

DICHIARAZIONE DI CONFORMITÀ ALLE PRESCRIZIONI CEI 0-21:2022-03
DECLARATION OF CONFORMITY WITH CEI REQUIREMENTS 0-21:2022-03

Con la presente dichiarazione, resa ai sensi degli artt. 46 e 47 DPR 28 Dicembre 2000, n 445, consapevole delle responsabilità e delle sanzioni penali previste dall'art. 76 del citato DPR per false attestazioni e dichiarazioni mendaci, il sottoscritto Chen Wei in qualità di vicepresidente della società Afore New Energy Technology (Shanghai) Co., Ltd. con sede a Building 7, NO.333 Wanfang Road, Minhang District, Shanghai, China

With this declaration, made pursuant to articles 46 and 47 of Presidential Decree 28 December 2000, n. 445, aware of the responsibilities and penal sanctions provided for by art. 76 of the aforementioned Presidential Decree for false claims and misleading statements, the undersigned Chen Wei as Vice President of the company Afore New Energy Technology (Shanghai) Co., Ltd. based in Building 7, NO.333 Wanfang Road, Minhang District, Shanghai, China

DICHIARA

DECLARES

che gli inverter di propria costruzione di cui al nella relazione allegata sono conformi alle prescrizioni della norma CEI 0-21:2022-03. Attesta altresì che la produzione dei dispositivi avviene in regime di qualità (secondo ISO 9001, ed. 2000 e s.m.i.)

that the inverters of its own construction referred to in the attached report comply with the requirements of the CEI 0-21:2022-03 standard. It also certifies that the production of the devices takes place under a quality regime (according to ISO 9001, ed. 2000 and subsequent amendments)

Firma

Signature



Copy of passport



CERTIFICATE OF CONFORMITY

CERTIFICATO DI CONFORMITÀ

Issued to: Afore New Energy Technology (Shanghai) Co., Ltd.
Rilasciato a: Building 7, No.333 Wanfang Rd, Minhang District, Shanghai, China

For the product: Hybrid Inverter
Tipo prodotto:

Trade name:
Marchio:



Type/Model: AF3K-TH, AF4K-TH, AF5K-TH, AF6K-TH, AF8K-TH, AF10K-TH, AF12K-TH
Riferimento modello: AF15K-TH, AF17K-TH, AF20K-TH, AF25K-TH, AF30K-TH
AF3K-THP, AF4K-THP, AF5K-THP, AF6K-THP, AF8K-THP, AF10K-THP, AF12K-THP

Ratings: See Annex
Dati di targa:

Manufactured by: Afore New Energy Technology (Shanghai) Co., Ltd.
Costruttore: Building 7, No.333 Wanfang Rd, Minhang District, Shanghai, China

Requirements: CEI 0-21:2022-03
Requisiti: Regola tecnica di riferimento per la connessione di Utenti attivi e passivi alle reti BT delle imprese distributrici di energia elettrica

This Test Certificate is granted on account of an examination by DEKRA, the results of which are laid down in a confidential file no. 6167418.50

Il presente certificato è rilasciato a causa di un esame da parte di DEKRA, i cui risultati sono riportati in un file riservato n. 6167418.50

The examination has been carried out on one single specimen or several specimens of the product, submitted by the manufacturer. The certificate does not include an assessment of the manufacturer's production.

Conformity of his production with the specimen tested by DEKRA is not the responsibility of DEKRA.

Il sottoscritto dichiara che il prodotto di cui sopra è conforme ai requisiti tecnici menzionati. Questo attestato di conformità è rilasciato sulla base dei risultati di prova riferiti nel rapporto sopra menzionato.

La valutazione non include una verifica della produzione di serie né del luogo di produzione.

Shanghai, 4 September 2023

Certificate Number: 6167418.01COC

It expires at the latest on: 4 September 2028

DEKRA Testing and Certification (Shanghai) Ltd.

Cliff Lin
Certification Manager

© Integral publication of this certificate and adjoining reports is allowed

Accreditation of the certification body by IAS according to ISO/IEC 17065 for products.
Accreditation is valid in the areas of certification mentioned in the certificate.



PCA-141

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Document no. : 6167418.01COC

Ratings of the testing Hybrid Inverter:

Valutazioni dell'invertitore ibrido di prova:

Model list / Ratings of the test product				
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/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
AC Grid (input and output)				
Normal AC Voltage (VAC)	3P+N+PE/3P+PE 230/400			
Frequency (Hz)	50 / 60			
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 / 60			
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 (℃)	-25℃ to +60℃ (Derating 45℃)			
Inverter Isolation	Non-isolated (PV - AC - BAT)			
Overvoltage category	OVC III (AC Main), OVC II (PV)			

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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/Lead-acid			
Battery Normal Voltage Range (Vdc)	150-800(Field adapt battery voltage range)			
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)	50 / 60			
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~ +0.8)			
AC Load output (stand alone)				
Normal Voltage (VAC)	3P+N+PE/3P+PE 230/400			
Frequency (Hz)	50 / 60			
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)	IP65			
Protective class	Class I			
Temperature (℃)	-25℃ to +60℃ (Derating 45℃)			
Inverter Isolation	Non-isolated (PV - AC - BAT)			
Overvoltage category	OVC III (AC Main), OVC II (PV)			

Document no. : 6167418.01COC

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/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	20	25	30
AC Grid (input and output)				
Normal AC Voltage (VAC)	3P+N+PE/3P+PE 230/400			
Frequency (Hz)	50 / 60			
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~ +0.8)			
AC Load output (stand alone)				
Normal Voltage (VAC)	3P+N+PE/3P+PE 230/400			
Frequency (Hz)	50 / 60			
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				
Ingress protection (IP)	IP65			
Protective class	Class I			
Temperature (℃)	-25℃ to +60℃ (Derating 45℃)			
Inverter Isolation	Non-isolated (PV - AC - BAT)			
Overvoltage category	OVC III (AC Main), OVC II (PV)			

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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 / 60			
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 / 60			
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 (℃)	-25℃ to +60℃ (Derating 45℃)			
Inverter Isolation	Non-isolated (PV - AC - BAT)			
Overvoltage category	OVC III (AC Main), OVC II (PV)			

Document no. : 6167418.01COC

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 battery 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 / 60		
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 / 60		
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 (℃)	-25℃ to +60℃ (Derating 45℃)		
Inverter Isolation	Non-isolated (PV - AC - BAT)		
Overvoltage category	OVC III (AC Main), OVC II (PV)		

Document no. : 6167418.01COC

Type of generating unit:

Tipologia di apparato:

Static Conversion Device <i>Dispositivo di conversione statica</i>	Interface Protection <i>Protezione di interfaccia</i>	Interface Protection Device <i>Dispositivo di interfaccia</i>	Rotating Generator Device <i>Dispositivo di generazione rotante</i>
Yes/Sì	Yes/Sì	Yes/Sì	No

REMARK: the device is capable to limit the I_{dc} to 0,5% of the nominal current

NOTA: Il dispositivo è in grado di limitare la I_{dc} allo 0,5% della corrente nominale

Hardware version: 1.01

Versione hardware: 1.01

Software version: V01

Versione software: V01

The battery used for testing with the Hybrid Inverter covered by this certificate:

La batteria utilizzata per i test con l'invertitore ibrido coperto dal presente certificato:

Manufacturer	Afore New Energy Technology (Shanghai) Co., Ltd.		
Battery Models	AF20000W-H8	AF17500W-H7	AF15000W-H6
Nominal Voltage	384V	336V	288V
Nominal capacity	52Ah	52Ah	52Ah
CUS (Storage system useful capacity)	20.0kWh	17.5kWh	15.0kWh
Battery Models	AF12500W-H5	AF10000W-H4	AF7500W-H3
Nominal Voltage	240V	192V	144V
Nominal capacity	52Ah	52Ah	52Ah
CUS (Storage system useful capacity)	12.5kWh	10.0kWh	7.5kWh
Remark: The CB test certificate No. of the battery: DE 7-0773 When the batteries are connected in parallel, the charge/ discharge current is superimposed and is limited by the maximum current of the battery port of the Hybrid Inverter. The batteries are not integrated into the Hybrid Inverter and must be installed according to the local regulations.			

Testing Laboratory:

Laboratorio prove:

Testing Laboratory for CEI 0-21:2022-03

DEKRA Testing and Certification (Suzhou) Co., Ltd.

No. 99, Hongye Road, Suzhou Industrial Park Suzhou, 215006, P.R. China

Accreditation Number: L5313 (CNAS-ILAC)

Testing Laboratory for EMC:

1. Intertek Testing Services Shanghai

Building No.86, 1198 Qinzhou Road (North), Caohejing Development Zone, Shanghai 200233, China

Accreditation Number: 3309.02 (A2LA-ILAC)

2. Shanghai Inspection and Testing Institute of Instruments and Automation Systems Co., Ltd.

No.103, Caobao Road, Xuhui District, Shanghai, China

Accreditation Number: L0130 (CNAS-ILAC)

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