



All-In-One Energy Storage System



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All In One Energy Storage System Single Phase Home Storage Solution (LV)

Afore ASL Series is an all-in-one solar and storage solution that integrates the inverter, battery charger, UPS-level switching, and battery enclosure into a pre-wired modular system for easier and faster installation. The compact, elegantly designed, and robust unit is IP66 rated, so it can be mounted either inside or outside withstanding all weather conditions and brings a reduction of installation time of up to 50%.



IP66 Outdoor Design



Modular Design
Plug & Play



AFCI Standard



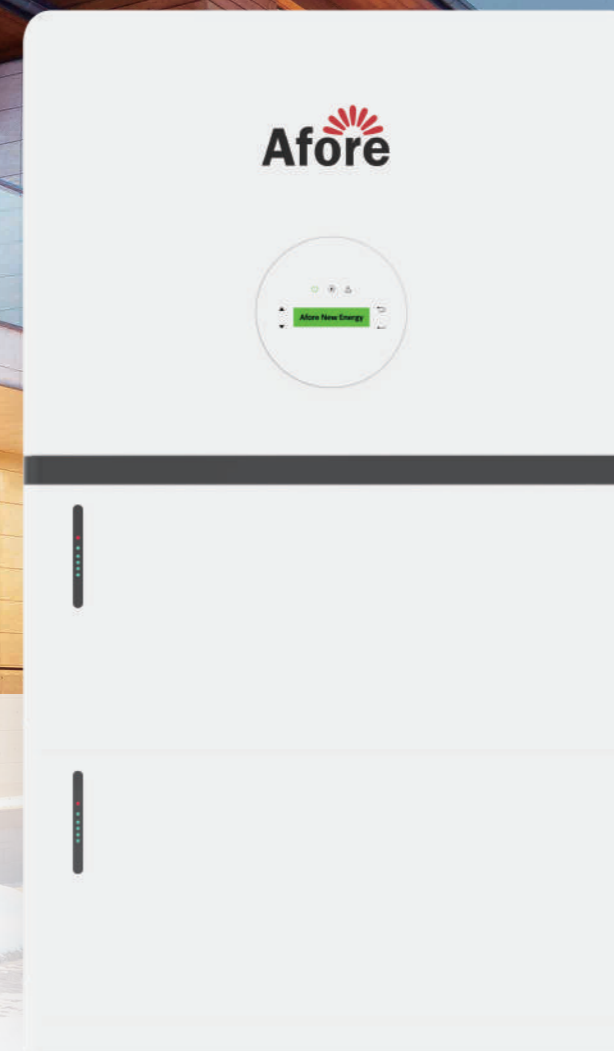
Scalable Design
Up To 30.72kWh



150% Backup
Overloading for 10s



RSD Ready
VPP Ready


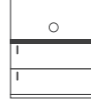
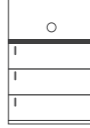
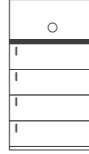

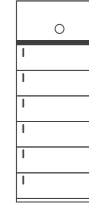


FOR SOLAR + ENERGY STORAGE SYSTEM

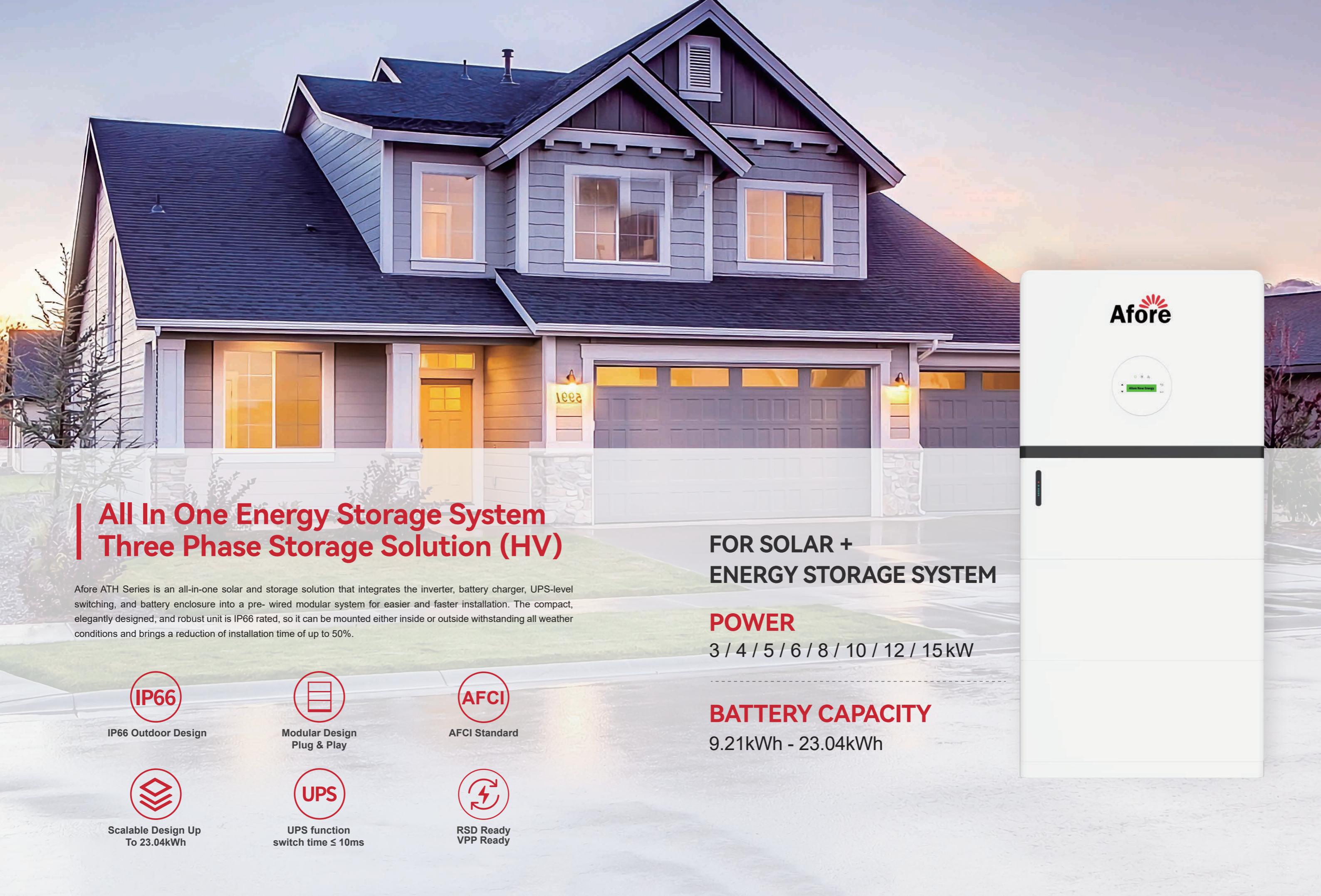
POWER 3 / 3.6 / 4 / 4.6 / 5 / 5.5 / 6 kW

CAPACITY 5.12kWh - 30.72kWh Battery Capacity

Technical Data	AF3K-ASL	AF3.6K-ASL	AF4K-ASL	AF4.6K-ASL	AF5K-ASL	AF5.5K-ASL	AF6K-ASL
PV Input							
Max. Input Power (kW)	6	7.2	8.0	9.2	10	11	12
Max. PV Voltage (V)				550			
MPPT Range (V)				80 - 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	5.0	5.5	6.0
Max. Charge/Discharge Current (A)	80			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)	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 (Back-up)							
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) (10s)	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) (10s)	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)	< 10						
Voltage THD (%)	< 3						
Efficiency							
CEC Efficiency (%)	97.0			98.1			
Max. Efficiency (%)	97.6			98.1			
PV to Bat. Efficiency (%)	98.1			98.1			
Bat. between AC Efficiency (%)	96.8			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	IP66 / NEMA4X						
AC/DC surge protection	Type II						
General Data							
Dimensions (W x H x D, mm)	600 x 430 x 210						
Weight (kg)	25						
Topology	Transformerless						
Cooling	Intelligent Fan						
Relatively 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						
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						

Model	AF5000W-LX	AF10000W-LX	AF15000W-LX	AF20000W-LX	AF25000W-LX	AF30000W-LX
Parameter						
	1pcs	2pcs	3pcs	4pcs	5pcs	6pcs
Number of Pack						
Total Energy	5.12kWh	10.24kWh	15.36kWh	20.48kWh	25.6kWh	30.72kWh
Usable Energy*	4.87kWh	9.73kWh	14.6kWh	19.46kWh	24.32kWh	29.19kWh
Voltage Range	44.8 ~ 57.6Vd.c					
Nominal Voltage	51.2Vd.c.					
Max. Charge Voltage	57.6Vd.c.					
Max. Continuous Charging Current	50 A	100 A	150 A	160 A	160 A	160 A
Max. Continuous Discharge Current	50 A	100 A	150 A	160 A	160 A	160 A
DOD	95 %					
Communication	CAN					
Dimension(L*W*H)	(600±2)* (215±2)* (790±3) mm	(600±2)* (215±2)* (1110±5) mm	(600±2)* (215±2)* (1430±7) mm	(600±2)* (215±2)* (1750±9) mm	(600±2)* (215±2)* (2070±9) mm	(600±2)* (215±2)* (2390±9) mm
Net Weight	(49±2) kg	(95±4) kg	(141±6) kg	(187±6) kg	(234±6) kg	(285±6) kg
Operating Condition	Indoor or outdoor					
Operating	Charging	0~50 °C				
Temperature	Discharging	-15~50 °C				
Humidity	15% ~ 85% RH (No Condensation)					
Cooling Type	Natural					
IP Rating	IP66					
Installation Method	Stacked installation					
Heating film power(W)(optional)	130W/pcs					
Supply connection	Fixed power cord					
WiFi	Yes					
Configuration	IEC62619,IEC63056,IEC61000-6-1,IEC61000-6-3,IEC62477-1,IEC60730,IEC62040,UN38.3,MSDS					

*Testing conditions based on temperature 25°C at the beginning of life. Total Energy/Usable Energy are measured with a standard test method: 0.2C Charge and Discharge. As per the characteristics of lithium batteries, such parameters as the charge/ discharge current and efficiency listed above are subject to change.



Afore



All In One Energy Storage System Three Phase Storage Solution (HV)

Afore ATH Series is an all-in-one solar and storage solution that integrates the inverter, battery charger, UPS-level switching, and battery enclosure into a pre-wired modular system for easier and faster installation. The compact, elegantly designed, and robust unit is IP66 rated, so it can be mounted either inside or outside withstanding all weather conditions and brings a reduction of installation time of up to 50%.

**FOR SOLAR +
ENERGY STORAGE SYSTEM**

POWER
3 / 4 / 5 / 6 / 8 / 10 / 12 / 15kW

BATTERY CAPACITY
9.21kWh - 23.04kWh



IP66 Outdoor Design



Modular Design
Plug & Play



AFCI Standard



Scalable Design Up
To 23.04kWh

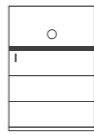
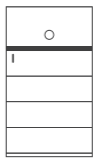
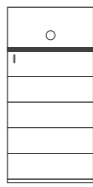
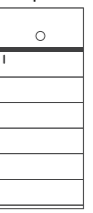


UPS function
switch time ≤ 10ms



RSD Ready
VPP Ready

■ Technical Data	AF3K-ATH	AF4K-ATH	AF5K-ATH	AF6K-ATH	AF8K-ATH	AF10K-ATH	AF12K-ATH	AF15K-ATH
PV Input								
Max. DC Input Power (kW)	6	8	10	12	16	20	24	30
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)	18.5x2							
Max. Short Current(A)	25 x2							
No. of MPPT Tracker / Strings	2/2							
Battery Port								
Battery Nominal Voltage (V)	350	350	350	350	350	350	450	500
Battery Voltage Range (V)	80-600							
Max. Charge/Discharge Current (A)	30							
Max. Charge/Discharge Power (kW)	3	4	5	6	8	10	12	15
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	15
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	22.5 / 16.5
Max. AC Output Current (A)	5.3	7	8.5	10.5	13.5	17	21.5	27
Nominal AC Voltage (V)	3P+N+PE/3P+PE 230/400							
Nominal AC Frequency (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	12	15
Nominal Output Voltage (V)	3P+N+PE/3P+PE 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	21.8
Peak Output Power	3.3kVA, 60s	4.4kVA, 60s	5.5kVA, 60s	6.6kVA, 60s	8.8kVA, 60s	11kVA, 60s	13.2kVA, 60s	16.5kVA, 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-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)	600 x 432 x 210							
Weight (kg)	25							
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	EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, IEC62109-1, IEC62109-2, IEC62477-1							
EMC	EN61000-6-2, EN61000-6-3							

■ Model	AF9000W-HU	AF13000W-HU	AF18000W-HU	AF23000W-HU
Parameters Of System				
	2pcs	3pcs	4pcs	5pcs
Number of Pack				
Total Energy	9.21kWh	13.82kWh	18.43kWh	23.04kWh
Usable Energy*	8.75kWh	13.13kWh	17.51kWh	21.89kWh
Voltage Range	112~144Vd.c.	168~216Vd.c.	224~288Vd.c.	280~360Vd.c.
Nominal Voltage	128Vd.c.	192Vd.c.	256Vd.c.	320Vd.c.
Charging Voltage Declared by Manufacturer	144Vd.c.	216Vd.c.	288Vd.c.	360Vd.c.
Nominal Charging Current	30A			
Nominal Discharge Current	30A			
DOD	95%			
Communication	CAN/RS485			
Dimension (L*W*H)	(600±2)*(210±2)* (1325±3)mm	(600±2)*(210±2)* (1610±5)mm	(600±2)*(210±2)* (1895±7)mm	(600±2)*(210±2)* (2180±9)mm
Net Weight	(100±2) kg	(141±4) kg	(182±6) kg	(223±6) kg
Operating Condition	Indoor or outdoor			
Storage Temperature Range	>3month, 15°C to 30°C <3month, 0°C to 45°C			
Operating Charging	0~52 °C			
Temperature Discharging	-15~52 °C			
Humidity	15% ~ 85%RH (No condensation)			
Cooling Type	Natural			
IP Rating of Enclosure	IP66			
Installation Method	Stacked installation			

*Testing conditions based on temperature 25°C at the beginning of life. Total Energy/Usable Energy are measured with a standard test method: 0.2C Charge and Discharge. As per the characteristics of lithium batteries, such parameters as the charge/ discharge current and efficiency listed above are subject to change.

■ Model	AF4600W-HU
Pack	
Total Energy	4.60kWh
Usable Energy*	4.37kWh
Voltage Range	56~72 Vd.c
Nominal Voltage	64V
Charging Voltage Declared by Manufacturer	72V
Upper Limit Charging Voltage	73V
Discharge Cut-off Voltage	56V
Lower Limit Discharging Voltage	52V
Max.Continuous Charging Current	30A
Max.Continuous Discharge Current	30A
DOD	95%
Dimension ((L*W*H),mm)	(600±2)*(210±2)*(285±2)
Net Weight	(41±2)kg
Operating Condition	Indoor or outdoor
Operating Charging	0~52 °C
Temperature Discharging	-15~52 °C
Humidity	15% ~ 85%RH(No Condensation)
Configuration	(10S)2S



Cabinet Solution For Air-cold Photovoltaic Energy Storage



Efficient Conversion

High energy density, can support battery transportation.



Smart and Friendly

Real-time status monitoring and fault recording. Multi-energy complementation of solar, storage, diesel-generator, and grid power, utilizing resources reasonably



Safe and Reliable

Multi-level battery protection system, ensuring impeccable safety. With grid power supply and backup power supply interface to ensure uninterrupted important loads



Flexible Configuration

Equipped with device black start function, it can quickly establish voltage support and integrate multiple MPPT channels with multiple photovoltaic interfaces

FOR SOLAR + ENERGY STORAGE SYSTEM

POWER 36 / 40 / 45 / 50 / 60 kW

CAPACITY 100.352 - 215.04kWh Battery Capacity

■ Technical Data	AF36K-TH	AF40K-TH	AF45K-TH	AF50K-TH	AF60K-TH
PV Input					
Max. DC Input Power (kW)	72	80	90	100	100
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)			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	45	50	60
Charging Curve			3 Stages		
Compatible Battery Type			Li-ion / Lead-acid / Sodium metal chloride battery		
AC Grid					
Nominal AC Output Power (kW)	36	40	45	50	60
Max. AC Input/Output Power (kVA)	54 / 39.6	60 / 44	67.5 / 49.5	75 / 55	90 / 66
Max. AC Output Current (A)	60.5	67	75.5	83.5	96
Nominal AC Voltage (V)			230/400		
Nominal AC Frequency (Hz)			50/60		
Power Factor			1 (-0.8-0.8 adjustable)		
Current THD (%)			<3%		
AC Load Output (Back-up)					
Nominal Output Power (kVA)	36	40	45	50	60
Nominal Output Voltage (V)			230/400		
Nominal Output Frequency (Hz)			50/60		
Max. AC Output Current (A)	60.5	67	75.5	83.5	96
Peak Output Power	39.6kVA, 60s	44kVA, 60s	49.5kVA, 60s	55kVA, 60s	66kVA, 60s
THDV (with linear load)			3%		
Switching Time (ms)			<10		
Efficiency					
Europe Efficiency	98.20%	98.30%	98.30%	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-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)			867 x 715 x 306 mm		
Weight (kg)			81kg		
Topology			Transformerless		
Cooling Concept			Intelligent Fan		
Relative Humidity			0-100%		
Operating Temperature Range (°C)			-25 to 60 °C		
Operating Altitude (m)			<4000		
Standby Consumption (W)			<100		
Display & Communication Interfaces			LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G, Sunspec		
Certification & Approvals			EN50549-1, C10/C11, VDE-AR-N4105, IEC62109-1, IEC62109-2, IEC62477-1		
EMC			EN61000-6-2, EN61000-6-4		

■ Model	AF100000W-HA1	AF215000W-HA2
Parameter		
Battery Type	LiFePO4	LiFePO4
Cell Specification	3.2V/280Ah	3.2V/280Ah
Battery module capacity	14.336kWh	43.008kWh
Battery string configuration	1P112S	1P240S
Number of battery strings	1	1
Rated capacity	100.352kWh	215.04kWh
Nominal Voltage	358.4V	768V
Voltage range	302.4V~403.2V	648V~864V
System		
Dimension(W*D*H)	1355*1300*2300mm (Includes air conditioner and inverter)	1350*1350*2300mm (Includes inverter)
Weight	1.55T	2.45T
IP Rating	IP54	IP54
Cooling Method	Air cooling	Liquid Cooling
Fire Safety Configuration	Aerosol	Aerosol
Operating Temperature	-20~55°C (>45°C power reduction)	-20~55°C (>45°C power reduction)
Humidity	0-95% (no condensation)	0-95% (no condensation)
Maximum working altitude	2000m	2000m
Communication Interface	Ethernet/RS485	Ethernet/RS485
Compliant with standards	UN38.3	UN38.3

This product sheet is as comprehensive and detailed as possible based on existing information. The company reserves the right to modify data, parameters and other information.

Liquid-cooling Pack Solutions



High Security

Battery circuit safety management, fast fuse protection. A multi-level battery protection system ensuring impeccable safety. Intelligent anti-leakage detection, enhancing system safety.



Long Lifespan

Intelligent liquid cooling ensures higher efficiency and longer battery cycle life. Modular design with parallel support for easy system expansion.



High Integration

Highly integrated, easy to transport and operation & maintenance friendly. Fully pre-assembled, eliminating the need for on-site battery module installation. On-site installation within 8 hours.



Intelligent

Real-time status monitoring and fault recording to achieve fault warning and fault location. Built-in battery performance monitoring and recording function.

Model	AF215000W-HA5	AF233000W-HA6	AF241000W-HA7	AF261000W-HA8
AC Side				
AC Rated Power	100kW	125kW	125kW	125kW
Allowable Grid Voltage Range	400V (-15%~10%)			
Allowable Grid Frequency Range	50/60Hz±2.5Hz			
Rated Current	145A	180A	180A	180A
Max. PCS Efficiency	98%			
Way of Connection	3P+N+PE			
Battery Side				
Cell Specification	LFP 3.2V/280Ah	LFP 3.2V/280Ah	LFP 3.2V/314Ah	LFP 3.2V/314Ah
Battery RACK Configuration	1P240S	1P260S	1P240S	1P260S
System Capacity	215kWh @ 25°C, 0.5P	233kWh @ 25°C, 0.5P	241kWh @ 25°C, 0.5P	261kWh @ 25°C, 0.5P
Voltage Range	648~864V	702~936V	648~864V	702~936V
System				
Charge/discharge Ratio	≤0.5P			
Display	Touch screen display (optional)			
Dimension(W*D*H)	1000*1350*2391mm (Incl. lifting lug), 1000*1350*2300mm (Excl. liftinglug)			
Weight	2400kg	2600kg	2450kg	2650kg
Noise	<75dB			
IP rating	IP54 (Pack: IP67)			
System Efficiency	>88%			
Cooling method	Liquid cooling			
Environmental Temperature	-30~55 °C			
Humidity	≤95%			
Maximum working altitude	2000m			
Fire safety configuration	Aerosol			
Communication Interface	Ethernet/CAN/RS485			
Communication Protocol	MODBUS-TCP			
Compliant with standards	GB/T 34120, GB/T 36276, IEC62477, IEC62619, IEC63056			

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Liquid-cooling Energy Storage Cabinet Solutions



High Security

Battery circuit safety management, fast fuse protection. A multi-level battery protection system ensuring impeccable safety. Intelligent anti-leakage detection, enhancing system safety.



Long Lifespan

Intelligent liquid cooling ensures higher efficiency and longer battery cycle life. Modular design with parallel support for easy system expansion.



High Integration

Highly integrated, easy to transport and operation & maintenance friendly. Fully pre-assembled, eliminating the need for on-site battery module installation. On-site installation within 8 hours.



Intelligent

Real-time status monitoring and fault recording to achieve fault warning and fault location. Built-in battery performance monitoring and recording function.

Model	AF372000W-HA9	AF428000W-HB0
AC Side		
AC Rated Power	186kW	215kW
Allowable Grid Voltage Range	400V (-15%~10%)	
Allowable Grid Frequency Range	50/60Hz±2.5Hz	
Rated Current	268A	310A
Max. PCS Efficiency	98%	
Way of Connection	3P+PE	
Battery Side		
Cell Specification	LFP 3.2V/280Ah	LFP 3.2V/314Ah
Battery RACK Configuration	1P416S	1P416S
System Capacity	372.736kWh @ 25°C, 0.5P	417.996kWh @ 25°C, 0.5P
Voltage Range	1123.2~1497.6V	
System		
Charge/discharge Ratio	≤0.5P	
Display	Touch screen display (optional)	
Dimension(W*D*H)	1400*1400*2400mm	
Weight	3600kg	3700kg
Noise	<75dB	
IP rating	IP54 (Pack: IP67)	
System Efficiency	>88%	
Cooling method	Liquid cooling	
Environmental Temperature	-30~55°C	
Humidity	≤95%	
Maximum working altitude	2000m	
Fire safety configuration	Aerosol	
Communication Interface	Ethernet/CAN/RS485	
Communication Protocol	MODBUS-RTU	
Compliant with standards	GB/T 34120, GB/T 36276, IEC62477, IEC62619, IEC63056	

This product sheet is as comprehensive and detailed as possible based on existing information. The company reserves the right to modify data, parameters and other information.

Large-scale Energy Storage Container Solutions



High Security

Election of lithium iron phosphate cells with high thermal stability. IP54 protection rating, meeting the needs of outdoor applications. C4 protection rating, 20-year reliability. Prevention based fire fighting strategy with independent fire fighting system.



High Integration

Modular design, DC 1500V system. Electrical and battery separation design, easy maintenance. Non-walk-in/modular highly integrated design saves space. Prefabricated compartment installation solution reducing on-site installation cost and commissioning time.



Long Lifespan

Integrated efficient liquid cooling system. The temperature difference inside the container is <math><5^{\circ}\text{C}</math>.

Model	AF3343KW-HB1	AF5015KW-HB2
Parameter		
Battery Type	3.2V, 314 Ah	
Max. Connection Number	1P416S*8	1P416S*12
Total Energy	3343.97kWh	5015.96kWh
Rated Power (0.5P)	1672kW	2500kW
Voltage Range (Battery)	1123.2~1497.6V	
System		
Dimension (W*D*H)	6058mm*2438mm*2896mm	
Weight	≤35T	≤50T
IP Rating	IP54 (Pack IP67)	
Operating Temperature	-20~50°C	
Humidity	0-95%RH (no condensation)	
Altitude	≤2000m (Standard) / ≤5000m (Optional)	
Cooling Method	Liquid cooling/50% ethylene glycol	
Fire Safety Configuration	Aerosol	
Corrosion Resistance	C4	
Communication Interface	CAN/Ethernet	
Certificates	GB/T36276 - 2023	

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