Single Phase Hybrid Storage Inverter

1-6 kW



The Afore AF low voltage series storage Inverters are designed to increase energy independence for homeowners. The power range is from 1kW to 6kW, 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 AF low voltage series storage inverters are integrated with Arc Fault Circuit Interrupter (AFCI) and rapid shutdown.



1.5 Times PV Oversize



MPPT CHANNELS Up to 2 MPPT Channels



UPS FUNCTION



PARALLEL Max.6 Parallel Stacking



Support Generator

Support for Time-of-use Optimization



Build in Anti-feed-in Function



Compact Size and Easy Installation



Configurable Operation Modes



Smart Monitoring & Remote Firmware Upgrade

Single Phase Hybrid Storage Inverter

4-6 kW Plus Series



The Afore AF low voltage series storage Inverters are designed to increase energy independence for homeowners. The power range is from 4kW to 6kW, 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 AF low voltage series storage inverters are integrated with Arc Fault Circuit Interrupter (AFCI) and rapid shutdown.



MAX. 120A Max. Charge Discharge Current 120A



PV OVERSIZE 1.5 Times PV Oversize



MPPT CHANNELS Up to 2 MPPT Channels



UPS FUNCTION



PARALLEL Switch Time < 10ms Max.6 Parallel Stacking

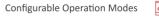
Support for Time-of-use Optimization

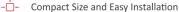
Arc Fault Circuit Interrupter (AFCI) (Optional)





at Build in Anti-feed-in Function











Off-grid mode, with a larger load capacity, the maximum load can be 6KVA

The charging and discharging power of the battery is greater

Technical Data	AF1K-SL-1	AF1.5K-SL-1	AF2K-SL-1	AF2.5K-SL-1	AF3K-SL-1	AF3.6K-SL-1					
PV Input	4.5	2.2	2.0	3.0	4.5	F 4					
Max. Input Power (kW)	1.5	2.3	3.0	3.8	4.5	5.4					
Max. PV Voltage (V)	550										
MPPT Range (V)	90 500	00 500		- 500	170 500	210 500					
Full MPPT Range (V)	80 - 500	90 - 500	120 - 500	150 - 500 60	170 - 500	210 - 500					
Normal Voltage (V) Startup Voltage (V)				00							
Max. Input Current (A)				5 x 1							
Max. Short Current (A)				x 1							
No. of MPP Tracker / No. of PV String				/1							
Battery Port				7 -							
Max. Charge/Discharge Power (kW)	1.0	1.5	2.0	2.5	3.0	3.6					
Max. Charge/Discharge Current (A)	25	40	50	63	80	80					
Battery Normal Voltage (V)			5	1.2							
Battery Voltage Range (V)				- 60							
Battery Type			Li-ion / Le	ad-acid etc.							
AC Grid											
Max Continuous Current (A)	5.0	7.0	10.0	12.0	14.0	17.0					
Max Continuous Power (kVA)	1.0	1.5	2.0	2.5	3.0	3.6					
Nominal Grid Current (A)	4.6 / 4.4	6.9 / 6.6	9.1 / 8.7	11.4 / 10.9	13.7 / 13.1	16.4 / 15.7					
Nominal Grid Voltage (V)	198 to 242 @ 220 / 207 to 253 @ 230										
Nominal Grid Frequency (Hz)				/ 60							
Power Factor		0.999 (Adju	ustable from 0.8 ov	verexcited to 0.8 und	lerexcited)						
Current THD (%)			<	: 3	·						
AC Load Output											
Max Continuous Current (A)	5.0	7.0	10.0	12.0	14.0	17.0					
Max Continuous Power (kVA)	1.0	1.5	2.0	2.5	3.0	3.6					
Max Peak Current (A) (10min)	6.9 / 6.6	10.5 / 10.0	13.7 / 13.1	17.3 / 16.6	20.5 / 19.6	24.6 / 23.5					
Max Peak Power (kVA) (10min)	1.5	2.3	3.0	3.8	4.5	5.4					
Nominal AC Voltage L-N (V)			220 /	/ 230							
Nominal AC Frequency (Hz)	50 / 60										
Switching Time (ms)			Sear	mless							
Voltage THD (%)			<	: 3							
Efficiency											
CEC Efficiency (%)			9	7.0							
Max. Efficiency (%)		97.6									
PV to Bat. Efficiency (%)			9	8.1							
Bat. between AC Efficiency (%)			9	6.8							
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 Enclosure Protect Level	Yes IP65 / NEMA4X										
General Data			1705/1	VEIVINAV							
Dimensions (W x H x D, mm)			370 × 5	35 x 192							
Weight (kg)	370 x 535 x 192 18.5										
Topology	Transformerless										
Cooling	Intelligent Fan										
Relative Humidity				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, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2										
EMC	EN61000-6-2, EN61000-6-3										

Technical Data PV Input	AF3K-SL	AF3.6K-SL	AF4K-SL	AF4.6K-SL	AF5K-SL	AF5.5K-SL	AF6K-SI			
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)	30 300	110 000	120 300	360	200 000	100 300	270 300			
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				2 / 2						
Max. Charge/Discharge Power (kW)	3.0	3.6	4.0	4.6	4.8	4.8	4.8			
Max. Charge/Discharge Current (A)	3.0 3.6 4.0 4.6 4.8 4.8 4.8 80									
Battery Normal Voltage (V)				51.2						
Battery Voltage Range (V)				40 - 60						
Battery Type			Li-i	ion / Lead-acid et	с.					
AC Grid	44.0	47.0	10.0	22.0	22.0	25.0	20.0			
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									
Nominal Grid Voltage (V)	198 to 242 @ 220 / 207 to 253 @ 230									
Nominal Grid Frequency (Hz)	50 / 60									
Power Factor		0.999	(Adjustable from	n 0.8 overexcited	to 0.8 underexo	ited)				
Current THD (%)				< 3						
AC Load Output										
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.			
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)	Seamless									
Voltage THD (%)				< 3						
Efficiency										
CEC Efficiency (%)				97.0						
Max. Efficiency (%)				97.6						
PV to Bat. Efficiency (%)				98.1						
Bat. between AC Efficiency (%)				96.8						
Protection				30.0						
PV Reverse Polarity Protection				Yes						
Over Current/Voltage Protection										
Anti-Islanding Protection	Yes Yes									
AC Short Circuit Protection										
Residual Current Detection	Yes									
Ground Fault Monitoring	Yes									
Insulation Resister Detection	Yes									
	Yes									
PV Arc Detection Enclosure Protect Level				Yes						
				IP65 / NEMA4X						
General Data				270 v E2E -: 102						
Dimensions (W x H x D, mm)) F		370 x 535 x 192	30.5					
Weight (kg)	18	8.5		T	20.5					
Topology				Transformerless						
Cooling				Intelligent Fan						
Relative 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									
	NRS097, G98/G99, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2									