ENERGY STORAGE SYSTEM SOLUTIONS

PV SYSTEM SOLUTIONS

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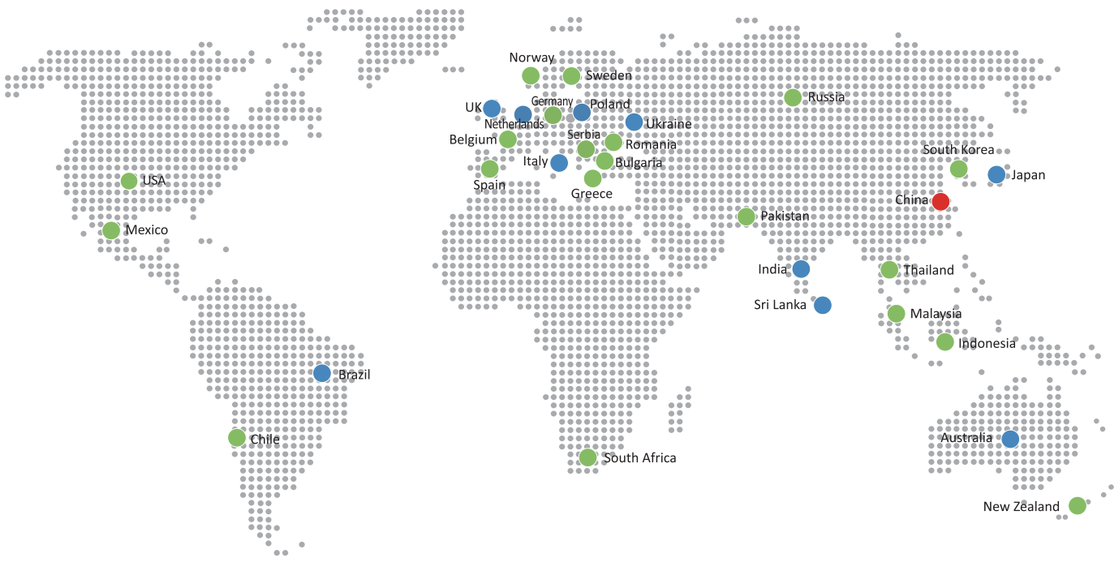
Global Market



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

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.

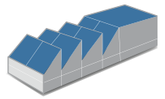
We offer not just good products, but also high-efficient local support to our partners and users throughout the inverter life span. Make sure the customers receive reliable returns by choosing Afore!

Contents

Single Phase PV String Inverter

Residential System

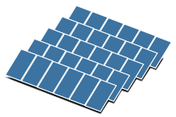
Single Phase 1-3kW, Single Phase 3-6kW, Single Phase 7-10kW



Three Phase PV String Inverter

Residential & Small Commercial System

Three Phase 3-25kW



Three Phase PV String Inverter

Commercial System and Power Plants

Three Phase 30kW, Three Phase 36-60kW, Three Phase 70-110kW

Energy storage system

Residential and Commercial Storage System

Single Phase Hybrid Inverter 1-6kW
Three Phase Hybrid Inverter 3-30kW
Three Phase Hybrid Inverter 36-50kW

Single Phase AC Coupled Inverter 1-6kW
Three Phase AC Coupled Inverter 3-30kW

Split Phase Hybrid Inverter 3-9.6kW

Low Voltage Stackable Energy Storage Battery (2.56-20.48kWh)
Wall Mounted Energy Storage Battery (5/10/15kWh)
High Voltage Stackable Energy Storage Battery (7.68-30.72kWh)

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.

- **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
- Arc Fault Circuit Interrupter (AFCI) (Optional)
- Build in Anti-feed-in Function
- Compact Size and Easy Installation
- Smart Monitoring & Remote Firmware Upgrade

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.

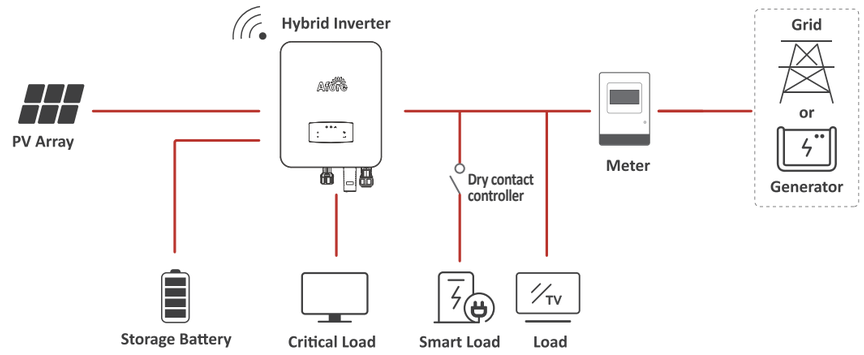
- **MAX. 120A** — Max. Charge/ Discharge Current 120A
- **PV OVERSIZE** — 1.5 Times PV Oversize
- **MPPT CHANNELS** — Up to 2 MPPT Channels
- **UPS FUNCTION** — Switch Time < 10ms
- **PARALLEL** — Max.6 Parallel Stacking

- Support for Time-of-use Optimization
- Configurable Operation Modes
- 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

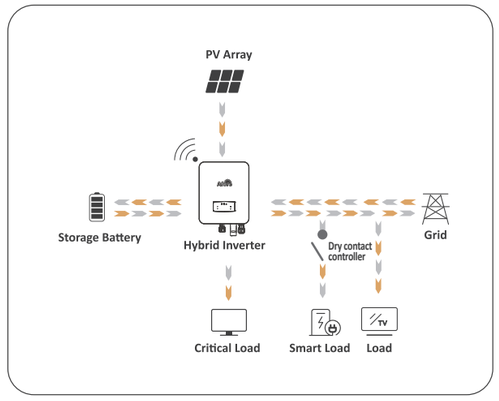
Technical Data	AF1K-SL-1	AF1.5K-SL-1	AF2K-SL-1	AF2.5K-SL-1	AF3K-SL-1	AF3.6K-SL-1
PV Input						
Max. Input Power (kW)	1.5	2.3	3.0	3.8	4.5	5.4
Max. PV Voltage (V)	550					
MPPT Range (V)	80 - 500					
Full MPPT Range (V)	80 - 500	90 - 500	120 - 500	150 - 500	170 - 500	210 - 500
Normal Voltage (V)	360					
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					

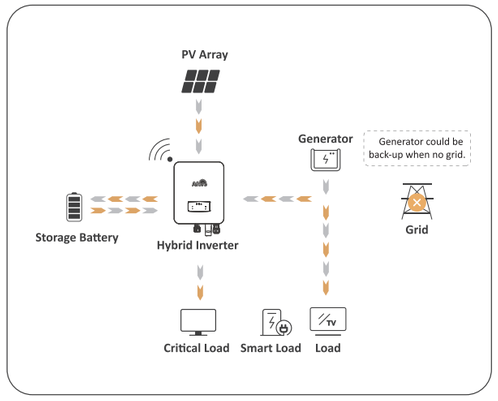
Technical Data	AF3K-SL	AF3.6K-SL	AF4K-SL	AF4.6K-SL	AF5K-SL	AF5.5K-SL	AF6K-SL
PV Input							
Max. Input Power (kW)	4.5	5.4	6.0	6.9	7.5	8.3	9.0
Max. PV Voltage (V)	550						
MPPT Range (V)	80 - 500						
Full MPPT Range (V)	90 - 500	110 - 500	120 - 500	130 - 500	150 - 500	160 - 500	170 - 500
Normal Voltage (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						

For New Storage System:



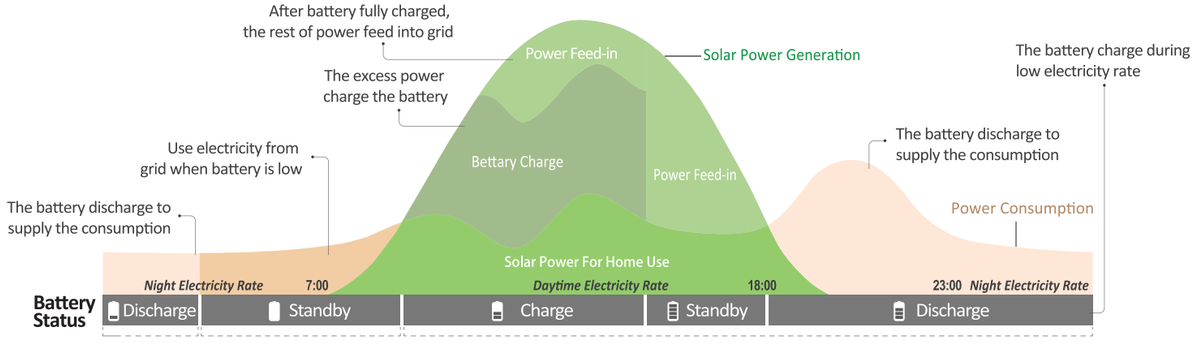
Optimizing Self-Consumption (on-grid) + Emergency Power Supply (off-grid)





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	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		

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

PV OVERSIZE
1.5 Times PV Oversize

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 (Below 10kW)
- Smart Monitoring & Remote Firmware Upgrade

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

PV OVERSIZE
1.5 Times PV Oversize

MAX. 20Adc
String Current Up To 20A

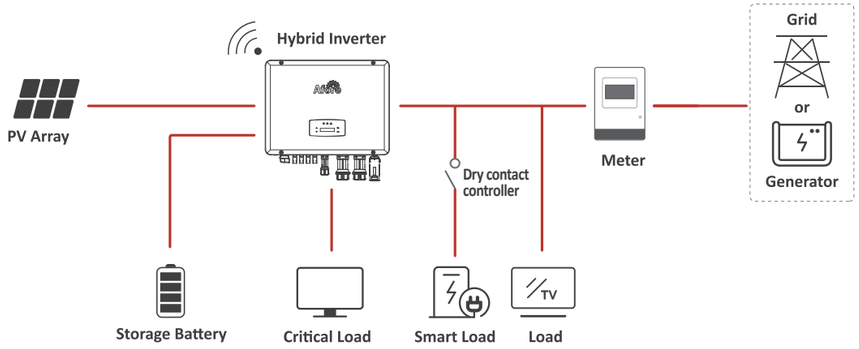
UPS FUNCTION
Switch Time < 10ms

- 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 (Below 10kW)
- Smart Monitoring & Remote Firmware Upgrade

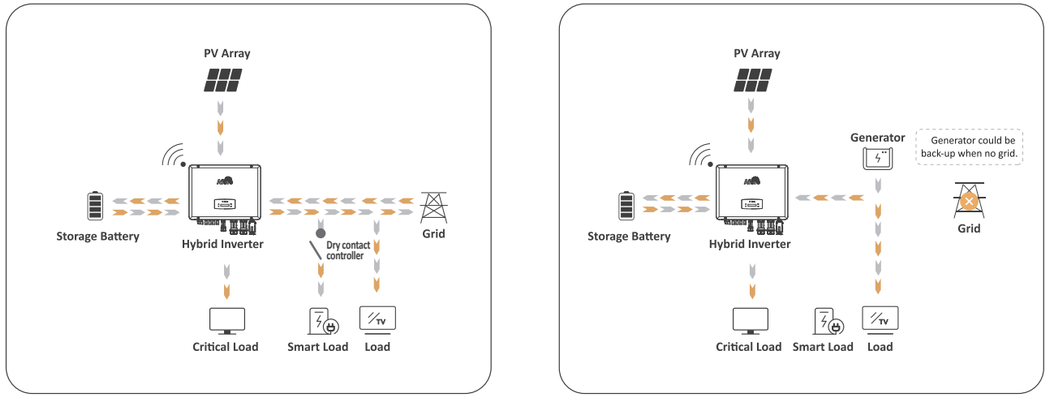
Technical Data	AF3K-TH	AF4K-TH	AF5K-TH	AF6K-TH	AF8K-TH	AF10K-TH
PV Input						
Max. DC Input Power (kW)	5	6	7.5	9	12	15
Max. PV Voltage (V)	1000					
Rated DC Input Voltage (V)	620					
DC Input Voltage Range (V)	150-1000					
MPPT Voltage Range (V)	150-850					
Full MPPT Range(V)	200-850			250-850	300-850	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-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)	370 x 497 x 192 / 558 x 535 x 260 mm					
Weight (kg)	20.8 / 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)	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 (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-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)	370 x 497 x 192 / 558 x 535 x 260	558 x 535 x 260 mm				
Weight (kg)	20.8 / 29kg	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					

For New Storage System:

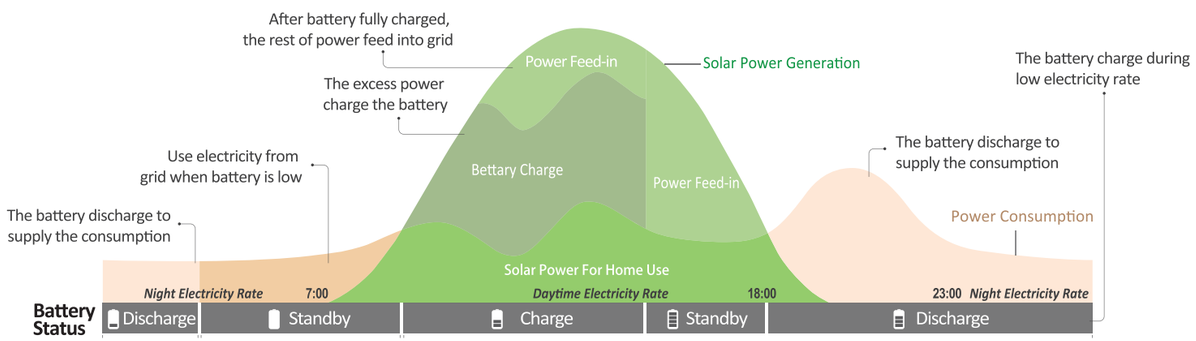


Optimizing Self-Consumption (on-grid) + Emergency Power Supply (off-grid)



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-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

PV OVERSIZE
1.5 Times PV Oversize

MAX. 40Adc
String Current Up To 40A

UPS FUNCTION
Switch Time < 10ms

INPUT
Support Generator

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

Technical Data	AF36K-TH	AF40K-TH	AF50K-TH
PV Input			
Max. DC Input Power (kW)	54	60	75
Max. PV Voltage (V)		1000	
Rated DC Input Voltage (V)		620	
DC Input Voltage Range (V)		150-1000	
MPPT Voltage Range (V)		150-850	
Full MPPT Range(V)		500-850	
Start-up Voltage (V)		160	
Max. DC Input Current (A)		40x4	
Max. Short Current(A)		48x4	
No. of MPPT Tracker / Strings		4/8	
Battery Port			
Battery Nominal Voltage (V)		500	
Battery Voltage Range (V)		150-800	
Max. Charge/Discharge Current (A)		120	
Max. Charge/Discharge Power (kW)	36	40	50
Charging Curve		3 Stages	
Compatible Battery Type		Li-ion / Lead-acid / Sodium metal chloride battery	
AC Grid			
Nominal AC Output Power (kW)	36	40	50
Max. AC Input/Output Power (kVA)	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-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)		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	

Monitoring
Device & Solution

Failure Alarm

PV Sytem Information Push

Multiple Systems In One Account

Cloud Data Synchronization

PC Browser Andriod And Ios

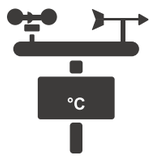
Real-time/ Historical Data Monitoring And Analysis

System Income Calculation

Wi-Fi / Ethernet / GPRS Data Sticker

Power Plant Data Logger

Zero injection Smart Meter(optional)



Weather Station

Global Projects