

Attestation of Conformity

Attestation No:	SHA-AoC-230007
Applicant Name & Address:	Afore New Energy Technology (Shanghai) Co., Ltd. Building 7, No.333 Wanfang Rd, Minhang District, Shanghai. China. 201112
Factory Name & Address:	Afore New Energy Technology (Shanghai) Co., Ltd. Building 7, No.333 Wanfang Rd, Minhang District, Shanghai. China. 201112
Product Description:	Hybrid inverter
Brand Name: Model:	Afore AF*-TH (*=3K, 4K, 5K, 6K, 8K, 10K, 12K, 15K, 17K, 20K, 25K, 30K) AF*-THP(*=3K, 4K, 5K, 6K, 8K, 10K, 12K) AF*-THA(*=3K, 4K, 5K, 6K, 8K, 10K, 12K, 15K, 17K) AF*-THC(*=3K, 4K, 5K, 6K)
Characteristics:	See appendix for details
Standards: EU Directive:	EN 62109-1:2010; EN 62109-2:2011; the Low Voltage Directive (LVD) (2014/35/EU)
Test Report No: Issued by:	230601221SHA-001, 230601221SHA-002 Intertek Testing Services Ltd. Shanghai
Issue date:	2023-07-04

This is to attest that the Technical Construction File for the product listed above has been evaluated against the Essential Safety Requirements of Annex I of the Low Voltage Directive (2014/35/EU). This Attestation can be used in support of the Manufacturers Declaration of Conformity on affixing the CE mark. Product conformity to CE marking is not assured until all other applicable EU Regulations are met in full.

Signa ure







Ratings & Principle Characteristics:

Specifications table						
Model	AF3K-TH	AF4K-TH	AF5K-TH	AF6K-TH		
PV input				•		
P pv Max(kW)	5	6	7.5	9		
Vmax PV (Vdc) (absolute Max.)	1000	1000	1000	1000		
Isc PV (absolute Max.) (A)	30*2	30*2	30*2	30*2		
Number MPP trackers	2	2	2	2		
Number input strings	1/1	1/1	1/1	1/1		
Max. PV input current (A)	20*2	20*2	20*2	20*2		
MPPT voltage range (Vdc)	150-850	150-850	150-850	150-850		
Vdc range @ full power (Vdc)	200-850	200-850	200-850	250-850		
Battery (charge/discharge)						
Battery type		Li-ion/Le	ead-acid			
Battery Normal Voltage (Range) (Vdc)	150	0-800(Field adapt b	battery voltage ran	ge)		
Max charge/discharge Current(A)	30	30	30	30		
Max charge/discharge Power(kW)	3	4	5	6		
AC Grid (input and output)						
Normal AC Voltage (VAC)		3P+N+PE/3P	+PE 230/400			
Frequency (Hz)		5	0			
Normal AC Current (A)	4.4	5.8	7.3	8.7		
Max. cont. input/output current (A)	8 / 5.3	10.5 / 7	13 / 8.5	16 / 10.5		
Rated Power (kW)	3	4	5	6		
Rated Apparent Power (kVA)	3	4	5	6		
Max. cont. input/output Power (kW)	4.5 / 3.3	6/4.4	7.5 / 5.5	9/6.6		
Max. cont. Apparent input/output Power (KVA)	4.5 / 3.3	6 / 4.4	7.5 / 5.5	9 / 6.6		
Power factor(adjustable)		1.0(-0.8	8~ +0.8)			
AC Load output (stand alone)						
Normal Voltage (VAC)		3P+N+PE/3P	+PE 230/400			
Frequency (Hz)		5		<u>.</u>		
Nominal Current (A)	4.4	5.8	7.3	8.7		
Max. cont. current (A)	5.3	7	8.5	10.5		
Max. cont. Power (kW)	3	4	5	6		
Rated Apparent Power (kVA)	3	4	5	6		
Max. cont. Apparent Power (kVA)	3	4	5	6		
Power factor	1.0					
Others						
Ingress protection (IP)	IP65					
Protective class	Class I					
Temperature (°C)	-25°C to +60°C (Derating 45°C)					
Inverter Isolation	Non-isolated (PV-AC-BAT)					
Overvoltage category	OVC III (AC Main), OVC II (PV)					
Firmware Version		V1				
Software Version	V01					



Ratings & Principle Characteristics:

Specifications table						
Model	AF8K-TH AF10K-TH AF12K-TH AF15K-TH					
PV input						
P pv Max(kW)	12	15	18	22.5		
Vmax PV (Vdc) (absolute Max.)	1000	1000	1000	1000		
Isc PV (absolute Max.) (A)	30*2	30*2	30*2	30+48		
Number MPP trackers	2	2	2	2		
Number input strings	1/1	1/1	1/1	1/2		
Max. PV input current (A)	20*2	20*2	20*2	20+32		
MPPT voltage range (Vdc)	150-850	150-850	150-850	150-850		
Vdc range @ full power (Vdc)	300-850	500-850	500-850	500-850		
Battery (charge/discharge)				•		
Battery type		Li-ion/Le	ad-acid			
Battery Normal Voltage (Range) (Vdc)	150)-800(Field adapt b	battery voltage ran	ge)		
Max charge/discharge Current(A)	30	30	30	50		
Max charge/discharge Power(kW)	8	10	12	15		
AC Grid (input and output)						
Normal AC Voltage (VAC)		3P+N+PE/3P	+PE 230/400			
Frequency (Hz)		5	0			
Normal AC Current (A)	11.6	14.5	17.4	21.8		
Max. cont. input/output current (A)	20 / 13.5	26 / 17	32 / 21.5	40.5 / 27		
Rated Power (kW)	8	10	12	15		
Rated Apparent Power (kVA)	8	10	12	15		
Max. cont. input/output Power (kW)	12 / 8.8	15 / 11	18 / 13.2	22.5 / 16.5		
Max. cont. Apparent input/output Power (kVA)	12 / 8.8	15 / 11	18 / 13.2	22.5 / 16.5		
Power factor(adjustable)		1.0(-0.8	8~ +0.8)	·		
AC Load output (stand alone)		x	ł			
Normal Voltage (VAC)		3P+N+PE/3P	+PE 230/400			
Frequency (Hz)		5	0			
Nominal Current (A)	11.6	14.5	17.4	21.8		
Max. cont. current (A)	13.5	17	21.5	27		
Max. cont. Power (kW)	8	10	12	15		
Rated Apparent Power (kVA)	8	10	12	15		
Max. cont. Apparent Power (kVA)	8	10	12	15		
Power factor		1.	0			
Others						
Ingress protection (IP)		IP				
Protective class	Class I					
Temperature (°C)	-25°C to +60°C (Derating 45°C)					
Inverter Isolation		Non-isolated				
Overvoltage category	OVC III (AC Main), OVC II (PV)					
Firmware Version	V1.01					
Software Version		V)1			



Ratings & Principle Characteristics:

Specifications table						
Model	AF3K-THP AF4K-THP AF5K-THP AF6K-THP					
PV input				•		
P pv Max(kW)	5	6	7.5	9		
Vmax PV (Vdc) (absolute Max.)	1000	1000	1000	1000		
Isc PV (absolute Max.) (A)	30*2	30*2	30*2	30*2		
Number MPP trackers	2	2	2	2		
Number input strings	1/1	1/1	1/1	1/1		
Max. PV input current (A)	20*2	20*2	20*2	20*2		
MPPT voltage range (Vdc)	150-850	150-850	150-850	150-850		
Vdc range @ full power (Vdc)	200-850	200-850	200-850	250-850		
Battery (charge/discharge)				•		
Battery type		Li-ion/Le	ead-acid			
Battery Normal Voltage (Range) (Vdc)	80	-600(Field adapt b		ae)		
Max charge/discharge Current(A)	50	50	50	50		
Max charge/discharge Power(kW)	3	4	5	6		
AC Grid (input and output)				•		
Normal AC Voltage (VAC)		3P+N+PE/3P	+PE 230/400			
Frequency (Hz)		5	0			
Normal AC Current (A)	4.4	5.8	7.3	8.7		
Max. cont. input/output current (A)	8 / 5.3	10.5 / 7	13 / 8.5	16 / 10.5		
Rated Power (kW)	3	4	5	6		
Rated Apparent Power (kVA)	3	4	5	6		
Max. cont. input/output Power (kW)	4.5 / 3.3	6 / 4.4	7.5 / 5.5	9 / 6.6		
Max. cont. Apparent input/output Power (KVA)	4.5 / 3.3	6 / 4.4	7.5 / 5.5	9 / 6.6		
Power factor(adjustable)		1.0(-0.8	3~ +0.8)			
AC Load output (stand alone)						
Normal Voltage (VAC)		3P+N+PE/3P	+PE 230/400			
Frequency (Hz)		5	0	-		
Nominal Current (A)	4.4	5.8	7.3	8.7		
Max. cont. current (A)	5.3	7	8.5	10.5		
Max. cont. Power (kW)	3	4	5	6		
Rated Apparent Power (kVA)	3	4	5	6		
Max. cont. Apparent Power (kVA)	3	4	5	6		
Power factor	1.0					
Others						
Ingress protection (IP)			65			
Protective class		Cla				
Temperature (°C)	-25°C to +60°C (Derating 45°C)					
Inverter Isolation	Non-isolated (PV-AC-BAT)					
Overvoltage category	OVC III (AC Main), OVC II (PV)					
Firmware Version	V1.01					
Software Version	V01					



Ratings & Principle Characteristics:

Specifications table					
Model	AF8K-THP AF10K-THP AF12K-THP				
PV input					
P pv Max(kW)	12	15	18		
Vmax PV (Vdc) (absolute Max.)	1000	1000	1000		
Isc PV (absolute Max.) (A)	30*2	30*2	30*2		
Number MPP trackers	2	2	2		
Number input strings	1/1	1/1	1/1		
Max. PV input current (A)	20*2	20*2	20*2		
MPPT voltage range (Vdc)	150-850	150-850	150-850		
Vdc range @ full power (Vdc)	300-850	500-850	500-850		
Battery (charge/discharge)					
Battery type		Li-ion/Lead-acid			
Battery Normal Voltage (Range) (Vdc)	80-600(Field adapt battery voltage range)	120-650(Field adapt ba	attery voltage range)		
Max charge/discharge Current(A)	50	50	50		
Max charge/discharge Power(kW)	8	10	12		
AC Grid (input and output)					
Normal AC Voltage (VAC)	3P	+N+PE/3P+PE 230/400			
Frequency (Hz)		50			
Normal AC Current (A)	11.6	14.5	17.4		
Max. cont. input/output current (A)	20 / 13.5	26 / 17	32 / 21.5		
Rated Power (kW)	8	10	12		
Rated Apparent Power (kVA)	8	10	12		
Max. cont. input/output Power (kW)	12 / 8.8	15 / 11	18 / 13.2		
Max. cont. Apparent input/output Power (kVA)	12 / 8.8	15 / 11	18 / 13.2		
Power factor(adjustable)		1.0(-0.8~ +0.8)			
AC Load output (stand alone)					
Normal Voltage (VAC)	3P	+N+PE/3P+PE 230/400			
Frequency (Hz)		50			
Nominal Current (A)	11.6	14.5	17.4		
Max. cont. current (A)	13.5	17	21.5		
Max. cont. Power (kW)	8	10	12		
Rated Apparent Power (kVA)	8	10	12		
Max. cont. Apparent Power (kVA)	8	10	12		
Power factor	1.0				
Others					
Ingress protection (IP)	IP65				
Protective class	Class I				
Temperature (°C)	-25°C to +60°C (Derating 45°C)				
Inverter Isolation	Non-isolated (PV-AC-BAT)				
Overvoltage category	OVC III (AC Main), OVC II (PV)				
Firmware Version		V1.01			
Software Version	V01				



Ratings & Principle Characteristics:

Specifications table						
Model	AF17K-TH AF20K-TH AF25K-TH AF30K-TH					
PV input						
P pv Max(kW)	25.5	30	37.5	45		
Vmax PV (Vdc) (absolute Max.)	1000	1000	1000	1000		
Isc PV (absolute Max.) (A)	48*2	48*2	60*2	60*2		
Number MPP trackers	2	2	2	2		
Number input strings	2/2	2/2	2/2	2/2		
Max. PV input current (A)	32*2	32*2	40*2	40*2		
MPPT voltage range (Vdc)	150-850	150-850	150-850	150-850		
Vdc range @ full power (Vdc)	500-850	500-850	500-850	500-850		
Battery (charge/discharge)						
Battery type		Li-ion/Le				
Battery Normal Voltage (Range) (Vdc)	150	0-800(Field adapt b	battery voltage ran	ige)		
Max charge/discharge Current(A)	50	50	60	60		
Max charge/discharge Power(kW)	17	20	25	30		
AC Grid (input and output)						
Normal AC Voltage (VAC)		3P+N+PE/3P	+PE 230/400			
Frequency (Hz)		5	0			
Normal AC Current (A)	24.7	29	36.3	43.5		
Max. cont. input/output current (A)	45 / 30	48 / 32	60 / 40	72 / 48		
Rated Power (kW)	17	20	25	30		
Rated Apparent Power (kVA)	17	20	25	30		
Max. cont. input/output Power (kW)	25.5 / 18.7	30 / 22	37.5 / 27.5	45 / 33		
Max. cont. Apparent input/output Power (kVA)	25.5 / 18.7	30 / 22	37.5 / 27.5	45 / 33		
Power factor(adjustable)		1.0(-0.8	3~ +0.8)			
AC Load output (stand alone)						
Normal Voltage (VAC)		3P+N+PE/3P	+PE 230/400			
Frequency (Hz)		-	0	1		
Nominal Current(A)	24.7	29	36.3	43.5		
Max. cont. current (A)	30	32	40	48		
Max. cont. Power (kW)	17	20	25	30		
Rated Apparent Power (kVA)	17	20	25	30		
Max. cont. Apparent Power (kVA)	17	20	25	30		
Power factor		1	.0			
Others		. <u> </u>				
Ingress protection (IP)	IP65					
Protective class		Cla				
Temperature (°C)		-25°C to +60°C				
Inverter Isolation	Non-isolated (PV-AC-BAT)					
Overvoltage category	OVC III (AC Main), OVC II (PV)					
Firmware		V1				
Software Version	V01					



Ratings & Principle Characteristics:

Specifications table						
Model	AF3K-THA	AF6K-THA				
PV input						
P pv Max(kW)	5	6	7.5	9		
Vmax PV (Vdc) (absolute Max.)	1000	1000	1000	1000		
Isc PV (absolute Max.) (A)	30*2	30*2	30*2	30*2		
Number MPP trackers	2	2	2	2		
Number input strings	1/1	1/1	1/1	1/1		
Max. PV input current (A)	20*2	20*2	20*2	20*2		
MPPT voltage range (Vdc)	150-850	150-850	150-850	150-850		
Vdc range @ full power (Vdc)	200-850	200-850	200-850	200-850		
Battery (charge/discharge)						
Battery type			ead-acid			
Battery Normal Voltage Range (Vdc)		0-600(Field adapt l				
Max charge/discharge Current(A)	30	30	30	30		
Max charge/discharge Power(kW)	3	4	5	6		
AC Grid (input and output)			/			
Normal AC Voltage (VAC)			P 133/230			
Frequency (Hz)			50	1		
Normal AC Current (A)	7.6	10.1	12.6	15.1		
Max. cont. input/output current (A)	16 / 10.5	20 / 13.5	26 / 17	32 / 21.5		
Rated Power (kW)	3	4	5	6		
Rated Apparent Power (kVA)	3	4	5	6		
Max. cont. input/output Power (kW)	4.5 / 3.3	6/4.4	7.5 / 5.5	9 / 6.6		
Max. cont. Apparent input/output Power (kVA)	4.5 / 3.3	6 / 4.4	7.5 / 5.5	9 / 6.6		
Power factor(adjustable)		1.0(-0.8	8~ +0.8)			
AC Load output (stand alone)						
Normal Voltage (VAC)		3P+PE/3I	P 133/230			
Frequency (Hz)			<u>50</u>			
Nominal Current (A)	7.6	10.1	12.6	15.1		
Max. cont. current (A)	10.5	13.5	17	21.5		
Max. cont. Power (kW)	3	4	5	6		
Rated Apparent Power (kVA)	3	4	5	6		
Max. cont. Apparent Power (kVA)	3	4	5	6		
Others						
Ingress protection (IP)	IP65					
Protective class	Class I					
Temperature (℃)	-25°C to +60°C (Derating 45°C)					
Inverter Isolation	Non-isolated (PV - AC - BAT)					
Overvoltage category	OVC III (AC Main), OVC II (PV)					
Firmware	V1.01					
Software Version		V	01			



Ratings & Principle Characteristics:

Specifications table						
Model	AF3K-THC	AF4K-THC	AF5K-THC	AF6K-THC		
PV input						
P pv Max(kW)	5	6	7.5	9		
Vmax PV (Vdc) (absolute Max.)	1000	1000	1000	1000		
Isc PV (absolute Max.) (A)	30*2	30*2	30*2	30*2		
Number MPP trackers	2	2	2	2		
Number input strings	1/1	1/1	1/1	1/1		
Max. PV input current (A)	20*2	20*2	20*2	20*2		
MPPT voltage range (Vdc)	150-850	150-850	150-850	150-850		
Vdc range @ full power (Vdc)	200-850	200-850	200-850	200-850		
Battery (charge/discharge)						
Battery type			ead-acid			
Battery Normal Voltage Range (Vdc)		· · ·	attery voltage ran	· /		
Max charge/discharge Current(A)	50	50	50	50		
Max charge/discharge Power(kW)	3	4	5	6		
AC Grid (input and output)			D 400/000			
Normal AC Voltage (VAC)			P 133/230			
Frequency (Hz)			50	1		
Normal AC Current (A)	7.6	10.1	12.6	15.1		
Max. cont. input/output current (A)	16 / 10.5	20 / 13.5	26 / 17	32/21.5		
Rated Power (kW)	3	4	5	6		
Rated Apparent Power (kVA)	3	4	5	6		
Max. cont. input/output Power (kW) Max. cont. Apparent input/output Power	4.5 / 3.3	6 / 4.4	7.5 / 5.5	9 / 6.6		
(kVA)	4.5 / 3.3	6 / 4.4	7.5 / 5.5	9 / 6.6		
Power factor(adjustable)		1.0(-0.8	8~ +0.8)			
AC Load output (stand alone)			,			
Normal Voltage (VAC)		3P+PE/3	P 133/230			
Frequency (Hz)		-	50	•		
Nominal Current (A)	7.6	10.1	12.6	15.1		
Max. cont. current (A)	10.5	13.5	17	21.5		
Max. cont. Power (kW)	3	4	5	6		
Rated Apparent Power (kVA)	3	4	5	6		
Max. cont. Apparent Power (kVA)	3	4	5	6		
Others						
Ingress protection (IP)	IP65					
Protective class	Class I					
Temperature (℃)	-25°C to +60°C (Derating 45°C)					
Inverter Isolation	Non-isolated (PV - AC - BAT)					
Overvoltage category	OVC III (AC Main), OVC II (PV)					
Firmware	V1.01					
Software Version		V	01			



Ratings & Principle Characteristics:

Specifications table						
Model	AF8K-THA	AF10K- THA	AF12K- THA	AF15K- THA	AF17K- THA	
PV input				•		
P pv Max(kW)	12	15	18	22.5	25.5	
Vmax PV (Vdc) (absolute Max.)	1000	1000	1000	1000	1000	
Isc PV (absolute Max.) (A)	30+48	48*2	48*2	60*2	60*2	
Number MPP trackers	2	2	2	2	2	
Number input strings	1/2	2/2	2/2	2/2	2/2	
Max. PV input current (A)	20+32	32*2	32*2	40*2	40*2	
MPPT voltage range (Vdc)	150-850	150-850	150-850	150-850	150-850	
Vdc range @ full power (Vdc)	200-850	200-850	250-850	300-850	300-850	
Battery (charge/discharge)		1	_i-ion/Lead-aci	d		
Battery type Battery Normal Voltage Range (Vdc)				u voltage range)		
Max charge/discharge Current(A)	50	50	50	60	60	
Max charge/discharge Power(kW)	8	10	12	15	17	
AC Grid (input and output)	0	10	12	15	17	
Normal AC Voltage (VAC)		35	P+PE/3P 133/2	230		
Frequency (Hz)		01	50	.50		
Normal AC Current (A)	20.1	25.1	30.1	37.6	42.7	
Max. cont. input/output current (A)	40.5 / 27	45 / 30	48 / 32	60 / 40	72 / 48	
Rated Power (kW)	8	10	12	15	17	
Rated Apparent Power (kVA)	8	10	12	15	17	
Max. cont. input/output Power (kW)	12/8.8	15 / 11	18 / 13.2	22.5 / 16.5	25.5 / 18.7	
Max. cont. Apparent input/output Power (kVA)	12 / 8.8	15 / 11	18 / 13.2	22.5 / 16.5	25.5 / 18.7	
Power factor(adjustable)			1.0(-0.8~ +0.8	5)	•	
AC Load output (stand alone)						
Normal Voltage (VAC)		3F	P+PE/3P 133/2	230		
Frequency (Hz)			50	•		
Nominal Current (A)	20.1	25.1	30.1	37.6	42.7	
Max. cont. current (A)	27	30	32	40	48	
Max. cont. Power (kW)	8	10	12	15	17	
Rated Apparent Power (kVA)	8	10	12	15	17	
Max. cont. Apparent Power (kVA)	8	10	12	15	17	
Others						
Ingress protection (IP)			IP65			
Protective class	Class I					
Temperature (℃)	-25°C to +60°C (Derating 45°C)					
Inverter Isolation		Non-iso	blated (PV - AC	C - BAT)		
Overvoltage category		OVC III	(AC Main), OV	C II (PV)		
Firmware	V1.01					
Software Version			V01			