



## ENERGY STORAGE SYSTEM SOLUTIONS PV SYSTEM SOLUTIONS



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# Single Phase Hybrid Storage Inverter

## 1-3.6 kW



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

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

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

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



**AI EMS**  
Electricity Pricing  
& Automation

**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

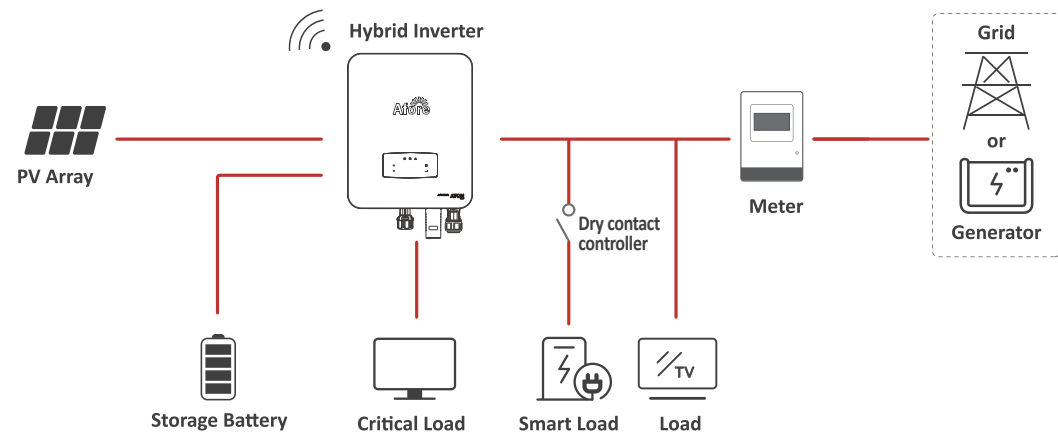
AFCI (Optional) & Rapid Shutdown Ready

Build in Anti-feed-in Function

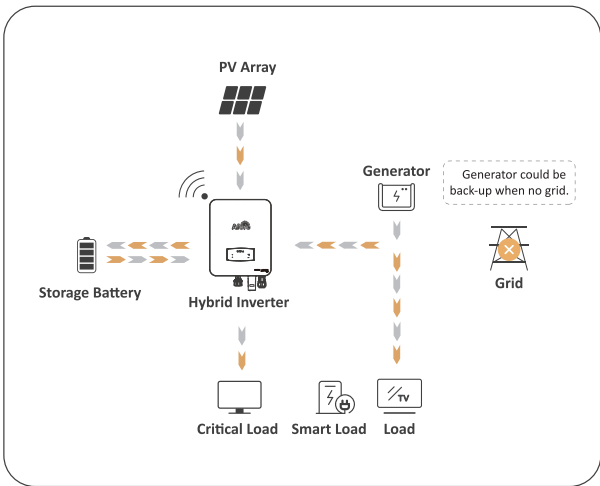
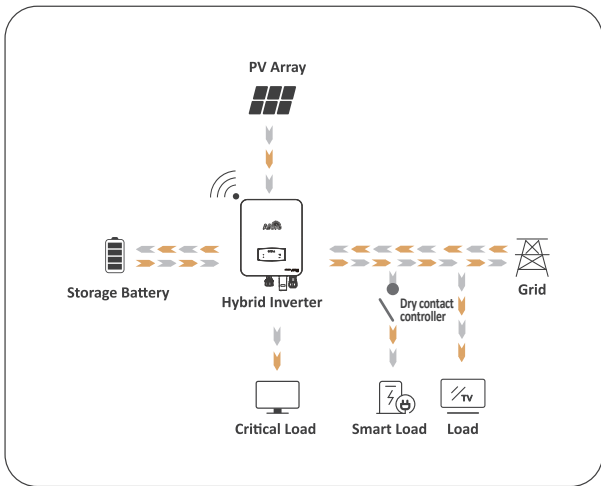
Compact Size and Easy Installation

Smart Monitoring & Remote Firmware Upgrade

For New Storage System:

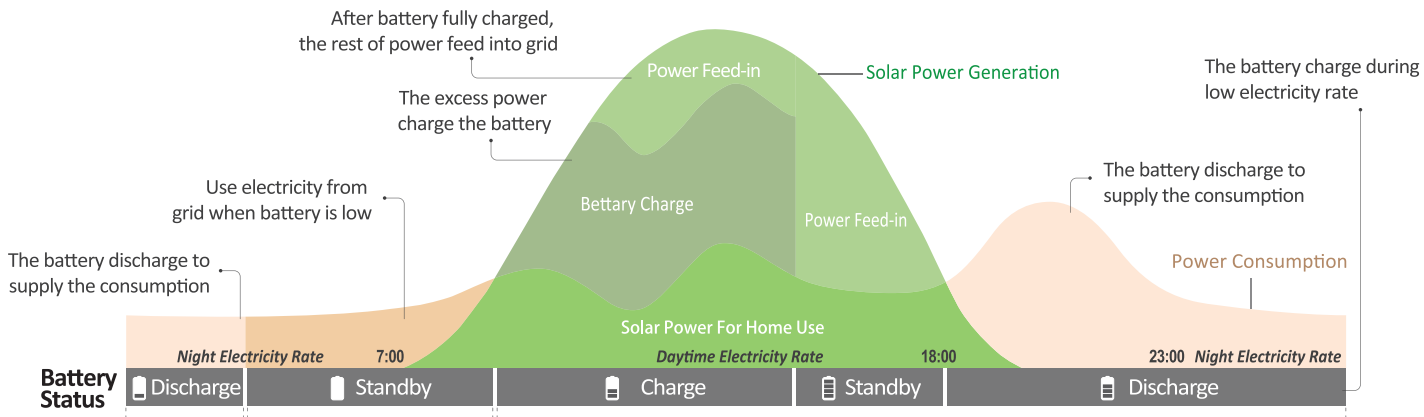


Optimizing Self-Consumption (on-grid) + Emergency Power Supply (off-grid)



### Optimizing Self-Consumption Mode

With home energy storage installed, home owners may also be able to change from a flat rate electricity tariff to a time-of-use tariff. For the areas and regions, where peak shaving can be applied.



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

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

# Single Phase Hybrid Storage Inverter

## 4-6 kW Plus Series



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

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

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

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

**AI EMS**  
Electricity Pricing & Automation

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

**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

Support for Time-of-use Optimization

Configurable Operation Modes

AFCI (Optional) & Rapid Shutdown Ready

The charging and discharging power of the battery is greater

Build in Anti-feed-in Function

Compact Size and Easy Installation

Smart Monitoring & Remote Firmware Upgrade

Off-grid mode, with a larger load capacity, the maximum load can be 6KVA

Technical Data	AF4K-SLP	AF4.6K-SLP	AF5K-SLP	AF5.5K-SLP	AF6K-SLP
PV Input					
Max. Input Power (kW)	6	6.9	7.5	8.3	9
Max. PV Voltage (V)	550				
MPPT Range (V)	80 - 500				
Full MPPT Range (V)	120 - 500	130 - 500	150 - 500	160 - 500	170 - 500
Normal Voltage (V)	360				
Startup Voltage (V)	100				
Max. Input Current (A)	18.5 x 2				
Max. Short Current (A)	26 x 2				
No. of MPP Tracker / No. of PV String	2 / 2				
Battery Port					
Max. Charge/Discharge Power (kW)	4.0	4.6	5.0	5.5	6.0
Max. Charge/Discharge Current (A)	120				
Battery Normal Voltage (V)	51.2				
Battery Voltage Range (V)	40 - 60				
Battery Type	Li-ion / Lead-acid etc.				
AC Grid					
Max Continuous Current (A)	19.0	22.0	23.0	26.0	28.0
Max Continuous Power (kVA)	4.0	4.6	5.0	5.5	6.0
Nominal Grid Current (A)	18.2 / 17.4	21.0 / 20.0	22.8 / 21.8	25.0 / 24.0	27.3 / 26.1
Nominal Grid Voltage (V)	198 to 242 @ 220 / 207 to 253 @ 230				
Nominal Grid Frequency (Hz)	50 / 60				
Power Factor	1 default (adjustable from 0.8 leading to 0.8 lagging)				
Current THD (%)	< 3				
AC Load Output					
Max Continuous Current (A)	19.0	22.0	23.0	26.0	28.0
Max Continuous Power (kVA)	4.0	4.6	5.0	5.5	6.0
Max Peak Current (A) (10min)	27.3 / 26.1	31.4 / 30	34.1 / 32.7	37.8 / 36.1	41.0 / 39.2
Max Peak Power (kVA) (10min)	6.0	6.9	7.5	8.3	9.0
Nominal AC Voltage L-N (V)	220 / 230				
Nominal AC Frequency (Hz)	50 / 60				
Switching Time (ms)	Seamless				
Voltage THD (%)	< 3				
Efficiency					
CEC Efficiency (%)	97.0				
Max. Efficiency (%)	97.6				
PV to Bat. Efficiency (%)	98.1				
Bat. between AC Efficiency (%)	96.8				
Protection					
PV Reverse Polarity Protection	Yes				
Over Current/Voltage Protection	Yes				
Anti-Islanding Protection	Yes				
AC Short Circuit Protection	Yes				
Residual Current Detection	Yes				
Ground Fault Monitoring	Yes				
Insulation Resister Detection	Yes				
PV Arc Detection	Yes				
Enclosure Protect Level	IP65 / NEMA4X				
AC/DC surge protection	Type II				
General Data					
Dimensions (W x H x D, mm)	370 x 535 x 192				
Weight (kg)	20.5				
Topology	Transformerless				
Cooling	Intelligent Fan				
Relative Humidity	0 - 100 %				
Operating Temperature Range (°C)	- 25 to 60				
Operating Altitude (m)	< 4000				
Standby Consumption (W)	< 10				
Mounting	Wall Bracket				
Communication with RSD	SUNSPEC				
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G, Sunspec				
Certification & Approvals	NRS097, G99, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2, IEC62477-1				
EMC	EN61000-6-2, EN61000-6-3				

# Single Phase Hybrid Storage Inverter

## 8-12 kW




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


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

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

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



**AI EMS**  
Electricity Pricing & Automation




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

Max.  
1.5

PV OVERSIZE


1.5 Times PV Oversize



3  
MPPT

MPPT CHANNELS


Up to 3 MPPT Channels



<10  
ms


UPS FUNCTION


Switch Time < 10ms




PARALLEL


Max.6 Parallel Stacking







**INPUT**  
Support Generator









Higher Yields

Support for Time-of-use Optimization

Configurable Operation Modes

AFCI (Optional) & Rapid Shutdown Ready

Colorful touch LCD, User-friendly

Build in Anti-feed-in Function

Compact Size and Easy Installation

Smart Monitoring & Remote Firmware Upgrade

Technical Data	AF8K-SLP	AF9K-SLP	AF10K-SLP	AF11K-SLP	AF12K-SLP
PV Input					
Max. Input Power (kW)	12	13.5	15	16.5	18
Max. PV Voltage (V)	550				
MPPT Range (V)	80 - 500				
Full MPPT Range (V)	150 - 500	170 - 500	190 - 500	210 - 500	230 - 500
Normal Voltage (V)	360				
Startup Voltage (V)	100				
Max. Input Current (A)	18.5 x 3				
Max. Short Current (A)	26 x 3				
No. of MPP Tracker / No. of PV String	3 / 1+1+2				
Battery Port					
Max. Charge/Discharge Power (kW)	8.0	9.0	10	11	12
Max. Charge/Discharge Current (A)	200	240	240	240	240
Battery Normal Voltage (V)	51.2				
Battery Voltage Range (V)	40 - 60				
Battery Type	Li-ion / Lead-acid etc.				
AC Grid & Diesel Gen (Optional)					
Max Continuous Current (A)	37	41	46	50	55
Max Continuous Power (kVA)	8.0	9.0	10	11	12
Nominal Grid Current (A)	36.4 / 34.8	41 / 39.2	45.5 / 43.5	50 / 47.9	54.6 / 52.2
Nominal Grid Voltage (V)	198 to 242 @ 220 / 207 to 253 @ 230				
Nominal Grid Frequency (Hz)	50 / 60				
Power Factor	1 default (adjustable from 0.8 leading to 0.8 lagging)				
Current THD (%)	< 3				
AC Load Output					
Max Continuous Current (A)	37	41	46	50	55
Max Continuous Power (kVA)	8	9	10	11	12
Max Peak Current (A) (10min)	55.5	61.5	69	75	82.5
Max Peak Power (kVA) (10min)	12	13.5	15	16.5	18
Nominal AC Voltage L-N (V)	220 / 230				
Nominal AC Frequency (Hz)	50 / 60				
Switching Time (ms)	Seamless				
Voltage THD (%)	< 3				
Efficiency					
European Efficiency (%)	96.8				
Max. Efficiency (%)	98.1				
Protection					
PV Reverse Polarity Protection	Yes				
Bat. Reverse Polarity Protection	Yes				
Over Current/Voltage Protection	Yes				
Anti-Islanding Protection	Yes				
AC Short Circuit Protection	Yes				
Residual Current Detection	Yes				
Ground Fault Monitoring	Yes				
PV Arc Detection	Yes				
Enclosure Protect Level	IP66				
General Data					
Dimensions (W x H x D, mm)	785 x 614 x 258				
Weight (kg)	51				
Topology	Transformerless				
Cooling	Intelligent Fan				
Relative Humidity	0 - 100 %				
Operating Temperature Range (°C)	- 25 to 60 (Derating 45)				
Operating Altitude (m)	< 4000				
Standby Consumption (W)	< 30				
Mounting	Wall Bracket				
Communication with RSD	SUNSPEC				
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G, Sunspec				
Certification & Approvals	NRS097, G99, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2				
EMC	EN61000-6-2, EN61000-6-3				