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-SLP AF4K-SL-0	AF4.6K-SL AF4.6K-SLP AF4.6K-SL-00	AF5K-SL AF5K-SLP AF5K-SL-0	AF5.5K-SL AF5.5K-SLP AF5.5K-SL-0	AF6K-SL AF6K-SLP AF6K-SL-0
	Potenza Nominale (kW)	1	1.5	2	2.5	3	3.6	4	4.6	5	5.5	6
	Il generatore	• È in grado di limitare la Idc allo 0,5% della corrente nominale										
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	AF4.6K-SL AF4.6K-SLP AF4.6K-SL-0	AF4.6K-SL AF4.6K-SLP AF4.6K-SL-0	AF5K-SL AF5K-SLP AF5K-SL-0	AF5.5K-SL AF5.5K-SLP AF5.5K-SL-0	AF6K-SL AF6K-SLP AF6K-SL-0
	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	AF4.6K-SL AF4.6K-SLP AF4.6K-SL-0	AF4.6K-SL AF4.6K-SLP AF4.6K-SL-0	AF5K-SL AF5K-SLP AF5K-SL-0	AF5.5K-SL AF5.5K-SLP AF5.5K-SL-0	AF6K-SL AF6K-SLP AF6K-SL-0
	Costruttore del convertitore statico	Afore New Energy Technology (Shanghai) Co., Ltd.										
	Versione firmware	V06										

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	Potenza nominale del convertitore (P_{NINV}) (kW)	1	1.5	2	2.5	3	3.6	4	4.6	5	5.5	6			
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	AF4.6K-SL AF4.6K-SL-0	AF5K-SL	AF5.5K-SL	AF6K-SL	AF5K-SL-0	AF5.5K-SL-0	AF6K-SL-0
	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	Shenzhen Hailei New Energy Co., LTD													
	Tecnologia	Rechargeable Li-ion Battery/LiFePO4 elettrochimico													
	Modelli batterie	ATOM WB-512100													
	Modelli BMS	ATOM WB-512100													
	Capacità nominale (kWh)	5.12kwh													
	CUS (Capacità Utile di Sistema) (kWh)	5.12kwh													
	Versione firmware BMS	V16.8													
	N. Moduli	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)	6190804.50
	Emessi da: **Numero accreditamento: Rif.** **Ente accreditamento:**	DEKRA Testing and Certification (Suzhou) Co., Ltd, Accreditamento a IAS, N° 6190804.01COC 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, 17.5.2024

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.: E53159904

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: 12 6月/JUN 2015

签发地点/Place of issue: 上海/SHANGHAI

有效期至/Date of expiry: 11 6月/JUN 2025

签发机关/Authority: 公安部出入境管理局 MPS Exit & Entry Administration

持照人签名/Bearer's signature: 陈星和

0538803930

POCHNCHEN<<XINGHE<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<

E531599044CHN6612201M2506115LDMCNAMHLKMNA938

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

The tested models are suitable for installation in systems with a total power greater than 11.08 kW.
I modelli testati sono adatti per l'installazione in sistemi con potenza di uscita maggiore di 11.08 kW.
This Test Certificate is granted on account of an examination by DEKRA, the results of which are laid down in a confidential file no. 6190804.50
Il presente certificato è rilasciato a causa di un esame da parte di DEKRA, i cui risultati sono riportati in un file riservato n. 6190804.50
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.
This Test Certificate expires at the latest on 2029-05-16 or expires upon withdrawal of one of the above mentioned standards.
Il presente certificato di prova scade al più tardi il 2029-05-16 o scade al momento del ritiro di uno dei suddetti standard.

Shanghai, 16 May 2024 Certificate Number: 6190804.01COC
DEKRA Testing and Certification (Shanghai) Ltd.

Cliff Lin
Certification Manager

IAS ACCREDITED Product Certification Agency
PCA-141

© Integral publication of this certificate and adjoining reports is allowed

DEKRA Testing and Certification (Shanghai) Ltd.
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ESA-CER-F021 v3.0

Document no. : 6190804.01COC

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. : 6190804.01COC

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)						

Document no. : 6190804.01COC

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)				

Annex

Document no. : 6190804.01COC

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)					

Document no. : 6190804.01COC

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)	120	120	120	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

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
Hardware version: 1.01
Versione hardware: 1.01
Firmware release (SW): V02
Revisione firmware (SW): V02

Document no. : 6190804.01COC

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	ATOM WB-512100			
Manufacturer	Shenzhen Hailei 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
Battery System 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
Battery System 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
Battery System Capacity	46.08 kWh	51.2 kWh	56.32 kWh	61.44 kWh
Number of battery module in parallel	13	14	15	-
Nominal Voltage	51.2 V			
Nominal capacity	1300 Ah	1400 Ah	1500 Ah	-
Battery System Capacity	66.56 kWh	71.68 kWh	76.8 kWh	-
Remark: The CB test certificate No. of the battery: NL-105998 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)

--- End ---