

Dichiarazione di conformità CEI-021

	Tipo di dispositivo indicato nella dichiarazione				
Produttore	Sineng Electric Co., Ltd. 6, Hehui Road, Huishan Economic Development Zone, Wuxi, Cina				
Tipo di dispositivo	Dispositivo di conversione statica				
Modello	SN20HT	SN25HT	SN29.9HT	SN30HT	SN33HT
Firmware	V 1.00				
Numero di fasi	3/N/PE 220/380V, 230/400V				
Potenza nominale in kW	20kW	25kW	29.9kW	30kW	33kW
Corrente di cortocircuito (I _{cc} [A])	50A	50A	50A	50A	50A
Potenza massima in termini di energia solare (kW)	22kW	27.5kW	33kW	33kW	33kW
Corrente nominale (I _n [A])	28.9 A	36.2 A	43.3 A	43.5 A	47.8 A
Compatibilità dei sistemi di archiviazione	La serie Sineng EB-HA/EB-HB comprende da 1 a 4 unità. La serie Sineng EB-H01 comprende da 1 a 10 unità. La serie LV-IESS Series comprende da 1 a 4 unità .				

Nota:

Il dispositivo può limitare il IdC al 0,5% della corrente nominale.

L'inverter è adatto a sistemi di qualsiasi potenza.

Riferimenti normativi e laboratori che hanno effettuato i test	
Standard e numero del certificato:	CEI 0-21:2022 CEI 0-21/V1:2022 CEI 0-21/V2:2024 CEI 0-21/V2EC:2024 CEI 0-21/V2EC2:2025 CEI 0-21/V3:2025 CEI 0-21:2026-07 Numero del certificato: 6287307.01COC , data 2026-09-16 Numero del rapporto: 6287307.50, data: 2026-09-15
Riferimento: ente di certificazione:	DEKRA Testing and Certification (Shanghai) Ltd. • No.250, Jiangchangshan Road, Jing'an District, Shanghai, 200436 • Cina

Caratteristiche tecniche del DDI (Dispositivo per Interfaccia Diretta) *		
Modelli	SN20HT, SN25HT	SN29.9HT, SN30HT, SN33HT
Brand	Hongfa	Songchuan
Modello	HF165F/12-HT(704)(A21)	515A-1AH-F-C L01
Tipo	Rilevatore di trasmissione (Relay)	
Numero	11	
operazione interblocco	No	
Standard di riferimento	CEI-021; CEI EN 61810-1	

Il dispositivo è completamente integrato nell'inverter.

Caratteristiche tecniche del sistema SPI (System Interface Protection)		
Modelli	SN20HT, SN25HT, SN29.9HT, SN30HT, SN33HT	
Firmware	D S P: V1.00	A R M: V1.00

*** Il dispositivo è completamente integrato nell'inverter**

Afferma inoltre che gli inverter sopracitati sono certificati con i sistemi di accumulo energetico SINENG EB-HA, SINENG EB-HB, SINENG EB-H01, LV-IESS Series come dimostrano i dati riportati nelle tabelle seguenti:

Sineng EB-HA	SN20HT			
	EB-6.4KWH-HA	EB-12.8KWH-HA	EB-19.2KWH-HA	EB-25.7KWH-HA
Tecnologia	Litio ferro fosfato			
Energia totale [kWh]	6.4	12.8	19.2	25.7
Energia disponibile [kWh]	5.76	11.52	17.28	23.13
Capacità [Ah]	15.58	31.16	46.74	62.33
Potenza massima di carica [kW]	3	6	9	12
Potenza massima di scarica [kW]	3	6	9	12
Smax (Potenza apparente massima) [KVA]	22	22	22	22
PInv (Potenza nominale) [kW]	20	20	20	20

Sineng EB-HA	SN25HT			
	EB-6.4KWH-HA	EB-12.8KWH-HA	EB-19.2KWH-HA	EB-25.7KWH-HA
Tecnologia	Litio ferro fosfato			
Energia totale [kWh]	6.4	12.8	19.2	25.7
Energia disponibile [kWh]	5.76	11.52	17.28	23.13
Capacità [Ah]	15.58	31.16	46.74	62.33
Potenza massima di carica [kW]	3	6	9	12
Potenza massima di scarica [kW]	3	6	9	12
Smax (Potenza apparente massima) [KVA]	27.5	27.5	27.5	27.5
PInv (Potenza nominale) [kW]	25	25	25	25

Sineng EB-HA	SN29.9HT			
	EB-6.4KWH-HA	EB-12.8KWH-HA	EB-19.2KWH-HA	EB-25.7KWH-HA
Tecnologia	Litio ferro fosfato			
Energia totale [kWh]	6.4	12.8	19.2	25.7
Energia disponibile [kWh]	5.76	11.52	17.28	23.13
Capacità [Ah]	15.58	31.16	46.74	62.33
Potenza massima di carica [kW]	3	6	9	12
Potenza massima di scarica [kW]	3	6	9	12
Smax (Potenza apparente massima) [KVA]	33	33	33	33
PInv (Potenza nominale) [kW]	29.9	29.9	29.9	29.9

Sineng EB-HA	SN30HT			
	EB-6.4KWH-HA	EB-12.8KWH-HA	EB-19.2KWH-HA	EB-25.7KWH-HA
Tecnologia	Litio ferro fosfato			
Energia totale [kWh]	6.4	12.8	19.2	25.7
Energia disponibile [kWh]	5.76	11.52	17.28	23.13
Capacità [Ah]	15.58	31.16	46.74	62.33
Potenza massima di carica [kW]	3	6	9	12
Potenza massima di scarica [kW]	3	6	9	12
Smax (Potenza apparente massima) [KVA]	33	33	33	33
PInv (Potenza nominale) [kW]	30	30	30	30

Sineng EB-HA	SN33HT			
	EB-6.4KWH-HA	EB-12.8KWH-HA	EB-19.2KWH-HA	EB-25.7KWH-HA
Tecnologia	Litio ferro fosfato			
Energia totale [kWh]	6.4	12.8	19.2	25.7
Energia disponibile [kWh]	5.76	11.52	17.28	23.13
Capacità [Ah]	15.58	31.16	46.74	62.33
Potenza massima di carica [kW]	3	6	9	12
Potenza massima di scarica [kW]	3	6	9	12
Smax (Potenza apparente massima) [KVA]	33	33	33	33
PInv (Potenza nominale) [kW]	33	33	33	33

Sineng EB-HB	SN20HT			
	EB-6.4KWH-HB	EB-12.8KWH-HB	EB-19.2KWH-HB	EB-25.7KWH-HB
Tecnologia	Litio ferro fosfato			
Energia totale [kWh]	6.4	12.8	19.2	25.7
Energia disponibile [kWh]	5.76	11.52	17.28	23.13
Capacità [Ah]	17.18	34.36	51.54	68.72
Potenza massima di carica [kW]	3	6	9	12
Potenza massima di scarica [kW]	3	6	9	12
Smax (Potenza apparente massima) [KVA]	22	22	22	22
PInv (Potenza nominale) [kW]	20	20	20	20

Sineng EB-HB	SN25HT			
	EB-6.4KWH-HB	EB-12.8KWH-HB	EB-19.2KWH-HB	EB-25.7KWH-HB
Tecnologia	Litio ferro fosfato			
Energia totale [kWh]	6.4	12.8	19.2	25.7
Energia disponibile [kWh]	5.76	11.52	17.28	23.13
Capacità [Ah]	17.18	34.36	51.54	68.72
Potenza massima di carica [kW]	3	6	9	12
Potenza massima di scarica [kW]	3	6	9	12
Smax (Potenza apparente massima) [KVA]	27.5	27.5	27.5	27.5
PInv (Potenza nominale) [kW]	25	25	25	25

Sineng EB-HB	SN29.9HT			
	EB-6.4KWH-HA	EB-12.8KWH-HA	EB-19.2KWH-HA	EB-25.7KWH-HA
Tecnologia	Litio ferro fosfato			
Energia totale [kWh]	6.4	12.8	19.2	25.7
Energia disponibile [kWh]	5.76	11.52	17.28	23.13
Capacità [Ah]	17.18	34.36	51.54	68.72
Potenza massima di carica [kW]	3	6	9	12
Potenza massima di scarica [kW]	3	6	9	12
Smax (Potenza apparente massima) [KVA]	33	33	33	33
PInv (Potenza nominale) [kW]	29.9	29.9	29.9	29.9

Sineng EB-HB	SN30HT			
	EB-6.4KWH-HA	EB-12.8KWH-HA	EB-19.2KWH-HA	EB-25.7KWH-HA
Tecnologia	Litio ferro fosfato			
Energia totale [kWh]	6.4	12.8	19.2	25.7
Energia disponibile [kWh]	5.76	11.52	17.28	23.13
Capacità [Ah]	17.18	34.36	51.54	68.72
Potenza massima di carica [kW]	3	6	9	12
Potenza massima di scarica [kW]	3	6	9	12
Smax (Potenza apparente massima) [KVA]	33	33	33	33
PInv (Potenza nominale) [kW]	30	30	30	30

Sineng EB-HB	SN33HT			
	EB-6.4KWH-HA	EB-12.8KWH-HA	EB-19.2KWH-HA	EB-25.7KWH-HA
Tecnologia	Litio ferro fosfato			
Energia totale [kWh]	6.4	12.8	19.2	25.7
Energia disponibile [kWh]	5.76	11.52	17.28	23.13
Capacità [Ah]	17.18	34.36	51.54	68.72
Potenza massima di carica [kW]	3	6	9	12
Potenza massima di scarica [kW]	3	6	9	12
Smax (Potenza apparente massima) [KVA]	33	33	33	33
PInv (Potenza nominale) [kW]	30	30	30	30

Sineng EB-H01	SN20HT					
	EB-10.24KWH-H01	EB-15.36KWH-H01	EB-20.48KWH-H01	EB-30.72KWH-H01	EB-40.96KWH-H01	EB-51.2KWH-H01
Tecnologia	Litio ferro fosfato					
Energia totale [kWh]	10.24	15.36	20.68	30.72	40.96	51.2
Energia disponibile [kWh]	9.73	14.59	19.65	29.18	38.91	48.64
Capacità [Ah]	100	100	100	100	100	100
Potenza massima di carica [kW]	5	7.5	10	15	20	25
Potenza massima di scarica [kW]	5	7.5	10	15	20	25
Smax (Potenza apparente massima) [KVA]	22	22	22	22	22	22
PInv (Potenza nominale) [kW]	20	20	20	20	20	20

Sineng EB-H01	SN25HT					
	EB-10.24KWH-H01	EB-15.36KWH-H01	EB-20.48KWH-H01	EB-30.72KWH-H01	EB-40.96KWH-H01	EB-51.2KWH-H01
Tecnologia	Litio ferro fosfato					
Energia totale [kWh]	10.24	15.36	20.68	30.72	40.96	51.2
Energia disponibile [kWh]	9.73	14.59	19.65	29.18	38.91	48.64
Capacità [Ah]	100	100	100	100	100	100
Potenza massima di carica [kW]	5	7.5	10	15	20	25
Potenza massima di scarica [kW]	5	7.5	10	15	20	25
Smax (Potenza apparente massima) [KVA]	27.5	27.5	27.5	27.5	27.5	27.5
PInv (Potenza nominale) [kW]	25	25	25	25	25	25

Sineng EB-H01	SN29.9HT					
	EB-10.24KWH-H01	EB-15.36KWH-H01	EB-20.48KWH-H01	EB-30.72KWH-H01	EB-40.96KWH-H01	EB-51.2KWH-H01
Tecnologia	Litio ferro fosfato					
Energia totale [kWh]	10.24	15.36	20.68	30.72	40.96	51.2
Energia disponibile [kWh]	9.73	14.59	19.65	29.18	38.91	48.64
Capacità [Ah]	100	100	100	100	100	100
Potenza massima di carica [kW]	5	7.5	10	15	20	25
Potenza massima di scarica [kW]	5	7.5	10	15	20	25
Smax (Potenza apparente massima) [KVA]	33	33	33	33	33	33
PInv (Potenza nominale) [kW]	29.9	29.9	29.9	29.9	29.9	29.9

Sineng EB-H01	SN30HT					
	EB-10.24KWH-H01	EB-15.36KWH-H01	EB-20.48KWH-H01	EB-30.72KWH-H01	EB-40.96KWH-H01	EB-51.2KWH-H01
Tecnologia	Litio ferro fosfato					
Energia totale [kWh]	10.24	15.36	20.68	30.72	40.96	51.2
Energia disponibile [kWh]	9.73	14.59	19.65	29.18	38.91	48.64
Capacità [Ah]	100	100	100	100	100	100
Potenza massima di carica [kW]	5	7.5	10	15	20	25
Potenza massima di scarica [kW]	5	7.5	10	15	20	25
Smax (Potenza apparente massima) [KVA]	33	33	33	33	33	33
PInv (Potenza nominale) [kW]	30	30	30	30	30	30

Sineng EB-H01	SN33HT					
	EB-10.24KWH-H01	EB-15.36KWH-H01	EB-20.48KWH-H01	EB-30.72KWH-H01	EB-40.96KWH-H01	EB-51.2KWH-H01
Tecnologia	Litio ferro fosfato					
Energia totale [kWh]	10.24	15.36	20.68	30.72	40.96	51.2
Energia disponibile [kWh]	9.73	14.59	19.65	29.18	38.91	48.64
Capacità [Ah]	100	100	100	100	100	100
Potenza massima di carica [kW]	5	7.5	10	15	20	25
Potenza massima di scarica [kW]	5	7.5	10	15	20	25
Smax (Potenza apparente massima) [KVA]	33	33	33	33	33	33
PInv (Potenza nominale) [kW]	33	33	33	33	33	33

Dichiarazione di conformità alle normative:

**CEI 0-21:2022, CEI 0-21/V1:2022, CEI 0-21/V2:2024, CEI 0-21/V2EC:2024, CEI 0-21/V2EC2:2025,
CEI 0-21/V3:2025, CEI0-21:2026-07**

Con la presente dichiarazione, redatta ai sensi dell'articolo 47 DPR n. 445 del 28 dicembre 2000, consapevole delle responsabilità penali e delle sanzioni previste dall'articolo 76 del citato DPR per false attestazioni e dichiarazioni mendaci. Io, il firmatario Zhang Jian, passaporto n.EJ1323114, in qualità di Responsabile dei Prodotti all'estero della Sineng Electric Co., Ltd., con sede a Wuxi, n. 6, via Hehui, Zona di Sviluppo Economico di Huishan, Cina.

Dichiara

Che l'inverter di produzione propria specificato nel punto "Tipo di dispositivo a cui si riferisce la dichiarazione" è conforme ai requisiti stabiliti dalle seguenti norme **CEI: CEI 0-21:2022, CEI 0-21/V1:2022, CEI 0-21/V2:2024, CEI 0-21/V2EC:2024, CEI 0-21/V2EC2:2025, CEI 0-21/V3:2025, CEI 0-21 2026-07**

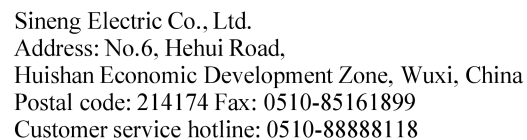
Wuxi, Cina, 18/09/2026

Sineng Electric Co., Ltd.

Responsabile dei prodotti all'estero



NOTA INFORMATIVA IN BASE ALL'ARTICOLO 13 DEL DECRETO LEGISLATIVO 196/2003: I dati sopra indicati sono forniti esclusivamente per l'uso previsto dal procedimento amministrativo per il quale sono stati richiesti ai sensi delle attuali norme giuridiche e possono essere utilizzati esclusivamente a tale scopo specifico.





CERTIFICATE OF CONFORMITY

CERTIFICATO DI CONFORMITÀ

Issued to: **SINENG ELECTRIC Co., Ltd.**
Rilasciato a: No.6, Hehui Road, Huishan District 214174, Wuxi City, China

For the product: **GRID-CONNECTED HYBRID INVERTER**
Tipo prodotto:

Trade name:  **SINENG**
Marchio:

Type/Model: **SN20HT, SN25HT, SN29.9HT, SN30HT, SN33HT**
Riferimento modello:

Ratings: **See Annex**
Dati di targa:

Manufactured by: **SINENG ELECTRIC Co., Ltd.**
Costruttore: No.6, Hehui Road, Huishan District 214174, Wuxi City, China

Requirements: **CEI 0-21:2026-07**
Requisiti: *Regola tecnica di riferimento per la connessione di Utenti attivi e passivi alle reti BT delle imprese distributrici di energia elettrica*

Factory: **SINENG ELECTRIC Co., Ltd.**
Fabbrica: No.6, Hehui Road, Huishan District 214174, Wuxi City, China

Type of product certification scheme: Type 1a (Type approval).
Tipo di schema di certificazione del prodotto: Tipo 1a (Omologazione).
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. 6287307.50
Il presente certificato è rilasciato a causa di un esame da parte di DEKRA, i cui risultati sono riportati in un file riservato n. 6287307.50
The examination has been carried out on one single specimen of the product. 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.
L'esame è stato effettuato su un unico esemplare del prodotto. 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 2031-09-16 or expires upon withdrawal of one of the above mentioned standards.
Il presente certificato di prova scade al più tardi il 2031-09-16 o scade al momento del ritiro di uno dei suddetti standard.

Shanghai, 16 September 2026 Certificate Number: 6287307.01COC

DEKRA Testing and Certification (Shanghai) Ltd.


Kreny Lin
Certification Manager

© Integral publication of this certificate and adjoining reports is allowed
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
ESA-CER-F021 v5.0


PCA-141

Page 1 of 4

Annex



Document no. : 6287307.01COC

Ratings of the testing Hybrid Inverter:

Valutazioni dell'invertitore ibrido di prova:

Ratings of the test product:

Operating temperature range: - 25°C to + 60°C

Protective class: I

Ingress protection rating: IP66

Power factor range (adjustable): 0.8 leading...0.8 lagging

SN20HT:

PV input: max 1000 Vdc, MPP voltage range: 160–950 Vdc, max 32 A/32 A/20 A, Isc PV: 50 A/50 A/25 A

Battery: Voltage range 180-800 Vdc, Max charge and discharge current: 50 A*2/50 A*2

AC output: 3/(N)/PE, 220/380 Vac, 230/400 Vac, 240/415 Vac, 50/60 Hz, rated power 20 kW, rated apparent power 20 kVA, max apparent power 22 kVA, rated current: 30.4 A (380 Vac), 29.0 A (400 Vac), 27.8 A (415 Vac), max current: 33.4 A (380 Vac), 31.9 A (400 Vac), 30.6 A (415 Vac)

SN25HT:

PV input: max 1000 Vdc, MPP voltage range: 160–950 Vdc, max 32 A/32 A/20 A, Isc PV: 50 A/50 A/25 A

Battery: Voltage range 180-800 Vdc, Max charge and discharge current: 50 A*2/50 A*2

AC output: 3/(N)/PE, 220/380 Vac, 230/400 Vac, 240/415 Vac, 50/60 Hz, rated power 25 kW, rated apparent power 25 kVA, max apparent power 27.5 kVA, rated current: 37.9 A (380 Vac), 36.3 A (400 Vac), 34.8 A (415 Vac), max current: 41.7 A (380 Vac), 39.9 A (400 Vac), 38.2 A (415 Vac)

SN29.9HT:

PV input: max 1000 Vdc, MPP voltage range: 160–950 Vdc, max 40 A/32 A/32 A, Isc PV: 50 A/50 A/50 A

Battery: Voltage range 180-800 Vdc, Max charge and discharge current: 50 A*2/50 A*2

AC output: 3/(N)/PE, 220/380 Vac, 230/400 Vac, 240/415 Vac, 50/60 Hz, rated power 29.9 kW, rated apparent power 29.9 kVA, max apparent power 29.9 kVA, rated current: 45.4 A (380 Vac), 43.4 A (400 Vac), 41.6 A (415 Vac), max current: 45.4 A (380 Vac), 43.4 A (400 Vac), 41.6 A (415 Vac)

SN30HT:

PV input: max 1000 Vdc, MPP voltage range: 160–950 Vdc, max 40 A/32 A/32 A, Isc PV: 50 A/50 A/50 A

Battery: Voltage range 180-800 Vdc, Max charge and discharge current: 50 A*2/50 A*2

AC output: 3/(N)/PE, 220/380 Vac, 230/400 Vac, 240/415 Vac, 50/60 Hz, rated power 30 kW, rated apparent power 30 kVA, max apparent power 33 kVA, rated current: 45.5 A (380 Vac), 43.5 A (400 Vac), 41.7 A (415 Vac), max current: 50.0 A (380 Vac), 47.9 A (400 Vac), 45.9 A (415 Vac)

SN33HT:

PV input: max 1000 Vdc, MPP voltage range: 160–950 Vdc, max 40 A/32 A/32 A, Isc PV: 50 A/50 A/50 A

Battery: Voltage range 180-800 Vdc, Max charge and discharge current: 50 A*2/50 A*2

AC output: 3/(N)/PE, 220/380 Vac, 230/400 Vac, 240/415 Vac, 50/60 Hz, rated power 33 kW, rated apparent power 33 kVA, max apparent power 33 kVA, rated current: 50.0 A (380 Vac), 47.9 A (400 Vac), 45.9 A (415 Vac), max current: 50.0 A (380 Vac), 47.9 A (400 Vac), 45.9 A (415 Vac)

Annex



Document no. : 6287307.01COC

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/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: A02
Versione hardware: A02
Software version: V1.0
Versione software: V1.0

Testing Laboratory:
Laboratorio prove:

Testing Laboratory for CEI 0-21:2026-07
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. TÜV SÜD Certification and Testing (China) Co., Ltd.
Floor 1-4, Building B, No. 37, Tuanjie Road (Middle), Xishan Economic and Technological Development Zone, Wuxi, Jiangsu, China
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 ---

Annex



Document no. : 6287307.01COC

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/Si	Yes/Si	Yes/Si	No/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: A02

Versione hardware: A02

Software version: V1.0

Versione software: V1.0

Testing Laboratory:

Laboratorio prove:

Testing Laboratory for CEI 0-21:2026-07

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. TÜV SÜD Certification and Testing (China) Co., Ltd.

Floor 1-4, Building B, No. 37, Tuanjie Road (Middle), Xishan Economic and Technological Development Zone, Wuxi, Jiangsu, China

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 ---



Test Report issued under the responsibility of:

Page 1 of 402



TEST REPORT CEI 0-21 Reference technical rules for the connection of active and passive users to the LV networks of electrical distribution companies	
Report	
Report Number	6287307.50
Date of issue	2026-09-15
Total number of pages	402 pages
Testing Laboratory	DEKRA Testing and Certification (Suzhou) Co., Ltd.
Address	No. 99, Hongye Road, Suzhou Industrial Park Suzhou, 215006, P.R. China
Applicant's name	SINENG ELECTRIC Co., Ltd.
Address	No.6, Hehui Road, Huishan District 214174, Wuxi City, China
Test specification:	
Standard	CEI 0-21:2026-07
Test procedure	Type test
Non-standard test method	N/A
Test Report Form No.	CEI 0-21_V4.0
Test Report Form(s) Originator	DEKRA Testing and Certification (Suzhou) Co., Ltd.
Master TRF	Dated 2024-02
Test item description	GRID-CONNECTED HYBRID INVERTER
Trade Mark	 SINENG
Manufacturer	SINENG ELECTRIC Co., Ltd.
	No.6, Hehui Road, Huishan District 214174, Wuxi City, China
Model/Type reference	SN20HT, SN25HT, SN29.9HT, SN30HT, SN33HT

TRF No. CEI 0-21_V4.0

Ratings.....:	Ratings of the test product: Operating temperature range: - 25°C to + 60°C Protective class: I Ingress protection rating: IP66 Power factor range (adjustable): 0.8 leading... 0.8 lagging SN20HT: PV input: max 1000 Vdc, MPP voltage range: 160–950 Vdc, max 32 A/32 A/20 A, Isc PV: 50 A/50 A/25 A Battery: Voltage range 180-800 Vdc, Max charge and discharge current: 50 A*2/50 A*2 AC output: 3/(N)/PE, 220/380 Vac, 230/400 Vac, 240/415 Vac, 50/60 Hz, rated power 20 kW, rated apparent power 20 kVA, max apparent power 22 kVA, rated current: 30.4 A (380 Vac), 29.0 A (400 Vac), 27.8 A (415 Vac), max current: 33.4 A (380 Vac), 31.9 A (400 Vac), 30.6 A (415 Vac) SN25HT: PV input: max 1000 Vdc, MPP voltage range: 160–950 Vdc, max 32 A/32 A/20 A, Isc PV: 50 A/50 A/25 A Battery: Voltage range 180-800 Vdc, Max charge and discharge current: 50 A*2/50 A*2 AC output: 3/(N)/PE, 220/380 Vac, 230/400 Vac, 240/415 Vac, 50/60 Hz, rated power 25 kW, rated apparent power 25 kVA, max apparent power 27.5 kVA, rated current: 37.9 A (380 Vac), 36.3 A (400 Vac), 34.8 A (415 Vac), max current: 41.7 A (380 Vac), 39.9 A (400 Vac), 38.2 A (415 Vac) SN29.9HT: PV input: max 1000 Vdc, MPP voltage range: 160–950 Vdc, max 40 A/32 A/32 A, Isc PV: 50 A/50 A/50 A Battery: Voltage range 180-800 Vdc, Max charge and discharge current: 50 A*2/50 A*2 AC output: 3/(N)/PE, 220/380 Vac, 230/400 Vac, 240/415 Vac, 50/60 Hz, rated power 29.9 kW, rated apparent power 29.9 kVA, max apparent power 29.9 kVA, rated current: 45.4 A (380 Vac), 43.4 A (400 Vac), 41.6 A (415 Vac), max current: 45.4 A (380 Vac), 43.4 A (400 Vac), 41.6 A (415 Vac) SN30HT: PV input: max 1000 Vdc, MPP voltage range: 160–950 Vdc, max 40 A/32 A/32 A, Isc PV: 50 A/50 A/50 A Battery: Voltage range 180-800 Vdc, Max charge and discharge current: 50 A*2/50 A*2 AC output: 3/(N)/PE, 220/380 Vac, 230/400 Vac, 240/415 Vac, 50/60 Hz, rated power 30 kW, rated apparent power 30 kVA, max apparent power 33 kVA, rated current: 45.5 A (380 Vac), 43.5 A (400 Vac), 41.7 A (415 Vac), max current: 50.0 A (380 Vac), 47.9 A (400 Vac), 45.9 A (415 Vac) SN33HT: PV input: max 1000 Vdc, MPP voltage range: 160–950 Vdc, max 40 A/32 A/32 A, Isc PV: 50 A/50 A/50 A Battery: Voltage range 180-800 Vdc, Max charge and discharge current: 50 A*2/50 A*2 AC output: 3/(N)/PE, 220/380 Vac, 230/400 Vac, 240/415 Vac, 50/60 Hz, rated power 33 kW, rated apparent power 33 kVA, max apparent power 33 kVA, rated current: 50.0 A (380 Vac), 47.9 A (400 Vac), 45.9 A (415 Vac), max current: 50.0 A (380 Vac), 47.9 A (400 Vac), 45.9 A (415 Vac)
---------------	--

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
☒	Testing Laboratory:	DEKRA Testing and Certification (Suzhou) Co., Ltd.
Testing location/ address		No. 99, Hongye Road, Suzhou Industrial Park Suzhou, 215006, P.R. China
☐	Associated Testing Laboratory:	
Testing location/ address		
Tested by (name, function, signature)		Shine Yan (ENG) <i>Shine Yan</i>
Approved by (name, function, signature) ..		Sandy Qian (REW) <i>Sandy Qian</i>
Testing procedure: CTF Stage 1:		
Testing location/ address		
Tested by (name, function, signature)		
Approved by (name, function, signature) ..		
Testing procedure: CTF Stage 2:		
Testing location/ address		
Tested by (name + signature)		
Witnessed by (name, function, signature) ..		
Approved by (name, function, signature) ..		
Testing procedure: CTF Stage 3:		
Testing procedure: CTF Stage 4:		
Testing location/ address		
Tested by (name, function, signature)		
Witnessed by (name, function, signature) ..		
Approved by (name, function, signature) ..		
Supervised by (name, function, signature) ..		

List of Attachments (including a total number of pages in each attachment): Annex 1: ISO 9001 certificate (1 pages) Annex 2: IEC 62619 Certificate for used battery (5 pages) Annex 3: Datasheet of the relay (10 pages) Annex 4: Pictures of the unit (4 pages)	
Summary of testing:	
Tests performed (name of test and test clause):	Testing location:
All tests (except clause A.4.6 EMC tests)	DEKRA Testing and Certification (Suzhou) Co., Ltd. No.99, Hongye Road, Suzhou Industrial Park, Suzhou, Jiangsu, P.R. China
A.4.6 EMC tests (The EMC test reports provided by the customer)	1. TÜV SÜD Certification and Testing (China) Co., Ltd. Floor 1-4, Building B, No. 37, Tuanjie Road (Middle), Xishan Economic and Technological Development Zone, Wuxi, Jiangsu, China Report No.: 4840925255300 2. Shanghai Inspection and Testing Institute of Instruments and Automation Systems Co., Ltd. No.103, Caobao Road, Xuhui District, Shanghai, China Report No.: J25-179-WT Accreditation Number: L0130 (CNAS-ILAC)

Test item particulars:				
Equipment mobility	movable <u>fixed</u>	hand-held transportable	stationary for building-in	
Connection to the mains	pluggable equipment <u>permanent connection</u>		direct plug-in for building-in	
Environmental category	<u>outdoor</u>	indoor unconditional	indoor conditional	
Over voltage category Mains.....	OVC I	OVC II	<u>OVC III</u>	OVC IV
Over voltage category PV	OVC I	<u>OVC II</u>	OVC III	OVC IV
Mains supply tolerance (%)	-85 / +115 %			
Tested for power systems	TN			
IT testing, phase-phase voltage (V)	N/A			
Class of equipment	<u>Class I</u> Not classified	Class II	Class III	
Mass of equipment (kg)	≤ 42			
Pollution degree	Outside PD3; Inside PD2			
IP protection class	IP66			
Possible test case verdicts:				
- test case does not apply to the test object: N/A				
- test object does meet the requirement.....: P (Pass)				
- test object does not meet the requirement.....: F (Fail)				
- this clause is information reference for installation....: Info.				
Testing:				
Date of receipt of test item	2025-03-09 (samples provided by applicant) 2026-07-05 (Amendment 1)			
Date (s) of performance of tests	2025-03-10 to 2025-05-19 2026-07-06 to 2026-07-29(Amendment 1)			
General remarks:				
The test results presented in this report relate only to the object tested.				
This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.				
"(see Enclosure #)" refers to additional information appended to the report.				
"(see appended table)" refers to a table appended to the report.				
The clause A.4.6 EMC tests are not in the CNAS scope of DEKRA Testing and Certification (Suzhou) Co., Ltd.				
Throughout this report a ☐ comma / ☒ point is used as the decimal separator.				
Determination of the test result includes consideration of measurement uncertainty from the test equipment and methods.				
Use of uncertainty of measurement for decisions on conformity (decision rule):				
No decision rule is specified by this standard, when comparing the measurement result with the applicable limit according to the specification in that standard. The decisions on conformity are made without applying the measurement uncertainty ("simple acceptance" decision rule, previously known as "accuracy method").				
Name and address of factory (ies):				
SINENG ELECTRIC Co., Ltd.				
No.6, Hehui Road, Huishan District 214174, Wuxi City, China				

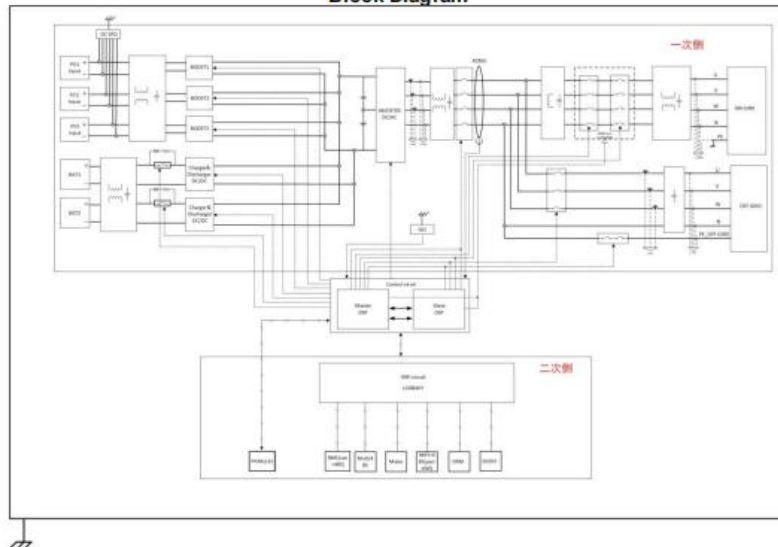
General product information:

These devices are hybrid inverters (bi-directional converter) designed to work with PV panels up to 1000Vd.c., and Li-ion batteries up to 800Vd.c.. They are responsible for converting the direct current generated by photovoltaic panels and batteries into 3-phase 380/400/415V a.c., 50/60 Hz alternative current for feeding into the electrical power distribution grid or the backup load. The hybrid inverter can operate when it is connected to the electrical power distribution line and as a stand-alone unit or in case of AC grid disruption. The devices are intended for professional incorporation into PV system, and they are assessed on a component test basis.

The devices use internal neutral-to-ground relay to bond the earthed conductor to protective earth, in stand-alone mode, the internal neutral-to-ground relays are closed automatically by default, the wire for connection to PE_BACKUP terminal is directly connected to the E-BAR of the external distribution box and no additional external neutral-to-ground switch device is required by installation. The devices can only be used in power distribution system with neutral continuity is not maintained throughout the system when all-pole main switch/circuit breaker upstream or interface protection switches were disconnected because of service/fault condition happened.

However, if power distribution system with neutral continuity is maintained throughout the system, it means that only three-pole (for three-line conductors) main switch/circuit breaker upstream or interface protection switches were disconnected because of service/fault condition happened, automatic closing the internal neutral-to-ground relays shall be disabled. The means used to bond the grounded conductor to protective earth shall be provided as part of the installation and the required means shall be followed with the installation instructions, including which conductor is to be bonded and the required current carrying capability or cross-section of the bonding means.

Block Diagram



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

Manufacturer	Dongguan Lithium Valley Energy Co., Ltd.			
Battery Models	LV-IESS-H1_RH5.12-#	LV-IESS-H2_RH5.12-#	LV-IESS-H3_RH5.12F-#	LV-IESS-H4_RH5.12F-#
Nominal Voltage	51.2 V * #	51.2 V * #	51.2 V * #	51.2 V * #
Nominal capacity	100 Ah	100 Ah	100 Ah	100 Ah
Battery System Capacity	5.12 kWh * #	5.12 kWh * #	5.12 kWh * #	5.12 kWh * #
Note: “#” representing different layers, ranging from 6 to 13 Remark: The test certificate No. of the battery: FR_721141 The batteries are not integrated into the Hybrid Inverter and must be installed according to the local regulations.				

Manufacturer	SINENG ELECTRIC CO., LTD.			
Battery Models	EB-6.4KWH-HA	EB-12.8KWH-HA	EB-19.2KWH-HA	EB-25.7KWH-HA
Nominal Voltage	412.8 V	412.8 V	412.8 V	412.8 V
Nominal capacity	15.58 Ah	31.16 Ah	46.74 Ah	62.33 Ah
Battery System Capacity	6.4 kWh	12.8 kWh	19.2 kWh	25.7 kWh
Manufacturer	SINENG ELECTRIC CO., LTD.			
Battery Models	EB-6.4KWH-HB	EB-12.8KWH-HB	EB-19.2KWH-HB	EB-25.7KWH-HB
Nominal Voltage	374.4V	374.4V	374.4V	374.4V
Nominal capacity	17.18 Ah	34.36 Ah	51.54 Ah	68.72 Ah
Battery System Capacity	6.4 kWh	12.8 kWh	19.2 kWh	25.7 kWh
Remark: The test certificate No. of the battery: No. B 091566 0134 Rev. 00 The batteries are not integrated into the Hybrid Inverter and must be installed according to the local regulations.				

Manufacturer	SINENG ELECTRIC CO., LTD.			
Battery Models	EB-20.48KWH-H01	EB-25.60KWH-H01	EB-30.72KWH-H01	EB-35.84KWH-H01
Nominal Voltage	204.8V	256.0V	307.2V	358.4V
Nominal capacity	100 Ah	100 Ah	100 Ah	100 Ah
Battery System Capacity	20.48 kWh	25.6 kWh	30.72 kWh	35.84 kWh
Battery Models	EB-40.96KWH-H01	EB-46.08KWH-H01	EB-51.2KWH-H01	-
Nominal Voltage	409.6V	460.8V	512.0V	-
Nominal capacity	100 Ah	100 Ah	100 Ah	-
Battery System Capacity	40.96 kWh	46.08 kWh	51.2 kWh	-
Remark: The test certificate No. of the battery: JPTUV-188039 The batteries are not integrated into the Hybrid Inverter and must be installed according to the local regulations.				