

# 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 IP65 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%.



IP65 Outdoor Design



Modular Design  
Plug & Play



AFCI Standard



Scalable Design  
Up To 30.72kWh



150% Backup  
Overloading for 10 mins



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)	4.5	5.4	6.0	6.9	7.5	8.3	9.0
Max. PV Voltage (V)	550						
MPPT Range (V)	80 - 500						
Full MPPT Range (V)	90 - 500	110 - 500	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)	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.						

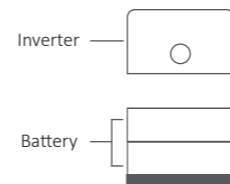
AC Grid							
Max Continuous Current (A)	14.0	17.0	19.0	22.0	23.0	26.0	28.0
Max Continuous Power (kVA)	3.0	3.6	4.0	4.6	5.0	5.5	6.0
Nominal Grid Current (A)	13.7 / 13.1	16.4 / 15.7	18.2 / 17.4	21.0 / 20.0	22.8 / 21.8	25.0 / 24.0	27.3 / 26.1
Nominal Grid Voltage (V)	198 to 242 @ 220 / 207 to 253 @ 230						
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) (10min)	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) (10min)	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	IP65 / NEMA4X						

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						
Noise Emission (dB)	< 25						
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						



1 Packs	2 Packs	3 Packs	4 Packs	5 Packs	6 Packs
5.12kWh	10.24kWh	15.36kWh	20.48kWh	25.6kWh	30.72kWh

**Model**      AF5000W-LE

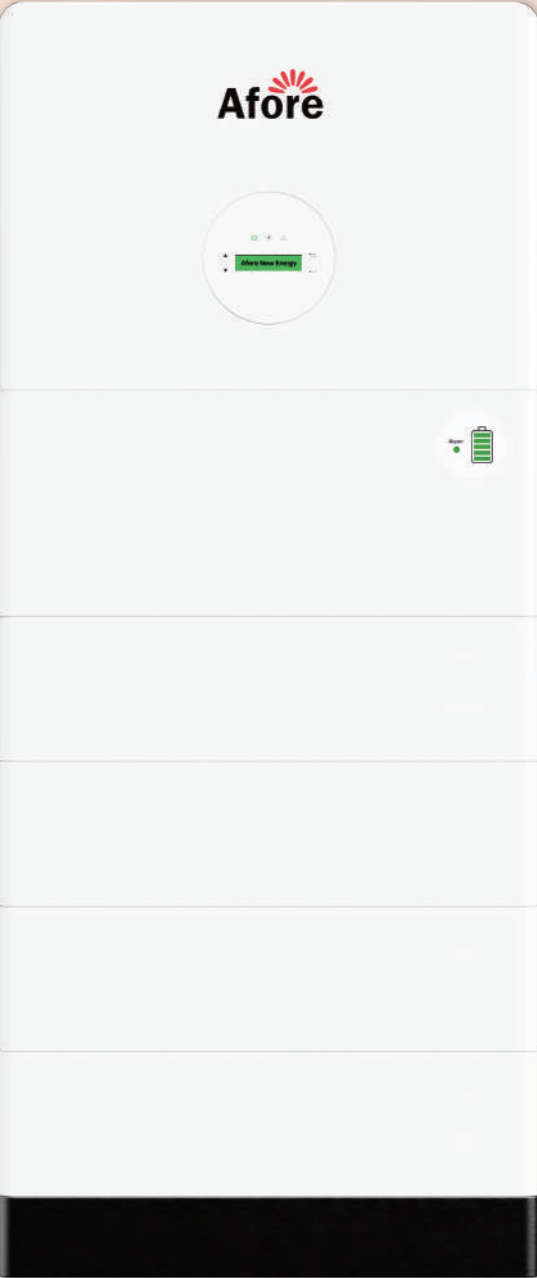
Parameter	
Nominal Voltage(Vdc)	51.2
Nominal Capacity(Wh)	5120
Working Voltage Range(Vdc)	44.8-56.16
Charge Voltage(Vdc)	58.4
Nominal Charge/Discharge Current(A)	50
Max.Charge/Discharge Current(A)	100
Peak Current(A)	200@3sec
Parallel Connection	≤ 6 pcs
Cycle Life	6000 @ 80% DOD, 25°C / 0.5C

Structure	
Dimension(mm)	600*210*300
Weight(kg)	50.5
IP Rating	IP65
Installation	Stacked

Working Environment	
Charge Working Temperature(°C)	0-55
Discharge Working Temperature(°C)	-20~60
Altitude(M)	<2500
Humidity(RH)	5-95% (w/o condensing)

Communication	
Communication Port	RS485, CAN
Display	SOC status indicator, LED indicator

Certification	
CB, IEC62619; CE-EMC, CE-GPSP, UKCA; UN38.3, MSDS	



# 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 IP65 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

**CAPACITY**  
7.68kWh - 25.6kWh Battery Capacity



IP65 Outdoor Design



Modular Design  
Plug & Play



AFCI Standard



Scalable Design Up  
To 25.6kWh



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)	5	6	7.5	9	12	15	18	22.5
Max. PV Voltage (V)	1000							
Rated DC Input Voltage (V)	620							
DC Input Voltage Range (V)	150-1000							
MPPT Voltage Range (V)	150-850							
Full MPPT Range(V)	200-850	250-850	300-850	500-850				
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)	150	200	200	250	300	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 / Sodium-ion battery							

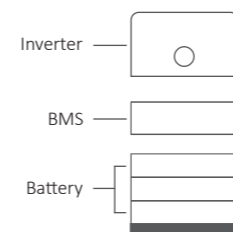
AC Grid								
Nominal AC Output Power (kW)	3	4	5	6	8	10	12	15
Max. AC Input/Output Power (kVA)	4.5 / 3.3	6 / 4.4	7.5 / 5.5	9 / 6.6	12 / 8.8	15 / 11	18 / 13.2	22.5 / 16.5
Max. AC Output Current (A)	5.3	7	8.5	10.5	13.5	17	21.5	27
Nominal AC Voltage (V)	230/400							
Nominal AC Frequency (Hz)	50/60							
Power Factor	1 (-0.8-0.8) adjustable							
Current THD (%)	<3%							

AC Load Output (Back-up)								
Nominal Output Power (VA)	3000	4000	5000	6000	8000	10000	12000	15000
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	17.4	21.8
Peak Output Power	3300VA, 60s	4400VA, 60s	5500VA, 60s	6600VA, 60s	8800VA, 60s	11000VA, 60s	13200VA, 60s	16500VA, 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	IP65							

General Data								
Dimensions (W x H x D, mm)	600 x 432 x 210							
Weight (kg)	25							
Topology	Transformerless							
Cooling Concept	Natural Convection				Intelligent Fan			
Relatively Humidity	0-100%							
Operating Temperature Range (°C)	-25 to 60 °C							
Operating Altitude (m)	<4000							
Noise Emission (dB)	<40							
Standby Consumption (W)	<5							
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							



**3 Packs | 4 Packs | 5 Packs | 6 Packs | 7 Packs | 8 Packs | 9 Packs | 10 Packs**

**7.68kWh | 10.24kWh | 12.8kWh | 15.36kWh | 17.29kWh | 20.48kWh | 23.04kWh | 25.6kWh**

**Model AF2500W-HB**

Parameter	
Nominal Voltage(Vdc)	51.2
Nominal Capacity(Wh)	2560
Working Voltage Range(Vdc)	129.6-516.6
Charge Voltage(Vdc)	56.16
Nominal Charge/Discharge Current(A)	25
Max.Charge/Discharge Current(A)	50
Peak Current(A)	100@3sec
Series Connection	3-10 pcs
Cycle Life	6000 @ 80% DOD, 25°C / 0.5C
Structure	
Power Module Dimensions(mm)/Weight(kg)	600*210*250 /14
Battery Module Dimensions(mm)/Weight(kg)	600*210*160 /27
Lampstand Module Dimensions(mm)/Weight(kg)	600*210*90 /5
Top Cap Module Dimensions(mm)/Weight(kg)	600*210*50 /2.5
IP Rating	IP65
Installation	Stacked
Working Environment	
Charge Working Temperature(°C)	0-55
Discharge Working Temperature(°C)	-20~60
Altitude(M)	<2500
Humidity(RH)	5-95% (w/o condensing)
Communication	
Communication Port	RS485, CAN
Display	SOC status indicator, LED indicator
Certification	
CB, IEC62619, CE-EMC, CE-GPSD, UKCA, UL1973, UL9540A, EN62040, IEC62040; UN38.3, MSDS	