

# Certificate of Conformity

Certificate Number: CN-PV-230704

On the basis of the tests undertaken, the sample<s> of the below product have been found to comply with the requirements of the referenced specification<s>/standard<s> at the time the tests were carried out. It does not imply that Intertek has performed any surveillance or control of the manufacture(s). The manufacturer(s) shall ensure that the manufacturing process assures compliance of the production units with the examined products mentioned in this certificate.

<b>Applicant:</b>	Afore New Energy Technology (Shanghai) Co., Ltd. Building 7, No.333 Wanfang Rd, Minhang District, Shanghai, China. 201112
<b>Product:</b>	Hybrid Inverter
<b>Ratings &amp; Principle Characteristics:</b>	See appendix of Certificate of Conformity
<b>Model:</b>	AF*-TH(*=3K, 4K, 5K, 6K, 8K, 9.99K, 10K, 12K, 14.99K, 15K, 17K, 20K, 24.99K, 25K, 29.99K, 30K ) AF*-THP(*=3K, 4K, 5K, 6K, 8K, 9.99K, 10K, 12K) AF*-THA (*=3K, 4K, 4.99K, 5K, 6K, 8K, 9.99K, 10K, 12K, 14.99K, 15K, 17K) AF*-THC(*=3K, 4K, 4.99K, 5K, 6K) AF*-TH-O(*=3K, 4K, 5K, 6K, 8K, 10K, 12K, 15K, 17K, 20K, 25K, 30K ) AF*-THP-O(*=3K, 4K, 5K, 6K, 8K, 10K, 12K)
<b>Brand Name&lt;s&gt;:</b>	Afore
<b>Product Complies with:</b>	C10/11: ed.2.2, 15 Mar 2021
<b>Certificate Issuing Office Name &amp; Address:</b>	Intertek Testing Services Ltd. Shanghai West Area, 2 <sup>nd</sup> Floor, No. 707, Zhangyang Road China (Shanghai) Pilot Free Trade Zone, Shanghai, P. R. China Accredited by ACCREDIA in accordance with ISO/IEC 17065:2012
<b>Test Report No.&lt;s&gt;:</b>	231101100SHA-001

Additional information in Appendix.

Signature



Certification Manager: Qiao Qiao

Date: 25 December 2023



PRD N° 306B

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

## APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-230704

### Ratings & Principle Characteristics:

Specifications table				
Model	AF3K-TH	AF4K-TH	AF5K-TH	AF6K-TH
<b>PV input</b>				
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
<b>Battery (charge/discharge)</b>				
Battery type	Li-ion/Lead-acid			
Battery Normal Voltage Range (Vdc)	150-800(Field adapt battery voltage range)			
Max charge/discharge Current(A)	30	30	30	30
Max charge/discharge Power(kW)	3	4	5	6
<b>AC Grid (input and output)</b>				
Normal AC Voltage (VAC)	3P+N+PE/3P+PE 230/400			
Frequency (Hz)	50			
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~ +0.8)			
<b>AC Load output (stand alone)</b>				
Normal Voltage (VAC)	3P+N+PE/3P+PE 230/400			
Frequency (Hz)	50			
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
<b>Others</b>				
Ingress protection (IP)	IP65			
Protective class	Class I			
Temperature (℃)	-25℃ to +60℃			
Inverter Isolation	Non-isolated (PV - AC - BAT)			
Overvoltage category	OVC III (AC Main), OVC II (PV)			
Firmware Version	1.01			

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

## APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-230704

### Ratings & Principle Characteristics:

Specifications table				
Model	AF8K-TH	AF9.99K-TH	AF10K-TH	AF12K-TH
<b>PV input</b>				
P pv Max (kW)	12	15	15	18
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)	300-850	500-850	500-850	500-850
<b>Battery (charge/discharge)</b>				
Battery type	Li-ion/Lead-acid			
Battery Normal Voltage Range (Vdc)	150-800(Field adapt battery voltage range)			
Max charge/discharge Current(A)	30	30	30	30
Max charge/discharge Power(kW)	8	9.99	10	12
<b>AC Grid (input and output)</b>				
Normal AC Voltage (VAC)	3P+N+PE/3P+PE 230/400			
Frequency (Hz)	50			
Normal AC Current (A)	11.6	14.5	14.5	17.4
Max. cont. input/output current (A)	20 / 13.5	26 / 17	26 / 17	32 / 21.5
Rated Power (kW)	8	9.99	10	12
Rated Apparent Power (kVA)	8	9.99	10	12
Max. cont. input/output Power (kW)	12 / 8.8	15 / 9.99	15 / 11	18 / 13.2
Max. cont. Apparent input/output Power (kVA)	12 / 8.8	15 / 9.99	15 / 11	18 / 13.2
Power factor(adjustable)	1.0( -0.8~ +0.8)			
<b>AC Load output (stand alone)</b>				
Normal Voltage (VAC)	3P+N+PE/3P+PE 230/400			
Frequency (Hz)	50			
Nominal Current (A)	11.6	14.5	14.5	17.4
Max. cont. current (A)	13.5	17	17	21.5
Max. cont. Power (kW)	8	9.99	10	12
Rated Apparent Power (kVA)	8	9.99	10	12
Max. cont. Apparent Power (kVA)	8	9.99	10	12
<b>Others</b>				
Ingress protection (IP)	IP65			
Protective class	Class I			
Temperature (°C)	-25℃ to +60℃			
Inverter Isolation	Non-isolated (PV - AC - BAT)			
Overvoltage category	OVC III (AC Main), OVC II (PV)			
Firmware Version	1.01			

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

## APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-230704

### Ratings & Principle Characteristics:

Specifications table				
Model	AF14.99K-TH	AF15K-TH	AF17K-TH	AF20K-TH
<b>PV input</b>				
P pv Max (kW)	22.5	22.5	25.5	30
Vmax PV (Vdc) (absolute Max.)	1000	1000	1000	1000
Isc PV (absolute Max.) (A)	30+48	30+48	48*2	48*2
Number MPP trackers	2	2	2	2
Number input strings	1/2	1/2	2/2	2/2
Max. PV input current (A)	20+32	20+32	32*2	32*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
<b>Battery (charge/discharge)</b>				
Battery type	Li-ion/Lead-acid			
Battery Normal Voltage Range (Vdc)	150-800(Field adapt battery voltage range)			
Max charge/discharge Current(A)	50	50	50	50
Max charge/discharge Power(kW)	14.99	15	17	20
<b>AC Grid (input and output)</b>				
Normal AC Voltage (VAC)	3P+N+PE/3P+PE 230/400			
Frequency (Hz)	50			
Normal AC Current (A)	21.8	21.8	24.7	29
Max. cont. input/output current (A)	40.5 / 27	40.5 / 27	45 / 30	48 / 32
Rated Power (kW)	14.99	15	17	20
Rated Apparent Power (kVA)	14.99	15	17	20
Max. cont. input/output Power (kW)	22.5 / 14.99	22.5 / 16.5	25.5 / 18.7	30 / 22
Max. cont. Apparent input/output Power (kVA)	22.5 / 14.99	22.5 / 16.5	25.5 / 18.7	30 / 22
Power factor(adjustable)	1.0( -0.8~ +0.8)			
<b>AC Load output (stand alone)</b>				
Normal Voltage (VAC)	3P+N+PE/3P+PE 230/400			
Frequency (Hz)	50			
Nominal Current (A)	21.8	21.8	24.7	29
Max. cont. current (A)	27	27	30	32
Max. cont. Power (kW)	14.99	15	17	20
Rated Apparent Power (kVA)	14.99	15	17	20
Max. cont. Apparent Power (kVA)	14.99	15	17	20
<b>Others</b>				
Ingress protection (IP)	IP65			
Protective class	Class I			
Temperature (℃)	-25℃ to +60℃			
Inverter Isolation	Non-isolated (PV - AC - BAT)			
Overvoltage category	OVC III (AC Main), OVC II (PV)			
Firmware Version	1.01			

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

## APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-230704

### Ratings & Principle Characteristics:

Specifications table				
Model	AF24.99K-TH	AF25K-TH	AF29.99K-TH	AF30K-TH
<b>PV input</b>				
P pv Max (kW)	37.5	37.5	45	45
Vmax PV (Vdc) (absolute Max.)	1000	1000	1000	1000
Isc PV (absolute Max.) (A)	60*2	60*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)	40*2	40*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
<b>Battery (charge/discharge)</b>				
Battery type	Li-ion/Lead-acid			
Battery Normal Voltage Range (Vdc)	150-800(Field adapt battery voltage range)			
Max charge/discharge Current(A)	60	60	60	60
Max charge/discharge Power(kW)	24.99	25	29.99	30
<b>AC Grid (input and output)</b>				
Normal AC Voltage (VAC)	3P+N+PE/3P+PE 230/400			
Frequency (Hz)	50			
Normal AC Current (A)	36.3	36.3	43.5	43.5
Max. cont. input/output current (A)	60 / 40	60 / 40	72 / 48	72 / 48
Rated Power (kW)	24.99	25	29.99	30
Rated Apparent Power (kVA)	24.99	25	29.99	30
Max. cont. input/output Power (kW)	37.5 / 24.99	37.5 / 27.5	45 / 29.99	45 / 33
Max. cont. Apparent input/output Power (kVA)	37.5 / 24.99	37.5 / 27.5	45 / 29.99	45 / 33
Power factor(adjustable)	1.0( -0.8~ +0.8)			
<b>AC Load output (stand alone)</b>				
Normal Voltage (VAC)	3P+N+PE/3P+PE 230/400			
Frequency (Hz)	50			
Nominal Current (A)	36.3	36.3	43.5	43.5
Max. cont. current (A)	40	40	48	48
Max. cont. Power (kW)	24.99	25	29.99	30
Rated Apparent Power (kVA)	24.99	25	29.99	30
Max. cont. Apparent Power (kVA)	24.99	25	29.99	30
<b>Others</b>				
Ingress protection (IP)	IP65			
Protective class	Class I			
Temperature (℃)	-25℃ to +60℃			
Inverter Isolation	Non-isolated (PV - AC - BAT)			
Overvoltage category	OVC III (AC Main), OVC II (PV)			
Firmware Version	1.01			

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

## APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-230704

### 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/Lead-acid			
Battery Normal Voltage Range (Vdc)	80-600(Field adapt battery voltage range)			
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)	50			
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~ +0.8)			
AC Load output (stand alone)				
Normal Voltage (VAC)	3P+N+PE/3P+PE 230/400			
Frequency (Hz)	50			
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
Others				
Ingress protection (IP)	IP65			
Protective class	Class I			
Temperature (°C)	-25°C to +60°C			
Inverter Isolation	Non-isolated (PV - AC - BAT)			
Overvoltage category	OVC III (AC Main), OVC II (PV)			
Firmware Version	1.01			

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.



## APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-230704

### Ratings & Principle Characteristics:

Specifications table				
Model	AF8K-THP	AF9.99K-THP	AF10K-THP	AF12K-THP
<b>PV input</b>				
P pv Max (kW)	12	15	15	18
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)	300-850	500-850	500-850	500-850
<b>Battery (charge/discharge)</b>				
Battery type	Li-ion/Lead-acid			
Battery Normal Voltage Range (Vdc)	80-600 (Field adapt battery voltage range)	120-650 (Field adapt battery voltage range)		
Max charge/discharge Current(A)	50	50	50	50
Max charge/discharge Power(kW)	8	9.99	10	12
<b>AC Grid (input and output)</b>				
Normal AC Voltage (VAC)	3P+N+PE/3P+PE 230/400			
Frequency (Hz)	50			
Normal AC Current (A)	11.6	14.5	14.5	17.4
Max. cont. input/output current (A)	20 / 13.5	26 / 17	26 / 17	32 / 21.5
Rated Power (kW)	8	9.99	10	12
Rated Apparent Power (kVA)	8	9.99	10	12
Max. cont. input/output Power (kW)	12 / 8.8	15 / 9.99	15 / 11	18 / 13.2
Max. cont. Apparent input/output Power (kVA)	12 / 8.8	15 / 9.99	15 / 11	18 / 13.2
Power factor(adjustable)	1.0( -0.8~ +0.8)			
<b>AC Load output (stand alone)</b>				
Normal Voltage (VAC)	3P+N+PE/3P+PE 230/400			
Frequency (Hz)	50			
Nominal Current (A)	11.6	14.5	14.5	17.4
Max. cont. current (A)	13.5	17	17	21.5
Max. cont. Power (kW)	8	9.99	10	12
Rated Apparent Power (kVA)	8	9.99	10	12
Max. cont. Apparent Power (kVA)	8	9.99	10	12
<b>Others</b>				
Ingress protection (IP)	IP65			
Protective class	Class I			
Temperature (℃)	-25℃ to +60℃			
Inverter Isolation	Non-isolated (PV - AC - BAT)			
Overvoltage category	OVC III (AC Main), OVC II (PV)			
Firmware Version	1.01			

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

## APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-230704

### Ratings & Principle Characteristics:

Specifications table				
Model	AF3K-THA	AF4K-THA	AF4.99K-THA	AF5K-THA
<b>PV input</b>				
P pv Max(kW)	5	6	7.5	7.5
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
<b>Battery (charge/discharge)</b>				
Battery type	Li-ion/Lead-acid			
Battery Normal Voltage Range (Vdc)	150-600(Field adapt battery voltage range)			
Max charge/discharge Current(A)	30	30	30	30
Max charge/discharge Power(kW)	3	4	4.99	5
<b>AC Grid (input and output)</b>				
Normal AC Voltage (VAC)	3P+PE/3P 133/230			
Frequency (Hz)	50			
Normal AC Current (A)	7.6	10.1	12.6	12.6
Max. cont. input/output current (A)	16 / 10.5	20 / 13.5	26 / 17	26 / 17
Rated Power (kW)	3	4	4.99	5
Rated Apparent Power (kVA)	3	4	4.99	5
Max. cont. input/output Power (kW)	4.5 / 3.3	6 / 4.4	7.5 / 4.99	7.5 / 5.5
Max. cont. Apparent input/output Power (kVA)	4.5 / 3.3	6 / 4.4	7.5 / 4.99	7.5 / 5.5
Power factor(adjustable)	1.0( -0.8~ +0.8)			
<b>AC Load output (stand alone)</b>				
Normal Voltage (VAC)	3P+PE/3P 133/230			
Frequency (Hz)	50			
Nominal Current (A)	7.6	10.1	12.6	12.6
Max. cont. current (A)	10.5	13.5	17	17
Max. cont. Power (kW)	3	4	4.99	5
Rated Apparent Power (kVA)	3	4	4.99	5
Max. cont. Apparent Power (kVA)	3	4	4.99	5
<b>Others</b>				
Ingress protection (IP)	IP65			
Protective class	Class I			
Temperature (°C)	-25°C to +60°C			
Inverter Isolation	Non-isolated (PV - AC - BAT)			
Overvoltage category	OVC III (AC Main), OVC II (PV)			
Firmware Version	1.01			

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.



## APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-230704

### Ratings & Principle Characteristics:

Specifications table				
Model	AF6K-THA	AF8K-THA	AF9.99K-THA	AF10K-THA
<b>PV input</b>				
P <sub>pv</sub> Max(kW)	9	12	15	15
V <sub>max</sub> PV (Vdc) (absolute Max.)	1000	1000	1000	1000
I <sub>sc</sub> PV (absolute Max.) (A)	30*2	30+48	48*2	48*2
Number MPP trackers	2	2	2	2
Number input strings	1/1	1/2	2/2	2/2
Max. PV input current (A)	20*2	20+32	32*2	32*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
<b>Battery (charge/discharge)</b>				
Battery type	Li-ion/Lead-acid			
Battery Normal Voltage Range (Vdc)	150-600(Field adapt battery voltage range)			
Max charge/discharge Current(A)	30	50	50	50
Max charge/discharge Power(kW)	6	8	9.99	10
<b>AC Grid (input and output)</b>				
Normal AC Voltage (VAC)	3P+PE/3P 133/230			
Frequency (Hz)	50			
Normal AC Current (A)	15.1	20.1	25.1	25.1
Max. cont. input/output current (A)	32 / 21.5	40.5 / 27	45 / 30	45 / 30
Rated Power (kW)	6	8	9.99	10
Rated Apparent Power (kVA)	6	8	9.99	10
Max. cont. input/output Power (kW)	9 / 6.6	12 / 8.8	15 / 9.99	15 / 11
Max. cont. Apparent input/output Power (kVA)	9 / 6.6	12 / 8.8	15 / 9.99	15 / 11
Power factor(adjustable)	1.0( -0.8~ +0.8)			
<b>AC Load output (stand alone)</b>				
Normal Voltage (VAC)	3P+PE/3P 133/230			
Frequency (Hz)	50			
Nominal Current (A)	15.1	20.1	25.1	25.1
Max. cont. current (A)	21.5	27	30	30
Max. cont. Power (kW)	6	8	9.99	10
Rated Apparent Power (kVA)	6	8	9.99	10
Max. cont. Apparent Power (kVA)	6	8	9.99	10
<b>Others</b>				
Ingress protection (IP)	IP65			
Protective class	Class I			
Temperature (°C)	-25°C to +60°C			
Inverter Isolation	Non-isolated (PV - AC - BAT)			
Overvoltage category	OVC III (AC Main), OVC II (PV)			
Firmware Version	1.01			

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

## APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-230704

### Ratings & Principle Characteristics:

Specifications table				
Model	AF12K-THA	AF14.99K-THA	AF15K-THA	AF17K-THA
<b>PV input</b>				
P <sub>pv</sub> Max(kW)	18	22.5	22.5	25.5
V <sub>max</sub> PV (Vdc) (absolute Max.)	1000	1000	1000	1000
I <sub>sc</sub> PV (absolute Max.) (A)	48*2	60*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	40*2	40*2	40*2
MPPT voltage range (Vdc)	150-850	150-850	150-850	150-850
Vdc range @ full power (Vdc)	250-850	300-850	300-850	300-850
<b>Battery (charge/discharge)</b>				
Battery type	Li-ion/Lead-acid			
Battery Normal Voltage Range (Vdc)	150-600(Field adapt battery voltage range)			
Max charge/discharge Current(A)	50	60	60	60
Max charge/discharge Power(kW)	12	14.99	15	17
<b>AC Grid (input and output)</b>				
Normal AC Voltage (VAC)	3P+PE/3P 133/230			
Frequency (Hz)	50			
Normal AC Current (A)	30.1	37.6	37.6	42.7
Max. cont. input/output current (A)	48 / 32	60 / 40	60 / 40	72 / 48
Rated Power (kW)	12	14.99	15	17
Rated Apparent Power (kVA)	12	14.99	15	17
Max. cont. input/output Power (kW)	18 / 13.2	22.5 / 14.99	22.5 / 16.5	25.5 / 18.7
Max. cont. Apparent input/output Power (kVA)	18 / 13.2	22.5 / 14.99	22.5 / 16.5	25.5 / 18.7
Power factor(adjustable)	1.0( -0.8~ +0.8)			
<b>AC Load output (stand alone)</b>				
Normal Voltage (VAC)	3P+PE/3P 133/230			
Frequency (Hz)	50			
Nominal Current (A)	30.1	37.6	37.6	42.7
Max. cont. current (A)	32	40	40	48
Max. cont. Power (kW)	12	14.99	15	17
Rated Apparent Power (kVA)	12	14.99	15	17
Max. cont. Apparent Power (kVA)	12	14.99	15	17
<b>Others</b>				
Ingress protection (IP)	IP65			
Protective class	Class I			
Temperature (°C)	-25°C to +60°C			
Inverter Isolation	Non-isolated (PV - AC - BAT)			
Overvoltage category	OVC III (AC Main), OVC II (PV)			
Firmware Version	1.01			

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

## APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-230704

### Ratings & Principle Characteristics:

Specifications table					
Model	AF3K-THC	AF4K-THC	AF4.99K-THC	AF5K-THC	AF6K-THC
<b>PV input</b>					
P pv Max(kW)	5	6	7.5	7.5	9
Vmax PV (Vdc) (absolute Max.)	1000	1000	1000	1000	1000
Isc PV (absolute Max.) (A)	30*2	30*2	30*2	30*2	30*2
Number MPP trackers	2	2	2	2	2
Number input strings	1/1	1/1	1/1	1/1	1/1
Max. PV input current (A)	20*2	20*2	20*2	20*2	20*2
MPPT voltage range (Vdc)	150-850	150-850	150-850	150-850	150-850
Vdc range @ full power (Vdc)	200-850	200-850	200-850	200-850	200-850
<b>Battery (charge/discharge)</b>					
Battery type	Li-ion/Lead-acid				
Battery Normal Voltage Range (Vdc)	80-600(Field adapt battery voltage range)				
Max charge/discharge Current(A)	50	50	50	50	50
Max charge/discharge Power(kW)	3	4	4.99	5	6
<b>AC Grid (input and output)</b>					
Normal AC Voltage (VAC)	3P+PE/3P 133/230				
Frequency (Hz)	50				
Normal AC Current (A)	7.6	10.1	12.6	12.6	15.1
Max. cont. input/output current (A)	16 / 10.5	20 / 13.5	26 / 17	26 / 17	32 / 21.5
Rated Power (kW)	3	4	4.99	5	6
Rated Apparent Power (kVA)	3	4	4.99	5	6
Max. cont. input/output Power (kW)	4.5 / 3.3	6 / 4.4	7.5 / 4.99	7.5 / 5.5	9 / 6.6
Max. cont. Apparent input/output Power (kVA)	4.5 / 3.3	6 / 4.4	7.5 / 4.99	7.5 / 5.5	9 / 6.6
Power factor(adjustable)	1.0( -0.8~ +0.8)				
<b>AC Load output (stand alone)</b>					
Normal Voltage (VAC)	3P+PE/3P 133/230				
Frequency (Hz)	50				
Nominal Current (A)	7.6	10.1	12.6	12.6	15.1
Max. cont. current (A)	10.5	13.5	17	17	21.5
Max. cont. Power (kW)	3	4	4.99	5	6
Rated Apparent Power (kVA)	3	4	4.99	5	6
Max. cont. Apparent Power (kVA)	3	4	4.99	5	6
<b>Others</b>					
Ingress protection (IP)	IP65				
Protective class	Class I				
Temperature (℃)	-25℃ to +60℃				
Inverter Isolation	Non-isolated (PV - AC - BAT)				
Overvoltage category	OVC III (AC Main), OVC II (PV)				
Firmware Version	1.01				

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

## APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-230704

### Ratings & Principle Characteristics:

Specifications table				
Model	AF3K-TH-0	AF4K-TH-0	AF5K-TH-0	AF6K-TH-0
<b>Battery (charge/discharge)</b>				
Battery type	Li-ion/Lead-acid			
Battery Normal Voltage Range (Vdc)	80-800(Field adapt battery voltage range)			
Max charge/discharge Current(A)	30	30	30	30
Max charge/discharge Power(kW)	3 / 3.3	4 / 4.4	5 / 5.5	6 / 6.6
<b>AC Grid (input and output)</b>				
Normal AC Voltage (VAC)	3P+N+PE/3P+PE 230/400			
Frequency (Hz)	50			
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	6 / 4	7.5 / 5	9 / 6
Max. cont. Apparent input/output Power (kVA)	4.5 / 3	6 / 4	7.5 / 5	9 / 6
Power factor(adjustable)	1.0( -0.8~ +0.8)			
<b>AC Load output (stand alone)</b>				
Normal Voltage (VAC)	3P+N+PE/3P+PE 230/400			
Frequency (Hz)	50			
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
<b>Others</b>				
Ingress protection (IP)	IP65			
Protective class	Class I			
Temperature (°C)	-25°C to +60°C			
Inverter Isolation	Non-isolated (AC - BAT)			
Overvoltage category	OVC III (AC Main)			
Firmware Version	1.01			

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

## APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-230704

### Ratings & Principle Characteristics:

Specifications table				
Model	AF8K-TH-0	AF10K-TH-0	AF12K-TH-0	AF15K-TH-0
<b>Battery (charge/discharge)</b>				
Battery type	Li-ion/Lead-acid			
Battery Normal Voltage Range (Vdc)	80-800(Field adapt battery voltage range)			150-800(Field adapt battery voltage range)
Max charge/discharge Current(A)	30	30	30	50
Max charge/discharge Power(kW)	8 / 8.8	10 / 11	12 / 13.2	15 / 16.5
<b>AC Grid (input and output)</b>				
Normal AC Voltage (VAC)	3P+N+PE/3P+PE 230/400			
Frequency (Hz)	50			
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	15 / 10	18 / 12	22.5 / 15
Max. cont. Apparent input/output Power (kVA)	12 / 8	15 / 10	18 / 12	22.5 / 15
Power factor(adjustable)	1.0( -0.8~ +0.8)			
<b>AC Load output (stand alone)</b>				
Normal Voltage (VAC)	3P+N+PE/3P+PE 230/400			
Frequency (Hz)	50			
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
<b>Others</b>				
Ingress protection (IP)	IP65			
Protective class	Class I			
Temperature (°C)	-25°C to +60°C			
Inverter Isolation	Non-isolated (AC - BAT)			
Overvoltage category	OVC III (AC Main)			
Firmware Version	1.01			

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

## APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-230704

### Ratings & Principle Characteristics:

Specifications table				
Model	AF3K-THP-0	AF4K-THP-0	AF5K-THP-0	AF6K-THP-0
<b>Battery (charge/discharge)</b>				
Battery type	Li-ion/Lead-acid			
Battery Normal Voltage Range (Vdc)	80-600(Field adapt battery voltage range)			
Max charge/discharge Current(A)	50	50	50	50
Max charge/discharge Power(kW)	3 / 3.3	4 / 4.4	5 / 5.5	6 / 6.6
<b>AC Grid (input and output)</b>				
Normal AC Voltage (VAC)	3P+N+PE/3P+PE 230/400			
Frequency (Hz)	50			
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	6 / 4	7.5 / 5	9 / 6
Max. cont. Apparent input/output Power (kVA)	4.5 / 3	6 / 4	7.5 / 5	9 / 6
Power factor(adjustable)	1.0( -0.8~ +0.8)			
<b>AC Load output (stand alone)</b>				
Normal Voltage (VAC)	3P+N+PE/3P+PE 230/400			
Frequency (Hz)	50			
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
<b>Others</b>				
Ingress protection (IP)	IP65			
Protective class	Class I			
Temperature (°C)	-25°C to +60°C			
Inverter Isolation	Non-isolated (AC - BAT)			
Overvoltage category	OVC III (AC Main)			
Firmware Version	1.01			

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.



## APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-230704

### Ratings & Principle Characteristics:

Specifications table			
Model	AF8K-THP-0	AF10K-THP-0	AF12K-THP-0
<b>Battery (charge/discharge)</b>			
Battery type	Li-ion/Lead-acid		
Battery Normal Voltage Range (Vdc)	80-600 (Field adapt battery voltage range)	120-650 (Field adapt battery voltage range)	
Max charge/discharge Current(A)	50	50	50
Max charge/discharge Power(kW)	8 / 8.8	10 / 11	12 / 13.2
<b>AC Grid (input and output)</b>			
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	15 / 10	18 / 12
Max. cont. Apparent input/output Power (kVA)	12 / 8	15 / 10	18 / 12
Power factor(adjustable)	1.0( -0.8~ +0.8)		
<b>AC Load output (stand alone)</b>			
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
<b>Others</b>			
Ingress protection (IP)	IP65		
Protective class	Class I		
Temperature (°C)	-25°C to +60°C		
Inverter Isolation	Non-isolated (AC - BAT)		
Overvoltage category	OVC III (AC Main)		
Firmware Version	1.01		

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

## APPENDIX: Certificate of Conformity

This is an Appendix to Certificate of Conformity Number: CN-PV-230704

### Ratings & Principle Characteristics:

Specifications table				
Model	AF17K-TH-0	AF20K-TH-0	AF25K-TH-0	AF30K-TH-0
<b>Battery (charge/discharge)</b>				
Battery type	Li-ion/Lead-acid			
Battery Normal Voltage Range (Vdc)	150-800(Field adapt battery voltage range)			
Max charge/discharge Current(A)	50	50	60	60
Max charge/discharge Power(kW)	17 / 18.7	20 / 22	25 / 27.5	30 / 33
<b>AC Grid (input and output)</b>				
Normal AC Voltage (VAC)	3P+N+PE/3P+PE 230/400			
Frequency (Hz)	50			
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 / 17	30 / 20	37.5 / 25	45 / 30
Max. cont. Apparent input/output Power (kVA)	25.5 / 17	30 / 20	37.5 / 25	45 / 30
Power factor(adjustable)	1.0( -0.8~ +0.8)			
<b>AC Load output (stand alone)</b>				
Normal Voltage (VAC)	3P+N+PE/3P+PE 230/400			
Frequency (Hz)	50			
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
<b>Others</b>				
Ingress protection (IP)	IP65			
Protective class	Class I			
Temperature (°C)	-25°C to +60°C			
Inverter Isolation	Non-isolated (AC - BAT)			
Overvoltage category	OVC III (AC Main)			
Firmware Version	1.01			

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.