

# Three Phase Hybrid Storage Inverter

## 7-12 kW (LV Battery Supported)




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


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

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


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




**AI EMS**  
Electricity Pricing & Automation




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




**100% UNBALANCE**  
Support Unbalance Load




**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 

 48V low voltage battery, transformer isolation design

 Build in Anti-feed-in Function

 Compact Size and Easy Installation

 Smart Monitoring & Remote Firmware Upgrade

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