

Three Phase Hybrid Storage Inverter

3-15 kW



The Afore AF series three phase storage inverters are designed to increase energy independence for homeowners and commercial users. The power range is from 3.0kW to 15kW, compatible with high voltage (80-600V) batteries.

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.

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



WIDE RANGE
Voltage Range (80-600V)



Max. 1.5
PV OVERSIZE
1.5 Times PV Oversize



Max. 18.5A
MAX. 18.5A dc
String Current Up To 18.5A



<10 ms
UPS FUNCTION
Switch Time < 10ms



COMPACT
Compact Design



GENERATOR
Generator Backup Support

Support for Time-of-use Optimization



Build in Anti-feed-in Function



Configurable Operation Modes



100% unbalanced output, each phase



AFCI (Optional) & Rapid Shutdown Ready



Smart Monitoring & Remote Firmware Upgrade
Dedicated web portal for installation monitoring, data archiving, report generation, and language selection (e.g. Polish language).



Technical Data

	AF3K-MTH+	AF4K-MTH+	AF5K-MTH+	AF6K-MTH+	AF8K-MTH+	AF10K-MTH+	AF12K-MTH+	AF15K-MTH+
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)	90-1000							
MPPT Voltage Range (V)	90 - 950							
Start-up Voltage (V)	110							
Max. DC Input Current (A)	18.5 x2							
Max. Short Current(A)	25 x2							
No. of MPPT Tracker / Strings	2/2							

AF3K-MTH+ AF4K-MTH+ AF5K-MTH+ AF6K-MTH+ AF8K-MTH+ AF10K-MTH+ AF12K-MTH+ AF15K-MTH+

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/Lithium - iron - phosphate							
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 to +0.8) adjustable							
THDi (%)	< 3%							
Number of powered phases	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							
Three-phase backup power supply	Yes							
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							
Residual current detection	Yes							
Ground Fault Monitoring	Yes							
Grid Monitoring	Yes							
DC insulation resistance monitoring	Yes							
Leakage current monitoring	Yes							
DC Switch	Yes							
Overheat protection	Yes							
Intelligent I-V curve monitoring	Yes							
AC/DC surge protection	Type II							
Enclosure Protect Level	IP66							
Curve loading under overload conditions	Yes							
General Data								
Dimensions (W x H x D, mm)	370 x 598.5 x 192mm							
Weight (kg)	22kg							
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, Modbus RTU							
Certification & Approvals	IEC62109-1, IEC62109-2, IEC62477-1, EN61000-6-1, EN61000-6-2, EN61000-6-3, IEC61000-4-16, IEC61000-4-18, IEC61000-4-29, IEC61727, IEC62116, NCRfG, EN50549-1, compliance with EN50438, PTPIREE, IREISD							
VPP Function	Yes							
Control operation modes	Yes							
Integrated compatibility with energy storage systems	Yes							
Collection and local visualization of electrical energy production data from the installation	Yes							
Connection of a communication module for data transmission.	Yes							
Warranty	10-Years							
Energy Management System (EMS)	Yes							
Display	Yes							
Possibility to select the menu language depending on the country: e.g. Polish language	Yes							
Management of PV operation, battery charging and discharging processes, and building energy consumption control.	Yes							