling Concept	Natural Convection				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							

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
PV OVERSIZE
1.5 Times PV Oversize

Max. 40A
MAX. 40A_{dc}
String Current Up To 40A

<10 ms
UPS FUNCTION
Switch Time < 10ms

INPUT
Support Generator

Support for Time-of-use Optimization

Configurable Operation Modes

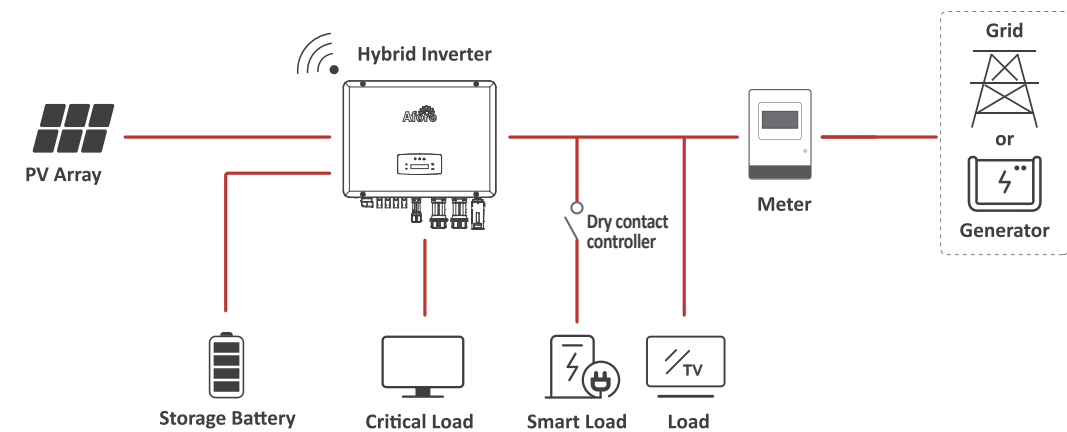
AFCI (Optional) & Rapid Shutdown Ready

Build in Anti-feed-in Function

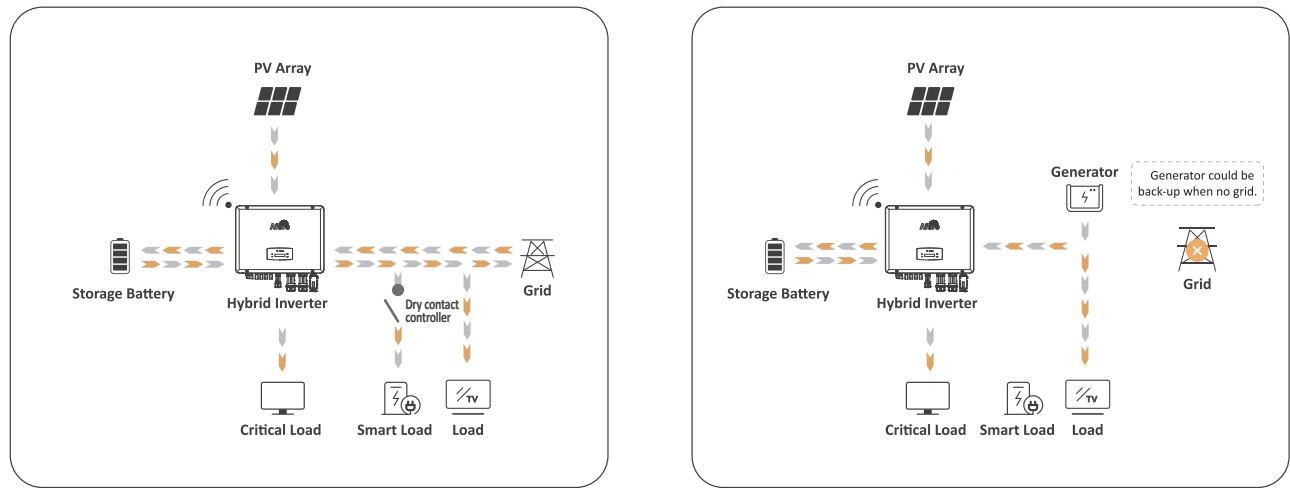
100% unbalanced output, each phase;
200% unbalanced output, each phase (≤ 10kW)

Smart Monitoring & Remote Firmware Upgrade

For New Storage System:

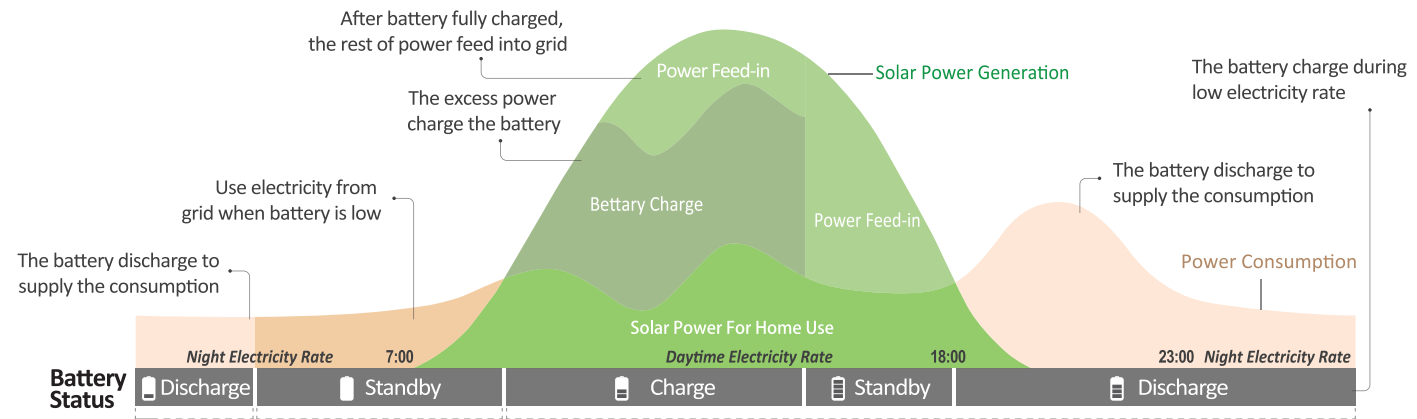


Optimizing Self-Consumption (on-grid) + Emergency Power Supply (off-grid)



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	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 (VA)	3000	4000	5000	6000	8000	10000
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	3300VA, 60s	4400VA, 60s	5500VA, 60s	6600VA, 60s	8800VA, 60s	11000VA, 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-circuit Protection	Yes					
Leakage Current Detection	Yes					
Ground Fault Monitoring	Yes					
Grid Monitoring	Yes					
Enclosure Protect Level	IP65					
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					
Noise Emission (dB)	< 30					
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					

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)	20×2		20+32		32×2				40×2			
Max. Short Current(A)	30×2		30+48		48×2				60×2			
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 (VA)	12000		15000		17000		20000		25000		30000	
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	13200VA, 60s		16500VA, 60s		18700VA, 60s		22000VA, 60s		27500VA, 60s		33000VA, 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-circuit Protection	Yes											
Leakage Current Detection	Yes											
Ground Fault Monitoring	Yes											
Grid Monitoring	Yes											
Enclosure Protect Level	IP65											
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											

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.



SODIUM METAL CHLORIDE BATTERY
Support
Sodium metal chloride battery



MIN. 80V
Battery Voltage
Minimum 80V



MAX. 50A
Max. Charge/
Discharge Current 50A



100% UNBALANCE
Support Unbalance Load



Max. 1.5
PV OVERSIZE
1.5 Times PV Oversize



Max. 20A
MAX. 20Adc
String Current Up To 20A



<10 ms
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)						
Current THD (%)	<3%						
AC Load Output (Back-up)							
Nominal Output Power (VA)	3000	4000	5000	6000	8000	10000	12000
Nominal Output Voltage (V)	230/400						
Nominal Output Frequency (Hz)	50/60						
Nominal Output Current (A)	4.4	5.8	7.3	8.7	11.6	14.5	17.4
Peak Output Power	3300VA, 60s	4400VA, 60s	5500VA, 60s	6600VA, 60s	8800VA, 60s	11000VA, 60s	13200VA, 60s
THDV (with linear load)	<3%						
Switching Time (ms)	<10						
Efficiency							
Europe Efficiency				97.50%			
Max. Efficiency	98.00%				98.20%	98.30%	
Battery Charge/Discharge Efficiency				98.00%			
Protection							
Reverse Polarity Protection				Yes			
Over Current / Voltage Protection				Yes			
Anti-islanding Protection				Yes			
AC Short-ciruit Protection				Yes			
Leakage Current Detection				Yes			
Ground Fault Monitoring				Yes			
Grid Monitoring				Yes			
Enclosure Protect Level				IP65			
General Data							
Dimensions (W x H x D, mm)	558 x 535 x 260 mm						
Weight (kg)	29kg						
Topology	Transformerless						
Cooling Concept	Intelligent Fan						
Relative Humidity	0-100%						
Operating Temperature Range (°C)	-25 to 60 °C						
Operating Altitude (m)	<4000						
Noise Emission (dB)	<40						
Standby Consumption (W)	<5						
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G						
Certification & Approvals	NRS097, G98/G99, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2						
EMC	EN61000-6-2, EN61000-6-3						

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



Max. 1.5
1.5 Times PV Oversize



Max. 40A
MAX. 40A_{dc}
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

■ 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)		40×4	
Max. Short Current(A)		48×4	
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)	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 Frenquency (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			
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-circuit Protection		Yes	
Leakage Current Detection		Yes	
Ground Fault Monitoring		Yes	
Grid Monitoring		Yes	
Enclosure Protect Level		IP65	
General Data			
Dimensions (W x H x D, mm)		979 x 610 x 310 mm	
Weight (kg)		70kg	
Topology		Transformerless	
Cooling Concept		Intelligent Fan	
Relative Humidity		0-100 %	
Operating Temperature Range (°C)		-25 to 60 °C	
Operating Altitude (m)		<4000	
Noise Emission (dB)		<60	
Standby Consumption (W)		<100	
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		

| High Voltage Stackable Energy Storage Battery

3-10 Modules
Stackable

153.6V-512V
High Voltage



High capacity

Scalable Design

Efficient Performance

Safe and Reliable

Real-time Monitoring

High Voltage

Intelligent BMS

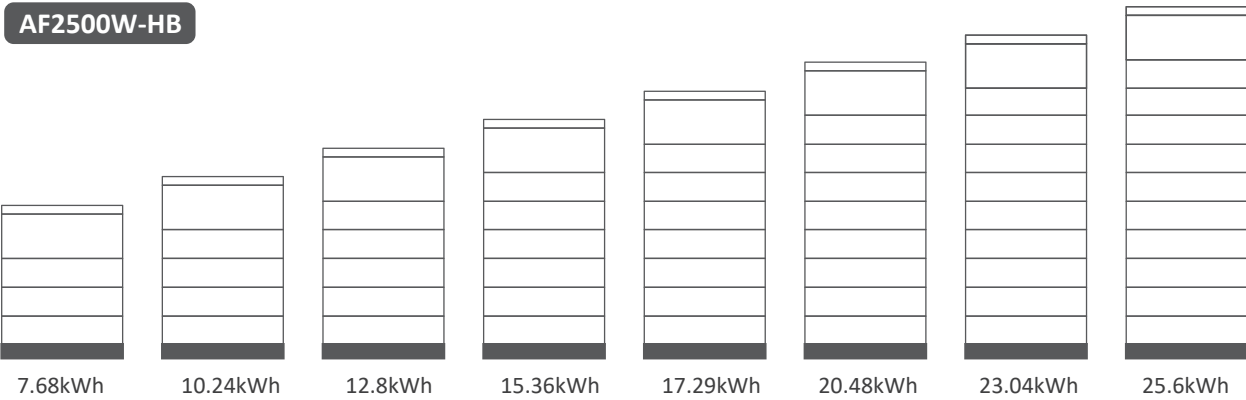
Seamless Integration

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.

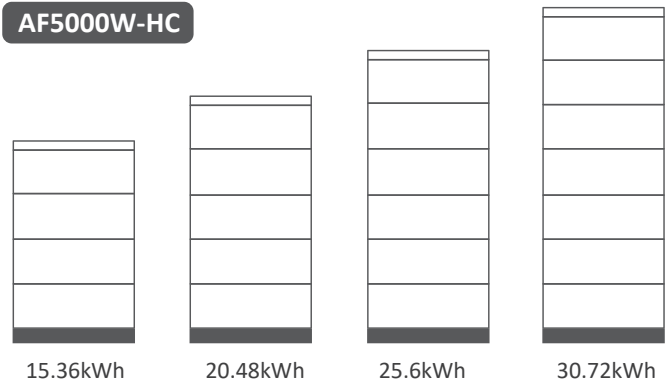
Thermal Aerosol Fire Suppression Device

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.

AF2500W-HB



AF5000W-HC



- 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-GPSP, UKCA, UL1973, UL9540A, EN62040, IEC62040; UN38.3, MSDS		



Single Phase AC Coupled Inverter

1-6 kW



Afore AC coupled inverter (1kW-6kW) is suitable for both single-phase & three-phase systems. It can be fitted alongside with string inverter, enabling you to upgrade to solar battery storage system without changing your current installation.

SEAMLESSLY SWITCH
Seamlessly Switch Time between EPS with Grid

SMART
Smart EMS/BMS

UNIBODY
One-piece Aluminum Housing

SAFETY
Proven Safety

Max. 80A
Max. 80A Battery Charge and Discharge Current

SUPPORT
Island support

97.6% High Frequency Isolation Charge and Discharge Efficiency

Integrated WIFI Monitoring & Remote Parameter Setting

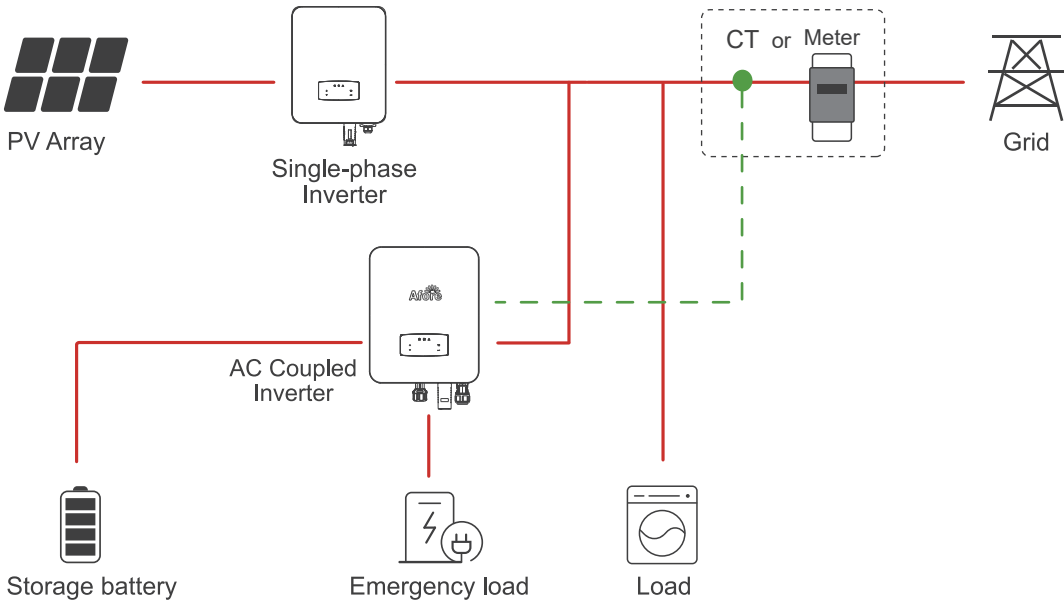
Plug & Play, Easy Maintenance

IP 65 Water-resistant & Dustproof

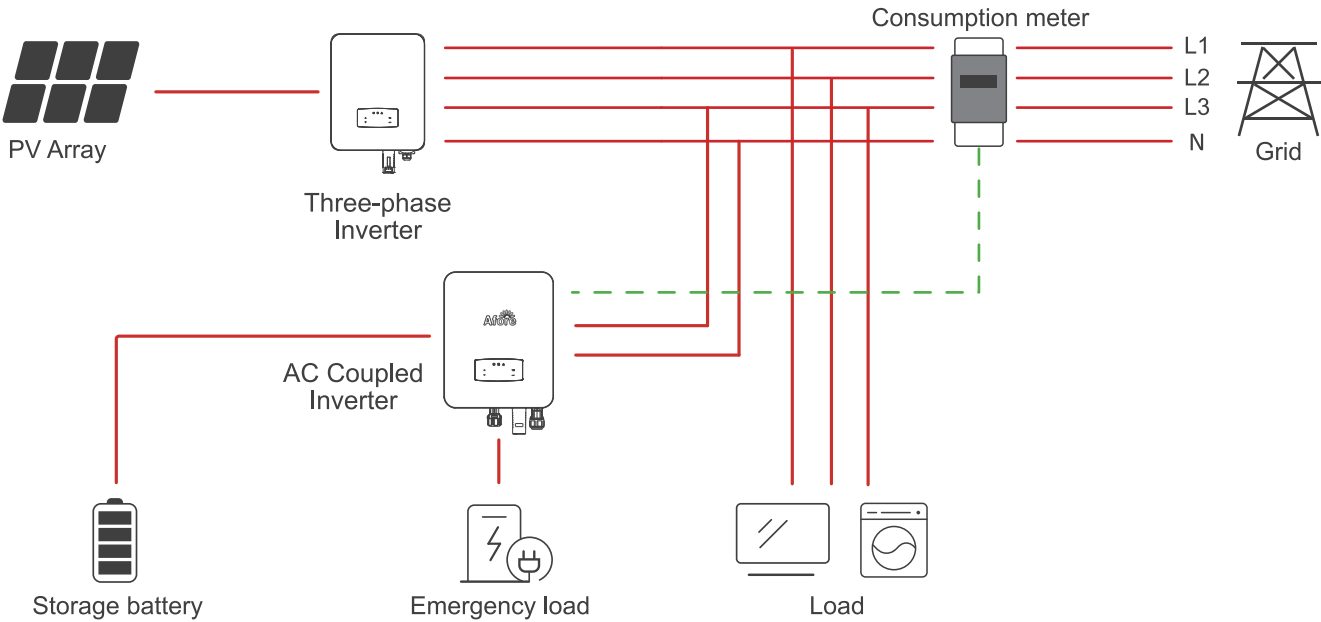
Retrofitting Storage Solution on Existing Solar System:

Adding battery storage to an existing solar system enables homeowners to store their solar PV generated electricity instead of export it to the grid. More savings on your electricity bill.

Single Phase AC Coupled (Retro Fit)



Three Phase AC Coupled (Retro Fit)



■ Technical Data	AF1K-SL-0	AF1.5K-SL-0	AF2K-SL-0	AF2.5K-SL-0	AF3K-SL-0
Battery Port					
Max. Charge/Discharge Power (kW)	1	1.5	2.0	2.5	3.0
Max. Charge/Discharge Current (A)	25	40	50	63	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)	5.0	7.0	10.0	12.0	14.0
Max Continuous Power (kVA)	1.0	1.5	2.0	2.5	3.0
Nominal Grid Current(A)	4.6 / 4.4	6.9 / 6.6	9.1 / 8.7	11.4 / 10.9	13.7 / 13.1
Nominal Grid Voltage (V)	198 to 242 @ 220 / 207 to 253 @ 230				
Nominal Grid Frequency (Hz)	50 / 60				
Power Factor	0.999 (Adjustable from 0.8 overexcited to 0.8 underexcited)				
Current THD (%)	< 3				
AC Load Output					
Max Continuous Current (A)	5.0	7.0	10.0	12.0	14.0
Max Continuous Power (kVA)	1.0	1.5	2.0	2.5	3.0
Max Peak Current (A) (10min)	6.9 / 6.6	10.5 / 10.0	13.7 / 13.1	17.1 / 16.4	20.5 / 19.6
Max Peak Power (kVA) (10min)	1.5	2.3	3.0	3.75	4.5
Nominal AC Voltage L-N (V)	220 / 230				
Nominal AC Frequency (Hz)	50 / 60				
Switching Time (ms)	Seamless				
Voltage THD (%)	< 3				
Efficiency					
Max. Efficiency (%)	97.6				
Bat. between AC Efficiency (%)	96.8				
Protection					
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				
Enclosure Protect Level	IP65 / NEMA4X				
General Data					
Dimensions (W x H x D, mm)	370 x 535 x 192				
Weight	18.5				
Topology	Tranformerless				
Cooling	Intelligent Fan				
Relative Humidity	0 - 100 %				
Operating Temperature Range (°C)	- 25 to 60				
Operating Altitude (m)	< 4000				
Noise Emission (dB)	< 25				
Standby Consumption (W)	< 10				
Mounting	Wall Bracket				
Communication with RSD	SUNSPEC				
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				

■ Technical Data	AF3.6K-SL-0	AF4K-SL-0	AF4.6K-SL-0	AF5K-SL-0	AF5.5K-SL-0	AF6K-SL-0
Battery Port						
Max. Charge/Discharge Power (kW)	3.6	4.0	4.6	5.0	5.5	6.0
Max. Charge/Discharge Current (A)	80	120	120	120	120	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)	17.0	19.0	22.0	23.0	26.0	28.0
Max Continuous Power (kVA)	3.6	4.0	4.6	5.0	5.5	6.0
Nominal Grid Current (A)	16.4 / 15.7	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	0.999 (Adjustable from 0.8 overexcited to 0.8 underexcited)					
Current THD (%)	< 3					
AC Load Output						
Max Continuous Current (A)	17.0	19.0	22.0	23.0	26.0	28.0
Max Continuous Power (kVA)	3.6	4.0	4.6	5.0	5.5	6.0
Max Peak Current (A) (10min)	24.6 / 23.5	27.3 / 26.1	31.4 / 30.0	34.1 / 32.7	37.8 / 36.1	41.0 / 39.2
Max Peak Power (kVA) (10min)	5.4	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 (s)	Seamless					
Voltage THD (%)	< 3					
Efficiency						
Max. Efficiency (%)	97.6					
Bat. between AC Efficiency (%)	96.8					
Protection						
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					
Enclosure Protect Level	IP65 / NEMA4X					
General Data						
Dimensions (W x H x D, mm)	370 x 535 x 192					
Weight	18.5	:	20.5			
Topology	Tranformerless					
Cooling	Intelligent Fan					
Relative Humidity	0 - 100 %					
Operating Temperature Range (°C)	- 25 to 60					
Operating Altitude (m)	< 4000					
Noise Emission (dB)	< 25					
Standby Consumption (W)	< 10					
Mounting	Wall Bracket					
Communication with RSD	SUNSPEC					
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					

Three Phase AC Coupled Inverter

3-30 kW



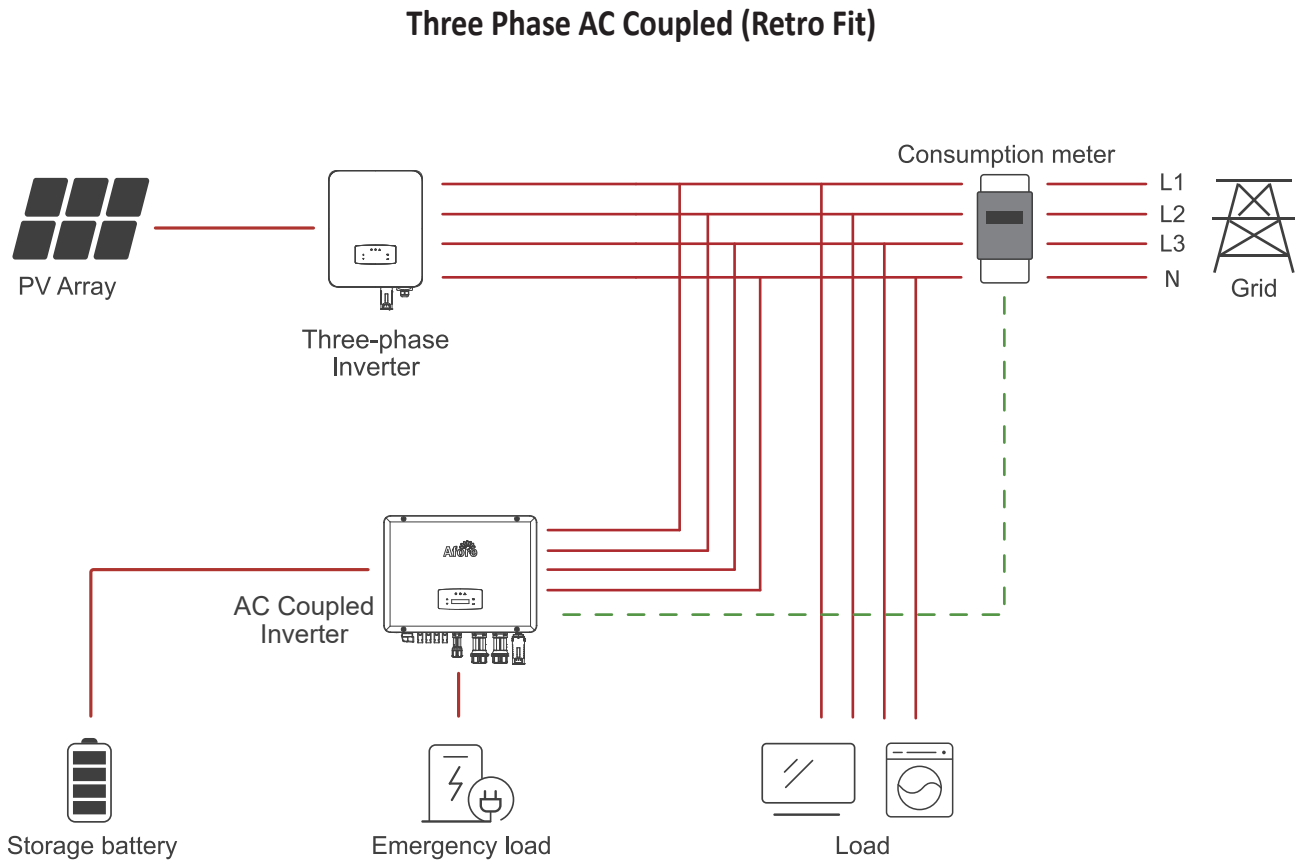
Afore AC coupled inverter (3-30kW) is suitable for three-phase systems. It can be fitted alongside with string inverter, enabling you to upgrade to solar battery storage system without changing your current installation.

-  **SODIUM METAL CHLORIDE BATTERY**
Support Sodium metal chloride battery
-  **WIDE RANGE**
Voltage Range (150-800V)
-  **MAX. 60A**
Max. Charge/Discharge Current 60A
-  **100% UNBALANCE**
Support Unbalance Load
-  **UPS FUNCTION**
Switch Time < 10ms
-  **SMART**
Smart EMS/BMS
-  **SUPPORT**
Island 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; 200% unbalanced output, each phase (≤ 10kW) 
- Smart Monitoring & Remote Firmware Upgrade 

Retrofitting Storage Solution on Existing Solar System:

Adding battery storage to an existing solar system enables homeowners to store their solar PV generated electricity instead of export it to the grid. More savings on your electricity bill.



Technical Data	AF3K-TH-0	AF4K-TH-0	AF5K-TH-0	AF6K-TH-0	AF8K-TH-0	AF10K-TH-0
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 / 3.3	4 / 4.4	5 / 5.5	6 / 6.6	8 / 8.8	10 / 11
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	6 / 4	7.5 / 5	9 / 6	12 / 8	15 / 10
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 (VA)	3000	4000	5000	6000	8000	10000
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	3300VA, 60s	4400VA, 60s	5500VA, 60s	6600VA, 60s	8800VA, 60s	11000VA, 60s
THDV (with linear load)	<3%					
Switching Time (ms)	<10					
Efficiency						
Max. Efficiency	98.00%		98.20%			
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					
Protective class	Class I					
Overvoltage category	OVC III (AC Main)					
General Data						
Dimensions (W x H x D, mm)	370 x 497 x 192 mm					
Weight (kg)	20.8kg					
Topology	Transformerless					
Cooling Concept	Natural Convection			Intelligent Fan		
Relative Humidity	0-100%					
Operating Temperature Range (°C)	-25 to 60 °C					
Operating Altitude (m)	<4000					
Noise Emission (dB)	<40					
Standby Consumption (W)	<5					
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G					
Certification & Approvals	NRS097, G98/G99, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2					
EMC	EN61000-6-2, EN61000-6-3					

Technical Data	AF12K-TH-0	AF15K-TH-0	AF17K-TH-0	AF20K-TH-0	AF25K-TH-0	AF30K-TH-0
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 / 13.2	15 / 16.5	17 / 18.7	20 / 22	25 / 27.5	30 / 33
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 / 12	22.5 / 15	25.5 / 17	30 / 20	37.5 / 25	45 / 30
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 (VA)	12000	15000	17000	20000	25000	30000
Nominal Output Voltage (V)	230/400					
Nominal Output Frequency (Hz)	50/60					
Nominal Output Current (A)	17.4	21.8	24.8	29	36.3	43.5
Peak Output Power	13200VA, 60s	16500VA, 60s	18700VA, 60s	22000VA, 60s	27500VA, 60s	33000VA, 60s
THDV (with linear load)	<3%					
Switching Time (ms)	<10					
Efficiency						
Max. Efficiency	98.30%		98.50%			
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					
Protective class	Class I					
Overvoltage category	OVC III (AC Main)					
General Data						
Dimensions (W x H x D, mm)	370 x 497 x 192	558 x 535 x 260 mm				
Weight (kg)	20.8kg	29kg			36kg	
Topology	Transformerless					
Cooling Concept	Intelligent Fan					
Relative Humidity	0-100%					
Operating Temperature Range (°C)	-25 to 60 °C					
Operating Altitude (m)	<4000					
Noise Emission (dB)	<40					
Standby Consumption (W)	<5					
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G					
Certification & Approvals	NRS097, G98/G99, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2					
EMC	EN61000-6-2, EN61000-6-3					

Three Phase AC Coupled Inverter

3-12 kW Plus Series



Afore AC coupled inverter (3-12kW) is suitable for three-phase systems. It can be fitted alongside with string inverter, enabling you to upgrade to solar battery storage system without changing your current installation.



SODIUM METAL CHLORIDE BATTERY
Support
Sodium metal chloride battery



MIN. 80V
Battery Voltage
Minimum 80V



MAX. 50A
Max. Charge/
Discharge Current 50A



100% UNBALANCE
Support Unbalance Load



UPS FUNCTION
Switch Time < 10ms



SMART
Smart EMS/BMS



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

Smart Monitoring & Remote Firmware Upgrade

■ Technical Data	AF3K-THP-0	AF4K-THP-0	AF5K-THP-0	AF6K-THP-0	AF8K-THP-0	AF10K-THP-0	AF12K-THP-0
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 / 3.3	4 / 4.4	5 / 5.5	6 / 6.6	8 / 8.8	10 / 11	12 / 13.2
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	6 / 4	7.5 / 5	9 / 6	12 / 8	15 / 10	18 / 12
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)						
Current THD (%)	<3%						
AC Load Output (Back-up)							
Nominal Output Power (VA)	3000	4000	5000	6000	8000	10000	12000
Nominal Output Voltage (V)	230/400						
Nominal Output Frequency (Hz)	50/60						
Nominal Output Current (A)	4.4	5.8	7.3	8.7	11.6	14.5	17.4
Peak Output Power	3300VA, 60s	4400VA, 60s	5500VA, 60s	6600VA, 60s	8800VA, 60s	11000VA, 60s	13200VA, 60s
THDV (with linear load)	<3%						
Switching Time (ms)	<10						
Efficiency							
Max. Efficiency	98.00%			98.20%		98.30%	
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						
Protective class	Class I						
Overvoltage category	OVC III (AC Main)						
General Data							
Dimensions (W x H x D, mm)	558 x 535 x 260 / 370 x 497 x 192 mm						
Weight (kg)	29 / 20.8kg						
Topology	Transformerless						
Cooling Concept	Intelligent Fan						
Relative Humidity	0-100%						
Operating Temperature Range (°C)	-25 to 60 °C						
Operating Altitude (m)	<4000						
Noise Emission (dB)	<40						
Standby Consumption (W)	<5						
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G						
Certification & Approvals	NRS097, G98/G99, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2						
EMC	EN61000-6-2, EN61000-6-3						

Split Phase Hybrid Storage Inverter

3-9.6 kW



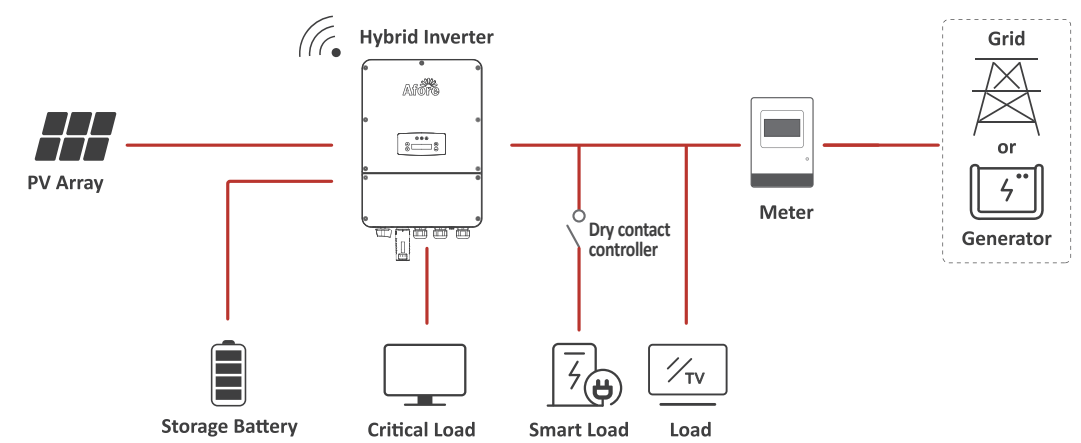
The Afore AF series storage inverters are designed to increase energy independence for homeowners. The power range is from 3.0kW to 9.6kW, compatible with high voltage (80-495V) batteries.

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

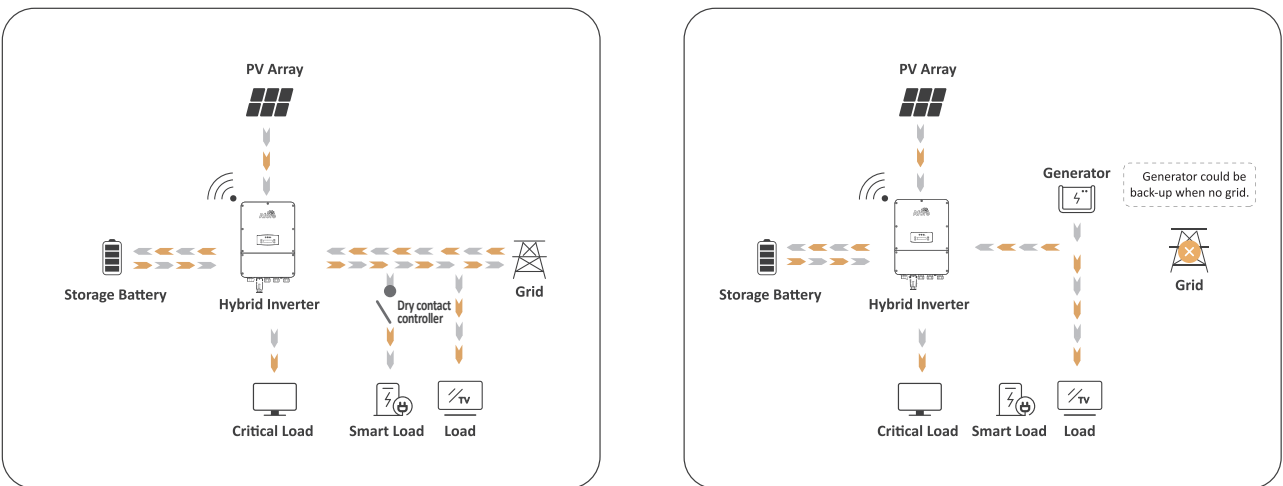
Thanks for the UPS function (switch time < 10ms), that it enables the crucial loads power on during outages. Additionally, under the backup operation mode, the inverter provides you up to 150% peak output overloading.

The AF series storage inverters meet the US safety regulations, integrated with Arc Fault Circuit Interrupter (AFCI) and Rapid Shutdown.

For New Storage System:

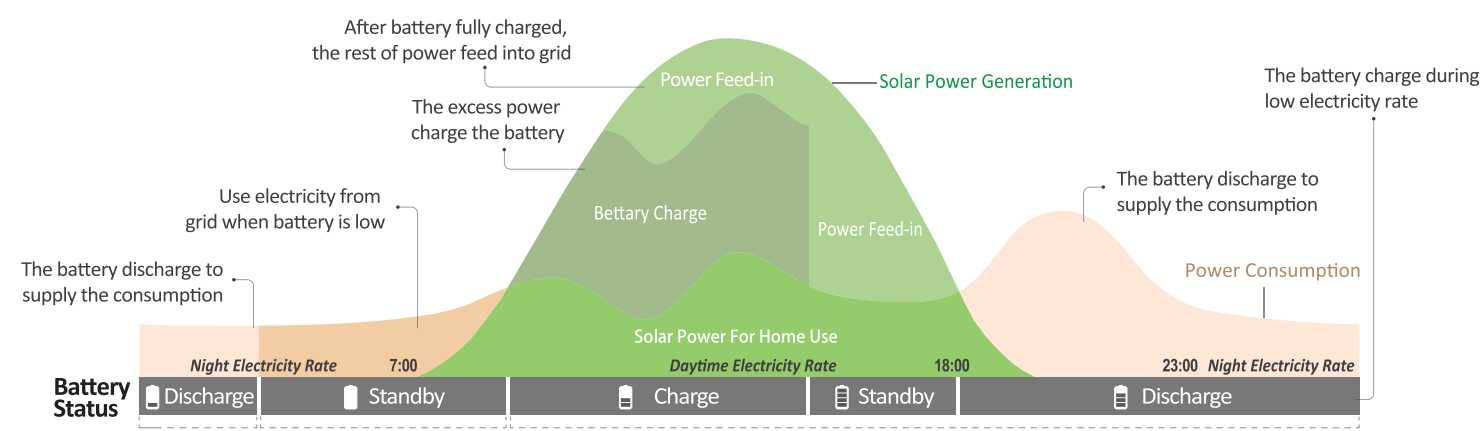


Optimizing Self-Consumption (on-grid) + Emergency Power Supply (off-grid)



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					
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 / 17.5	17.0 / 19.5	19.5 / 22.5	21.0 / 24	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	IP65 / NEMA4X					
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	Natural Convection					
Relative Humidity	0 - 100 %					
Operating Temperature Range	- 25 to 60 °C / - 77 to 140 °F					
Operating Altitude	< 4000 m / < 13123 ft					
Noise Emission (dB)	< 25					
Standby Consumption (W)	< 10					
Mounting	Wall Bracket					
Communication with RSD	SUNSPEC					
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, 4G					
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					
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 /29.0	29.5 / 34.0	32.0 / 36.5	33.5 /38.5	36.0 / 41.5	40.0 / 46.5
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)	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	IP65 / NEMA4X					
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	Transformerless					
Cooling	Natural Convection	Intelligent Fan				
Relative Humidity	0 - 100 %					
Operating Temperature Range	- 25 to 60 °C / - 77 to 140 °F					
Operating Altitude	< 4000 m / < 13123 ft					
Noise Emission (dB)	< 25	< 40				
Standby Consumption (W)	< 10					
Mounting	Wall Bracket					
Communication with RSD	SUNSPEC					
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, 4G					
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 Device & Solution



- Failure Alarm
- PV Sytem Information Push
- Multiple Systems In One Account
- Cloud Data Synchronization
- PC Browser Andriod And Ios
- Real-time/ Historical Data Monitoring And Analysis
- System Income Calculation



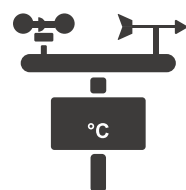
Wi-Fi / Ethernet / GPRS Data Sticker



Power Plant Data Logger



Zero injection Smart Meter(optional)



Weather Station

Global Projects

