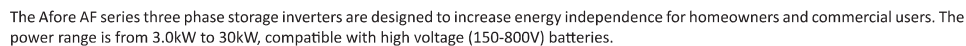


3-30 kW



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.

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.

Support for Time-of-use Optimization 

Configurable Operation Modes

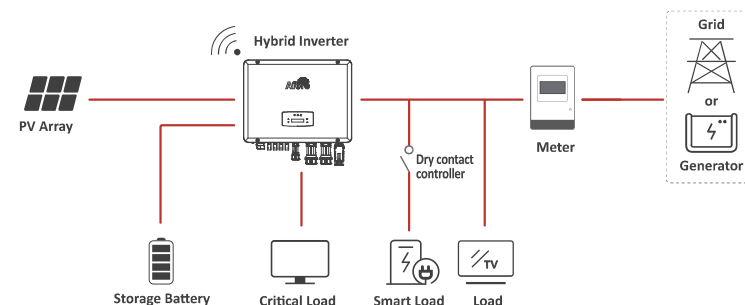
AFCI (Optional) & Rapid Shutdown Ready

 Build in Anti-feed-in Function

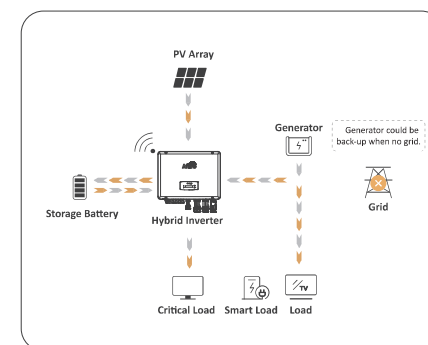
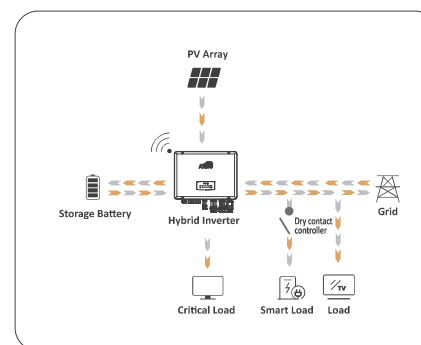
100% unbalanced output, each phase;
200% unbalanced output, each phase ($\leq 10\text{kW}$)

 Smart Monitoring & Remote Firmware Upgrade

For New Storage System:

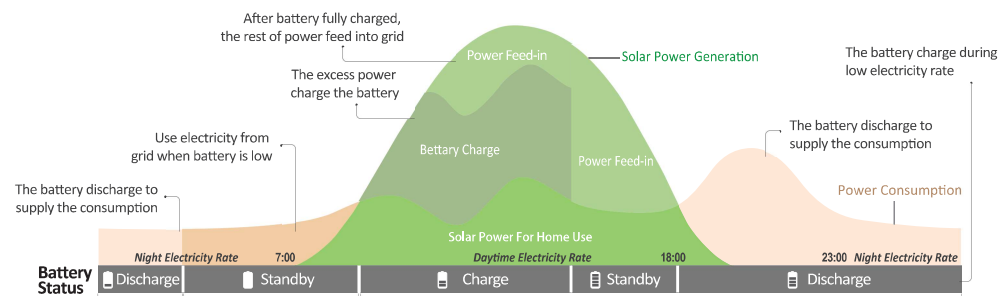


Optimizing Self-Consumption (on-grid) + Emergency Power Supply (off-grid)



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)	6	8	10	12	16	20
Max. PV Voltage (V)				1000		
Rated DC Input Voltage (V)				620		
DC Input Voltage Range (V)				150-1000		
MPPT Voltage Range (V)				150-850		
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 (kVA)	3	4	5	6	8	10
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	3.3kVA, 60s	4.4kVA, 60s	5.5kVA, 60s	6.6kVA, 60s	8.8kVA, 60s	11kVA, 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				IP66		
AC/DC surge protection				Type II		
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		
Standby Consumption (W)				<5		
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, IEC62109-1, IEC62109-2, IEC62477-1					
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)	24	30	34	40	50	51
Max. PV Voltage (V)				1000		
Rated DC Input Voltage (V)				620		
DC Input Voltage Range (V)				150-1000		
MPPT Voltage Range (V)				150-850		
Start-up Voltage (V)				160		
Max. DC Input Current (A)	20 x 2	20 + 32	32 x 2		40 x 2	
Max. Short Current(A)	30 x 2	30 + 48	48 x 2		60 x 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 (kVA)	12	15	17	20	25	30
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	13.2kVA, 60s	16.5kVA, 60s	18.7kVA, 60s	22kVA, 60s	27.5kVA, 60s	33kVA, 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				IP66		
AC/DC surge protection				Type II		
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		
Standby Consumption (W)				<5		
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, IEC62109-1, IEC62109-2, IEC62477-1					
EMC	EN61000-6-2, EN61000-6-3					