

# Single Phase Hybrid Storage Inverter

## 7-12 kW




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


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

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

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



**AI EMS**  
Electricity Pricing  
& Automation



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

Max.  
1.5

1.5 Times PV Oversize

2  
MPPT

Up to 2 MPPT Channels

<10  
ms

Switch Time < 10ms

PARALLEL

Max.6 Parallel Stacking

INPUT

Support Generator

Higher Yields

Support for Time-of-use Optimization

Configurable Operation Modes

AFCI (Optional) & Rapid Shutdown Ready

Build in Anti-feed-in Function

Compact Size and Easy Installation

Smart Monitoring & Remote Firmware Upgrade

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

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