Afore New Energy Technology (Shanghai) Co., Ltd
Building 7, No.333 Wanfang Rd, Minhang District, Shanghai, China
Phone: +86-21-54326236 Fax: +86-21-54326136 Email: info@aforenergy.com

DICHIARAZIONE DI CONFORMITÀ ALLA NORMA CEI 0-21

Sez. A	**I seguenti generatori rispettano le prescrizioni della norma CEI 0-21 ed. 2022-03**											
	Costruttore	Afore New Energy Technology (Shanghai) Co., Ltd Building 7, No.333 Wanfang Rd, Minhang District, Shanghai, China										
	Tipo Apparecchiatura	Inverter fotovoltaico con sistema di accumulo di energia in batteria										
	Marca	Afore										
	N. fasi	☒ Monofase ☐ Trifase Frequenza: 50 Hz Tensione (F-N): 230 V										
	Energia primaria utilizzata	Solare										
	Modello del generatore	AF1K-SL-1 AF1K-SL-0	AF1.5K-SL-1 AF1.5K-SL-0	AF2K-SL-1 AF2K-SL-0	AF2.5K-SL-1 AF2.5K-SL-0	AF3K-SL-1 AF3K-SL-0 AF3K-SL	AF3.6K-SL-1 AF3.6K-SL AF3.6K-SL-0	AF4K-SL AF4K-SL-0 AF4K-SLP	AF4.6K-SL AF4.6K-SL-0 AF4.6K-SLP	AF5K-SL AF5K-SL-0 AF5K-SLP	AF5.5K-SL AF5.5K-SL-0 AF5.5K-SLP	AF6K-SL AF6K-SL-0 AF6K-SLP
	Potenza Nominale (kW)	1	1.5	2	2.5	3	3.6	4	4.6	5	5.5	6
	Il generatore:	• È idoneo per installazione in impianti con potenza superiore a 11,08 kW • È in grado di limitare la Idc allo 0,5% della corrente nominale • Utilizza una funzione di protezione sensibile alla corrente continua										
Sez. B	**Caratteristiche del sistema di protezione di interfaccia**											
	Costruttore	Afore New Energy Technology (Shanghai) Co., Ltd										
	Modello	AF1K-SL-1 AF1K-SL-0	AF1.5K-SL-1 AF1.5K-SL-0	AF2K-SL-1 AF2K-SL-0	AF2.5K-SL-1 AF2.5K-SL-0	AF3K-SL-1 AF3K-SL-0 AF3K-SL	AF3.6K-SL-1 AF3.6K-SL AF3.6K-SL-0	AF4K-SL AF4K-SL-0 AF4K-SLP	AF4.6K-SL AF4.6K-SL-0 AF4.6K-SLP	AF5K-SL AF5K-SL-0 AF5K-SLP	AF5.5K-SL AF5.5K-SL-0 AF5.5K-SLP	AF6K-SL AF6K-SL-0 AF6K-SLP
	Tipo	• Integrata										
Sez. C	**Caratteristiche del convertitore statico**											
	Modello del convertitore statico	AF1K-SL-1 AF1K-SL-0	AF1.5K-SL-1 AF1.5K-SL-0	AF2K-SL-1 AF2K-SL-0	AF2.5K-SL-1 AF2.5K-SL-0	AF3K-SL-1 AF3K-SL-0 AF3K-SL	AF3.6K-SL-1 AF3.6K-SL AF3.6K-SL-0	AF4K-SL AF4K-SL-0 AF4K-SLP	AF4.6K-SL AF4.6K-SL-0 AF4.6K-SLP	AF5K-SL AF5K-SL-0 AF5K-SLP	AF5.5K-SL AF5.5K-SL-0 AF5.5K-SLP	AF6K-SL AF6K-SL-0 AF6K-SLP
	Costruttore del convertitore statico	Afore New Energy Technology (Shanghai) Co., Ltd										
	Versione firmware	V02										
	Potenza nominale del convertitore (P_{NINV}) (kW)	1	1.5	2	2.5	3	3.6	4	4.6	5	5.5	6

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Sez. E

Caratteristiche del Sistema di Accumulo (SdA)														
Modello	AF1K-SL-1 AF1K-SL-0	AF1.5K-SL-1 AF1.5K-SL-0	AF2K-SL-1 AF2K-SL-0	AF2.5K-SL-1 AF2.5K-SL-0	AF3K-SL-1 AF3K-SL-0 AF3K-SL	AF3.6K-SL-1 AF3.6K-SL AF3.6K-SL-0	AF4K-SL AF4K-SL-0 AF4K-SLP	AF4.6K-SL AF4.6K-SL-0 AF4.6K-SLP	AF5K-SL	AF5.5K-SL	AF6K-SL	AF5K-SL-0 AF5K-SLP	AF5.5K-SL-0 AF5.5K-SLP	AF6K-SL-0 AF6K-SLP
Psn (Potenza di scarica nominale) (kW)	1	1.5	2	2.5	3	3.6	4	4.6*	4.8*	4.8*	4.8*	5	5.5	6
Pcn (Potenza di carica nominale) (kW)	1	1.5	2	2.5	3	3.6	4	4.6*	4.8*	4.8*	4.8*	5	5.5	6
Psmax (Potenza di scarica massima) (kW)	1	1.5	2	2.5	3	3.6	4	4.6*	4.8*	4.8*	4.8*	5	5.5	6
Pcmax (Potenza di carica massima) (kW)	1	1.5	2	2.5	3	3.6	4	4.6*	4.8*	4.8*	4.8*	5	5.5	6
Tipologia	Bidirezionale													
Note	*Questa potenza è limitata dai parametri della batteria, dal numero di batterie parallele e dalla potenza nominale di uscita dell'inverter.													

Batterie utilizzabili per i convertitori statici sopra riportati	
Marca	Dongguan ZWAYN New Energy Co., Ltd
Tecnologia	elettrochimica al Litio (Lithium-ion)
Modelli batterie	ES-BOX12, ES-BOX12WF, ESS-5120-KS2-A01, ES-BOX12(LCD), ES-BOX26, ESS-5120-KS7(A05), ESS-5120-KS7(A06)
Modelli BMS	Integrato
Capacità nominale (kWh)	5.12
CUS (Capacità Utile di Sistema) (kWh)	4.096
Versione firmware BMS	GZ10BMUST13.6E
N. Moduli	1-16

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	Note	• Le batterie non sono integrate nell'inverter e devono essere installate secondo le normative locali. • I modelli riportati sono utilizzabili per il collegamento in parallelo • Eventuali discrepanze con le capacità riportate sull'etichetta o sulla scheda tecnica sono dovute all'arrotondamento da parte dell'ente certificatore
Sez. I	**Riferimenti dei laboratori che hanno eseguito le prove e dei relativi rapporti di prova (RdP)**	
	Metodo prescelto	Prove eseguite da laboratorio accreditato
	Rapporti di prova (RdP)	6200020.50
	Emessi da: **Numero accreditamento: Rif.** **Ente accreditamento:**	DEKRA Testing and Certification (Suzhou) Co., Ltd, Accreditamento a IAS, N°6200020.01COC. Accreditamento secondo norme DIN EN ISO/IEC 17065
Sez. L	**Dichiarazione di conformità del costruttore alle prescrizioni della norma CEI 0-21:2022-03**	

Con la presente dichiarazione, redatta ai sensi dell'articolo 47 del DPR 28 Dicembre 2000, n°445, il sottoscritto, Xinghe Chen, in qualità di legale rappresentante della Società Afore New Energy Technology (Shanghai) Co., Ltd, con sede in Building 7, No.333 Wanfang Rd, Minhang District, Shanghai, China, P. IVA 91310000561932991K, iscritta al registro delle imprese della pretura di None (Cina) con numero di registrazione 00000000202009040020.

DICHIARA

che gli inverter di propria costruzione e i relativi sistemi di accumulo di cui alle precedenti sezioni sono conformi alle prescrizioni contenute nella 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.)

Shanghai, 14.3.2025

Afore New Energy Technology (Shanghai) Co., Ltd
Xinghe Chen, CEO

中华人民共和国外交部请各国军政机关对持照人予以通行的便利和必要的协助。

The Ministry of Foreign Affairs of the People's Republic of China requests all civil and military authorities of foreign countries to allow the bearer of this passport to pass freely and afford assistance in case of need.

中华人民共和国 PEOPLE'S REPUBLIC OF CHINA

护 照
PASSPORT

类型/Type
P

国家码/Country Code
CHN

护照号码/Passport No.
EM5232998

姓名/Name
陈星和
CHEN, XINGHE

性别/Sex
男/M

国籍/Nationality
中国/CHINESE

出生日期/Date of birth
20 DEC 1966

出生地点/Place of birth
浙江/ZHEJIANG

签发日期/Date of issue
22 5月/MAY 2024

签发地点/Place of issue
上海/SHANGHAI

有效期至/Date of expiry
21 5月/MAY 2034

签发机关/Authority
中华人民共和国国家移民管理局
National Immigration Administration,PRC

持照人签名/Bearer's signature

21855804 69

P<CHNCHEN<<XINGHE<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<

EM52329982CHN6612201M3405215LDMCNAMHLKMNA932

CERTIFICATE OF CONFORMITY

CERTIFICATO DI CONFORMITÀ

Issued to: *Rilasciato a:*	Afore New Energy Technology (Shanghai) Co., Ltd. Building 7, No.333 Wanfang Rd, Minhang District, Shanghai, China
For the product: *Tipo prodotto:*	Hybrid Inverter
Trade name: *Marchio:*	Afore
Type/Model: *Riferimento modello:*	AF1K-SL-1, AF1.5K-SL-1, AF2K-SL-1, AF2.5K-SL-1, AF3K-SL-1, AF3.6K-SL-1, AF3K-SL, AF3.6K-SL, AF4K-SL, AF4.6K-SL, AF5K-SL, AF5.5K-SL, AF6K-SL, AF4K-SLP, AF4.6K-SLP, AF5K-SLP, AF5.5K-SLP, AF6K-SLP, AF1K-SL-0, AF1.5K-SL-0, AF2K-SL-0, AF2.5K-SL-0, AF3K-SL-0, AF3.6K-SL-0, AF4K-SL-0, AF4.6K-SL-0, AF5K-SL-0, AF5.5K-SL-0, AF6K-SL-0
Ratings: *Dati di targa:*	See Annex
Manufactured by: *Costruttore:*	Afore New Energy Technology (Shanghai) Co., Ltd. Building 7, No.333 Wanfang Rd, Minhang District, Shanghai, China
Requirements: *Requisiti:*	CEI 0-21:2022-03 *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. 6200020.50
Il presente certificato è rilasciato a causa di un esame da parte di DEKRA, i cui risultati sono riportati in un file riservato n. 6200020.50
The examination has been carried out on one single specimen of the product. The Attestation does not include an assessment of the manufacturer's production. Conformity of this production with the specimen tested by DEKRA is not the responsibility of DEKRA.
L'esame è stato effettuato su un singolo esemplare del prodotto. L'Attestazione non include una valutazione della produzione del produttore. La conformità di questa produzione con l'esemplare testato da DEKRA non è responsabilità di DEKRA.
This Test Certificate expires at the latest on 21 August 2029 or expires upon withdrawal of one of the above mentioned standards.
Il presente Certificato di Prova scade al più tardi il 21 agosto 2029 oppure scade in caso di ritiro di una delle norme sopra menzionate.

Shanghai, 21 August 2024 Certificate Number: 6200020.01COC

DEKRA Testing and Certification (Shanghai) Ltd.

Cliff Lin
Certification Manager

IAS ACCREDITED Product Certification Agency
PCA-141

DEKRA Testing and Certification (Shanghai) Ltd.
No.250, Jiangchangsan Road, Jing'an District, Shanghai, 200436 People's Republic of China
T +86 21 6056 7600 F +86 21 6056 7555 www.dekra-product-safety.com

Annex

Document no. : 6200020.01COC

Ratings of the testing Hybrid Inverter:

Valutazioni dell'invertitore ibrido di prova:

Models	**AF1K-SL-1**	**AF1.5K-SL-1**	**AF2K-SL-1**	**AF2.5K-SL-1**	**AF3K-SL-1**	**AF3.6K-SL-1**
PV input:						
Max PV voltage (V)	550					
MPPT voltage range (V)	80-500					
Max PV current (A)	18.5					
Isc PV (A)	26					
Max PV power (W)	1500	2300	3000	3800	4500	5400
Battery port:						
Battery type	Rechargeable Li-ion Battery/ LiFePO4/ Lead-acid					
Battery normal voltage (range) (Vdc)	51.2 (40-60)					
Max charge/ discharge current (A)	25	40	50	63	80	80
Max charge/ discharge power (W)	1000	1500	2000	2500	3000	3600
AC grid (input and output):						
Rated voltage (V)	L/N/PE, 230Vac					
Rated frequency (Hz)	50					
Max AC current (A)	5	7	10	12	14	17
Rated AC power (W)	1000	1500	2000	2500	3000	3600
Max AC apparent power (VA)	1000	1500	2000	2500	3000	3600
Power factor range	1.0 (-0.8 ~ +0.8 adjustable)					
AC load output (stand alone):						
Rated voltage (V)	L/N/PE, 230Vac					
Rated frequency (Hz)	50					
Max AC current (A)	5	7	10	12	14	17
Rated continuous AC power (W)	1000	1500	2000	2500	3000	3600
Max continuous AC apparent power (VA)	1000	1500	2000	2500	3000	3600
General:						
Protection class	I					
Degree of protection	IP65					
Overvoltage category	II(DC), III(AC)					
Ambient temperature	-25...+60°C (Derating > 45°C)					

Annex

Document no. : 6200020.01COC

Models	AF3K-SL	AF3.6K-SL	AF4K-SL	AF4.6K-SL	AF5K-SL	AF5.5K-SL	AF6K-SL
PV input:							
Max PV voltage (V)	550						
MPPT voltage range (V)	80-500						
Max PV current (A)	18.5 x 2						
Isc PV (A)	26 x 2						
Max PV power (W)	4500	5400	6000	6900	7500	8300	9000
Battery port:							
Battery type	Rechargeable Li-ion Battery/ LiFePO4/ Lead-acid						
Battery normal voltage (range) (Vdc)	51.2 (40-60)						
Max charge/ discharge current (A)	80						
Max charge/ discharge power (W)	3000	3600	4000	4600	4800	4800	4800
AC grid (input and output):							
Rated voltage (V)	L/N/PE, 230Vac						
Rated frequency (Hz)	50						
Max AC current (A)	14	17	19	22	23	26	28
Rated AC power (W)	3000	3600	4000	4600	5000	5500	6000
Max AC apparent power (VA)	3000	3600	4000	4600	5000	5500	6000
Power factor range	1.0 (-0.8 ~ +0.8 adjustable)						
AC load output (stand alone):							
Rated voltage (V)	L/N/PE, 230Vac						
Rated frequency (Hz)	50						
Max AC current (A)	14	17	19	22	23	26	28
Rated continuous AC power (W)	3000	3600	4000	4600	5000	5500	6000
Max continuous AC apparent power (VA)	3000	3600	4000	4600	5000	5500	6000
General:							
Protection class	I						
Degree of protection	IP65						
Overvoltage category	II(DC), III(AC)						
Ambient temperature	-25...+60°C (Derating > 45°C)						

Annex

Document no. : 6200020.01COC

Models	AF4K-SLP	AF4.6K-SLP	AF5K-SLP	AF5.5K-SLP	AF6K-SLP
PV input:					
Max PV voltage (V)	550				
MPPT voltage range (V)	80-500				
Max PV current (A)	18.5 x 2				
Isc PV (A)	26 x 2				
Max PV power (W)	6000	6900	7500	8300	9000
Battery port:					
Battery type	Rechargeable Li-ion Battery/ LiFePO4/ Lead-acid				
Battery normal voltage (range) (Vdc)	51.2 (40-60)				
Max charge/ discharge current (A)	120				
Max charge/ discharge power (W)	4000	4600	5000	5500	6000
AC grid (input and output):					
Rated voltage (V)	L/N/PE, 230Vac				
Rated frequency (Hz)	50				
Max AC current (A)	19	22	23	26	28
Rated AC power (W)	4000	4600	5000	5500	6000
Max AC apparent power (VA)	4000	4600	5000	5500	6000
Power factor range	1.0 (-0.8~ +0.8 adjustable)				
AC load output (stand alone):					
Rated voltage (V)	L/N/PE, 230Vac				
Rated frequency (Hz)	50				
Max AC current (A)	19	22	23	26	28
Rated continuous AC power (W)	4000	4600	5000	5500	6000
Max continuous AC apparent power (VA)	4000	4600	5000	5500	6000
General:					
Protection class	I				
Degree of protection	IP65				
Overvoltage category	II(DC), III(AC)				
Ambient temperature	-25...+60°C (Derating > 45°C)				

Document no. : 6200020.01COC

Models	AF1K-SL-0	AF1.5K-SL-0	AF2K-SL-0	AF2.5K-SL-0	AF3K-SL-0	AF3.6K-SL-0
Battery port:						
Battery type	Rechargeable Li-ion Battery/ LiFePO4/ Lead-acid					
Battery normal voltage (range) (Vdc)	51.2 (40-60)					
Max charge/ discharge current (A)	25	40	50	63	80	80
Max charge/ discharge power (W)	1000	1500	2000	2500	3000	3600
AC grid (input and output):						
Rated voltage (V)	L/N/PE, 230Vac					
Rated frequency (Hz)	50					
Max AC current (A)	5	7	10	12	14	17
Rated AC power (W)	1000	1500	2000	2500	3000	3600
Max AC apparent power (VA)	1000	1500	2000	2500	3000	3600
Power factor range	1.0 (-0.8 ~ +0.8 adjustable)					
AC load output (stand alone):						
Rated voltage (V)	L/N/PE, 230Vac					
Rated frequency (Hz)	50					
Max AC current (A)	5	7	10	12	14	17
Rated continuous AC power (W)	1000	1500	2000	2500	3000	3600
Max continuous AC apparent power (VA)	1000	1500	2000	2500	3000	3600
General:						
Protection class	I					
Degree of protection	IP65					
Overvoltage category	II(DC), III(AC)					
Ambient temperature	-25...+60°C (Derating > 45°C)					

Annex

Document no. : 6200020.01COC

Models	AF4K-SL-0	AF4.6K-SL-0	AF5K-SL-0	AF5.5K-SL-0	AF6K-SL-0
Battery port:					
Battery type	Rechargeable Li-ion Battery/ LiFePO4/ Lead-acid				
Battery normal voltage (range) (Vdc)	51.2 (40-60)				
Max charge/ discharge current (A)	80	80	100	120	120
Max charge/ discharge power (W)	4000	4600	5000	5500	6000
AC grid (input and output):					
Rated voltage (V)	L/N/PE, 230Vac				
Rated frequency (Hz)	50				
Max AC current (A)	19	22	23	26	28
Rated AC power (W)	4000	4600	5000	5500	6000
Max AC apparent power (VA)	4000	4600	5000	5500	6000
Power factor range	1.0 (-0.8 ~ +0.8 adjustable)				
AC load output (stand alone):					
Rated voltage (V)	L/N/PE, 230Vac				
Rated frequency (Hz)	50				
Max AC current (A)	19	22	23	26	28
Rated continuous AC power (W)	4000	4600	5000	5500	6000
Max continuous AC apparent power (VA)	4000	4600	5000	5500	6000
General:					
Protection class	I				
Degree of protection	IP65				
Overvoltage category	II(DC), III(AC)				
Ambient temperature	-25...+60°C (Derating > 45°C)				

Type of generating unit:
Tipologia di apparato:

Static Conversion Device *Dipositivo di conversione statica*	Interface Protection *Protezione di interfaccia*	Interface Protection Device *Dispositivo di interfaccia*	Rotating Generator Device *Dispositivo di generazione rotante*
Yes/*Si*	Yes/*Si*	Yes/*Si*	No/*No*

REMARK: the device is capable to limit the Idc to 0.5% of the nominal current
NOTA: Il dispositivo è in grado di limitare la Idc allo 0.5% della corrente nominale

Firmware release (SW): V02
Revisione firmware (SW): V02

Document no. : 6200020.01COC

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:

Battery Models	**ES-BOX12, ES-BOX12WF, ESS-5120-KS2-A01 ES-BOX12(LCD), ES-BOX26, ESS-5120-KS7(A05),ESS-5120-KS7(A06)**			
Manufacturer	Dongguan ZWAYN New Energy Co., Ltd			
Number of battery module in parallel	1	2	3	4
Nominal Voltage	51.2 V			
Nominal capacity	100 Ah	200 Ah	300 Ah	400 Ah
CUS (Storage system useful capacity)	5.12 kWh	10.24 kWh	15.36 kWh	20.48 kWh
Number of battery module in parallel	5	6	7	8
Nominal Voltage	51.2 V			
Nominal capacity	500 Ah	600 Ah	700 Ah	800 Ah
CUS (Storage system useful capacity)	25.6 kWh	30.72 kWh	35.84 kWh	40.96 kWh
Number of battery module in parallel	9	10	11	12
Nominal Voltage	51.2 V			
Nominal capacity	900 Ah	1000 Ah	1100 Ah	1200 Ah
CUS (Storage system useful capacity)	46.08 kWh	51.2 kWh	56.32 kWh	61.44 kWh
Number of battery module in parallel	13	14	15	16
Nominal Voltage	51.2 V			
Nominal capacity	1300 Ah	1400 Ah	1500 Ah	1600 Ah
CUS (Storage system useful capacity)	66.56 kWh	71.68 kWh	76.8 kWh	81.92 kWh
Remark: The CB test certificate No. of the battery: JPTUV-151536 and SE-114567 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. The electrical performance of the two models of batteries (ES-BOX12, ES-BOX12WF) is the same. The two models of batteries only differ in wifi function. ES-BOX12WF is the version with wifi. The electrical performance of the two models of batteries (ES-BOX12, ESS-5120-KS2-A01) is the same. The two models of batteries only differ in appearance, size, and weight to meet different installation needs. ES-BOX12(LCD), ES-BOX26, ESS-5120-KS7(A05) and ESS-5120-KS7(A06) are same except the appearance of shape, connection terminals, and screens.				

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)

--- End ---