Factory Inspection Certificate

Certificato di ispezione di fabbrica

Applicant:
Richiedente:
Huawei Technologies Co., Ltd.

Address:
Indirizzo:
Administration Building, Headquarters of Huawei Technologies Co., Ltd.
Bantian, Longgang District, Shenzhen, 518129, P.R. China

Product type:
Tipo prodotto:
Grid-tied photovoltaic inverter, Grid-tied Battery Converter, Solar inverter, Smart PCS

Model:
Modell:
See Annex 1

Test report No.:
Rapporto di test N°.:
16TH0239-CEI 0-16_3, 16TH0239-CEI 0-21_3, 17TH0333-CEI 0-21_2, 19TH0316-CEI 0-21_2, 19TH0316-CEI 0-16_1, 18TH0255-CEI 0-21_3, 19TH0240-CEI 0-16_0, 19TH0240-DEWA2016_2 PVSP190424N048-1, PVSP190424N048-5, PVUK 180906N022,19TH0506-CEI 0-21_2,19TH0506-CEI 0-16_1, 20TH0346-CEI 0-21_2, PV191219N027, 18TH0387-EN50549-2, 20TH0373-CEI 0-16_0, 20TH0373-CEI 0-21_0, 20TH0456-CEI 0-16_0, 64.290.22.31349.01, 64.290.22.31350.01, 64.290.22.31739.01, 64.290.22.30907.01, 6149836.51, 6149836.50, 64.290.21.30677.01, CN239V4B 001, CN23IMRW 001, CN23833U 001, 64.290.22.31380.01, 6149836.51, 6149836.50, 64.290.21.30677.01, CN239V4B 001, CN23IMRW 001, CN23833U 001

Ratings:
Caratteristiche:
See Annex 2 to 8
Vedi Allegati 2 a 8

Test samples of above stated models passed the electrical tests and monitored by annual Factory Inspections at following factory location, made in accordance to:
I campioni di prova sopra riportati sottoposti a verifica hanno superato le prove elettriche e saranno monitorati annualmente mediante ispezione di fabbrica presso il seguente sito, effettuate in conformità della:

Regole applicative per il riconoscimento delle tariffe incentivanti previste dal DM 5 Luglio 2012 (QUINTO CONTO ENERGIA) [§ 4.6.4 – Inverter]

- The factory inspection was based on: / *La verifica in fabbrica si è basata su:*
  CEI 0-21, CEI 0-16, TERNA annex A70 for connection to LV, MV/HV
- The report of the factory inspection includes the requirements of GSE applicative rules about the manufacturing quality process and used materials.
  Il rapporto di ispezione di fabbrica include i requisiti delle regole GSE applicabili al processo di qualità costruttiva e dei materiali utilizzati.
- Components check has been performed in order to guarantee a constant quality level as based on a detailed description supplied by License Holder to BV CPS Germany, as requested by:
  Controllo dei componenti è stato effettuato allo scopo di garantire un costante livello di qualità come prescritto nella dettagliata descrizione fornita dal titolare della licenza a BV CPS Germany come consentito dalla:
  Delibera AEEG n. 84/2012/R/EEL e documenti GSE "Quinto Conto Energia: chiarimenti su definizione edificio energeticamente certificabile e sulle Certificazioni/Attestazioni riguardanti i moduli fotovoltaici ed i gruppi di conversione inverter)";

Factory location:
Sito aziendale:
Huawei Machine Co., Ltd.
No.2 City Avenue, Song Shan Hu Science & Technology Industrial Park
Dongguan Guangdong, 523808, P.R. China

with main production steps: development, assembly, measuring and testing
secondo i seguenti principali processi: progettazione, assemblaggio, misura e controllo

Certificate No.:
Certificato N°.:
23-008

Report No.:
Rapporto N°
CB008
from/da: 2023-06-20

Issued:
Emesso il:
2023-08-03

Valid until:
Valido fino a:
2024-08-02

Ulrich Feike
Certification Body
Bureau Veritas Consumer Products Services Germany GmbH

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Annex 1 / *Allegato 1*

Model:

Grid-tied photovoltaic inverter:

SUN2000L-2KTL, SUN2000L-3KTL, SUN2000L-3.68KTL, SUN2000L-4KTL, SUN2000L-4.6KTL, SUN2000L-5KTL, SUN2000-33KTL-A, SUN2000-36KTL, SUN2000-42KTL

SUN2000-100KTL-H1, SUN2000-105KTLH1, SUN2000-168KTL-H1, SUN2000-185KTL-H1, SUN2000-200KTL-H2,

SUN2000-3KTL-M0, SUN2000-4KTL-M0, SUN2000-5KTL-M0, SUN2000-6KTL-M0, SUN2000-8KTL-M0, SUN2000-10KTL-M0, SUN2000-12KTL-M0, SUN2000-15KTL-M0, SUN2000-17KTL-M0, SUN2000-20KTL-M0, SUN2000-100KTL-M1,

SUN2000-8KTL-M2, SUN2000-10KTL-M2, SUN2000-12KTL-M2, SUN2000-15KTL-M2, SUN2000-17KTL-M2, SUN2000-20KTL-M2

SUN2000-15KTL-M3, SUN2000-17KTL-M3, SUN2000-20KTL-M3, SUN2000-30KTL-M3, SUN2000-36KTL-M3, SUN2000-40KTL-M3, SUN2000-42KTL-M3, SUN2000-215KTL-H0, SUN2000-215KTL-H3

Grid-tied photovoltaic inverter/Grid-tied Battery converter:

SUN2000-2KTL-L1, SUN2000-3KTL-L1, SUN2000-3.68KTL-L1, SUN2000-4KTL-L1, SUN2000-4.6KTL-L1, SUN2000-5KTL-L1, SUN2000-6KTL-L1

SUN2000-3KTL-M1, SUN2000-4KTL-M1, SUN2000-5KTL-M1, SUN2000-6KTL-M1, SUN2000-8KTL-M1, SUN2000-10KTL-M1

Battery Model:

LUNA2000-5KW-C0; LUNA2000-5-E0

Solar inverter, Huawei:

SUN2000-25KTL-M5, SUN2000-20KTL-M5, SUN2000-17KTL-M5, SUN2000-15KTL-M5, SUN2000-12KTL-M5

SUN2000-17KTL-M3, SUN2000-20KTL-M3, SUN2000-23KTL-M3, SUN2000-29.9KTL-M3, SUN2000-30KTL-M3, SUN2000-36KTL-M3, SUN2000-40KTL-M3, SUN2000-50KTL-M3, SUN2000-17KTL-M3, SUN2000-20KTL-M3, SUN2000-23KTL-M3, SUN2000-28KTL-M3, SUN2000-29.9KTL-M3, SUN2000-30KTL-M3, SUN2000-36KTL-M3, SUN2000-40KTL-M3, SUN2000-50KTL-M3

SUN2000-330KTL-H1/H2; SUN2000-115/100KTL-M2

Smart PCS:

LUNA2000-200KTL-H0 (BYD cell), LUNA2000-200KTL-H0/H1 (EVE cell), LUNA2000-100KTL-M1 (BYD cell), LUNA2000-100KTL-M1 (EVE cell)

Annex 2 / *Allegato 2*

Ratings / *Caratteristiche:*

Ratings	**SUN2000L-2KTL**	**SUN2000L-3KTL**	**SUN2000L-3.68KTL**
Input DC voltage [V]	600 Max.		
MPP DC voltage range [V]	90-500		
Input DC current [A]	11 / 11		
Isc PV [A]	15 / 15		
Output AC voltage [V]	220 / 230 / 240Va.c., 50/60Hz		
Max. Output AC current [A]	10	15	16
Rated Output power [kVA]	2	3	3,68
Max. Output power [kVA]	2,2	3,3	3,68
Battery input voltage [V]	600V Max.		
Battery current [A]	10A Max.		

Ratings	**SUN2000L-4KTL**	**SUN2000L-4.6KTL**	**SUN2000L-5KTL**
Input DC voltage [V]	600 Max.		
MPP DC voltage range [V]	90-500		
Input DC current [A]	11 / 11		
Isc PV [A]	15 / 15		
Output AC voltage [V]	220 / 230 / 240Va.c., 50/60Hz		
Max. Output AC current [A]	20	23	25
Rated Output power [kVA]	4	4,6	5
Max. Output power [kVA]	4,4	5	5,5
Battery input voltage [V]	600V Max.		
Battery current [A]	10A Max.		

Annex 3 / *Allegato 3*

Ratings	SUN2000-33KTL-A	SUN2000-36KTL	SUN2000-42KTL
MPP DC voltage range [V]	480-800	480-850V or 580-850V	580-850V
Input DC voltage range [V]	200-1000V, Max. 1100		
Input DC current [A]	Max. 22.0 x 4		
Output AC voltage [V]	400, 3(N)~ + PE, 50Hz	400, 3(N)~* + PE, or 480, 3~ + PE, 50Hz	480, 3~ + PE, 50Hz
Output AC current [A]	Max. 48,0 x 3	Max. 57,8 x3 (400Vac) or Max. 48,2A x3 (480Vac)	Max. 56,6 x3
Output power [VA]	Max. 33000	Max. 40000	Max. 47000
*Choose whether to connect the neutral wire to the SUN2000-36KTL based on the application scenario.			

Ratings:	SUN2000-168KTL-H1	SUN2000-185KTL-H1
MPP DC voltage range [V]:	500 - 1500	
Input DC voltage range [V]:	830 - 1300	830 - 1300
Input DC current [A]:	Max. 9 x 26	
Output AC voltage [V]:	800, 3~ + PE, 50/60Hz	
Output AC current [A]:	Max. 122,5	Max. 134,9
Nominal Output power [kW]:	150	175
Maximum Output power [kVA]:	168	185

Ratings:	SUN2000-100KTL-H1	SUN2000-105KTL-H1	SUN2000-200KTL-H2
Input DC voltage range [V]:	600 - 1500		
Full load MPP DC voltage range [V]:	880 - 1300	880 - 1300	930-1300
Input DC current [A]:	Max. 22A*6	Max. 25A*6	Max. 9 x 30
Output AC voltage [V]:	800, 3~ + PE, 50/60Hz		
Output AC current [A]:	Max. 80,2	Max. 84,6	Max. 155,2
Nominal Output power [kW]:	100	105	185
Maximum Output power [kVA]:	105	116	215

Annex 4 / *Allegato 4*

Ratings:	**SUN2000-3KTL-M0** **SUN2000-3KTL-M1**	**SUN2000-4KTL-M0** **SUN2000-4KTL-M1**	**SUN2000-5KTL-M0** **SUN2000-5KTL-M1**
MPP DC voltage range [V]:	140-980		
Input DC voltage range [V]:	140-1100, max. 1100		
Input DC current [A]: (For SUN2000-xKTL-M0 series)	11A max. x 2 strings		
Input DC current [A]: (For SUN2000-xKTL-M1 series)	13.5A max. x 2 strings		
Battery side DC voltage range [V]:	max.1100		
Battery side DC current [A]:	max. 16,0		
Output AC voltage [V]:	230/400, 3(N)~ + PE, 50Hz		
Output AC current [A]:	max. 5,1	max. 6,8	max. 8,5
Nominal Output power [kVA]:	3,0	4,0	5,0
Maximum Output power [kVA]:	3,3	4,4	5,5

Ratings:	**SUN2000-6KTL-M0** **SUN2000-6KTL-M1**	**SUN2000-8KTL-M0** **SUN2000-8KTL-M1**	**SUN2000-10KTL-M0** **SUN2000-10KTL-M1**
MPP DC voltage range [V]:	140-980		
Input DC voltage range [V]:	140-1100, max. 1100Vdc		
Input DC current [A]: (For SUN2000-xKTL-M0 series)	11A max. x 2 strings		
Input DC current [A]: (For SUN2000-xKTL-M1 series)	13.5A max. x 2 strings		
Battery side DC voltage range [V]:	max.1100		
Battery side DC current [A]:	max. 16,0		
Output AC voltage [V]:	230/400Vac, 3(N)~ + PE, 50Hz		
Output AC current [A]:	max. 10,1	max. 13,5	max. 16,9
Nominal Output power [kVA]:	6,0	8,0	10,0
Maximum Output power [kVA]:	6,6	8,8	11,0

Annex 5 / *Allegato 5*

Ratings:	**SUN2000-8KTL-M0** **SUN2000-8KTL-M2**	**SUN2000-10KTL-M0** **SUN2000-10KTL-M2**	**SUN2000-12KTL-M0** **SUN2000-12KTL-M2**
MPP DC voltage range [V]:	160-950		
Input DC voltage range [V]:	160-1080		
Input DC current [A]: (For SUN2000-xKTL-M0 series)	Max. 22 x 2 strings		
Input DC current [A]: (For SUN2000-xKTL-M2 series)	Max. 27 x 2 strings		
Output AC voltage [V]:	230/400, 3(N)~ + PE, 50Hz/60Hz		
Output AC current [A]:	Max. 13,4	Max. 17,0	Max. 20,0
Nominal Output power [kVA]:	8,0	10,0	12,0
Maximum Output power [kVA]:	8,8	11,0	13,2

Ratings:	**SUN2000-15KTL-M0** **SUN2000-15KTL-M2**	**SUN2000-17KTL-M0** **SUN2000-17KTL-M2**	**SUN2000-20KTL-M0** **SUN2000-20KTL-M2**
MPP DC voltage range [V]:	160-950		
Input DC voltage range [V]:	160-1080		
Input DC current [A]: (For SUN2000-xKTL-M0 series)	Max. 22 x 2 strings		
Input DC current [A]: (For SUN2000-xKTL-M2 series)	Max. 27 x 2 strings		
Output AC voltage [V]:	230/400, 3(N)~ + PE, 50Hz/60Hz		
Output AC current [A]:	Max. 25,2	Max. 28,5	Max. 33,5
Nominal Output power [kVA]:	15,0	17,0	20,0
Maximum Output power [kVA]:	16,5	18,7	22,0

Annex 6 / *Allegato 6*

Ratings:	**SUN2000-100KTL-M1**
MPP DC voltage range [V]:	200-1000
Input DC voltage range [V]:	200-1100
Input DC current [A]:	Max. 26A*10
Output AC voltage [V]:	400 Vac, 3W+N+PE; 50Hz 480 Vac, 3W+PE, 50Hz
Output AC current [A]:	Max. 160.4 A (400 Vac) Max. 133.7 A (480 Vac)
Nominal Output power [kVA]:	100
Maximum Output power [kVA]:	110

Ratings:	**SUN2000-2KTL-L1**	**SUN2000-3KTL-L1**	**SUN2000-3.68KTL-L1**
Input DC voltage [V]:	Max. 600		
MPP DC voltage range [V]:	90-560		
Input DC current [A]:	12,5/12,5		
Isc PV [A]:	18 / 18		
Output AC voltage [V]:	230Va.c., 50Hz		
Max. Output AC current [A]:	10	15	16
Rated Output power [kVA]:	2	3	3,68
Max Output power [kVA]:	2,2	3,3	3,68
Battery input voltage [V]:	Max. 600		
Battery current [A]:	Max. 15		

Ratings:	**SUN2000-4KTL-L1**	**SUN2000-4.6KTL-L1**	**SUN2000-5KTL-L1**	**SUN2000-6KTL-L1**
Input DC voltage [V]:	Max. 600			
MPP DC voltage range [V]:	90-560			
Input DC current [A]:	12,5/12,5			
Isc PV [A]:	18 / 18			
Output AC voltage [V]:	230Va.c., 50Hz			
Max. Output AC current [A]:	20	23	25	27,3
Rated Output power [kVA]:	4	4,6	5,0	6,0
Max Output power [kVA]:	4,4	5,0	5,5	6,0
Battery input voltage [V]:	Max. 600			
Battery current [A]:	Max. 15			

Annex 7 / *Allegato 7*

Ratings:	**SUN2000-15KTL-M3**	**SUN2000-17KTL-M3**	**SUN2000-20KTL-M3**
MPP DC voltage range [V]:	200-1000		
Input DC voltage range [V]:	200-1100		
Input DC current [A]:	Max. 26A*4		
Output AC voltage [V]:	400 Va.c., 3W+N+PE; 50Hz		
Max. Output AC current [A]:	25,2	28,5	33,5
Nominal Output power [kW]:	15,0	17,0	20,0
Maximum Output power [kVA]:	16,5	18,7	22,0

Ratings:	**SUN2000-30KTL-M3**	**SUN2000-36KTL-M3**
MPP DC voltage range [V]:	200-1000	
Input DC voltage range [V]:	200-1100	
Input DC current [A]:	Max. 26A*4	
Output AC voltage [V]:	400 Va.c., 3W+N+PE; 50Hz 480 Va.c., 3W+PE; 50Hz	
Max. Output AC current [A]:	47,9A/ 400 Va.c. 39,9A/ 480 Va.c.	58,0/ 400 Va.c. 48,4/ 480 Va.c.
Nominal Output power [kW]:	30	36
Maximum Output power [kVA]:	33	40

Ratings:	**SUN2000-40KTL-M3**	**SUN2000-42KTL-M3**
MPP DC voltage range [V]:	200-1000	
Input DC voltage range [V]:	200-1100	
Input DC current [A]:	Max. 26A*4	
Output AC voltage [V]:	400 Va.c., 3W+N+PE; 50Hz 480 Va.c., 3W+PE; 50Hz	480 Va.c., 3W+PE; 50Hz
Max. Output AC current [A]:	63,8A/ 400 Va.c. 53,2A/ 480 Va.c.	56,8A
Nominal Output power [kW]:	40	42
Maximum Output power [kVA]:	44	47

Annex 8 / *Allegato 8*

Battery Models	**LUNA2000-5KW-C0** **LUNA2000-5-E0**
Capacity of each battery module (kWh):	5 - 30
Number(s) of battery modules recommended by the manufacturer:	1 - 6

Ratings:	**SUN2000-215KTL-H0**	**SUN2000-215KTL-H3**
Input DC voltage range [V]:	500 - 1500	
Input DC current [A]:	max. 9 x 30	max. 3 x 100
Output AC voltage [V]:	800Vac, 3W + PE, 50Hz	
Output AC current [A]:	max. 155,2	max. 155,2
Nominal Output power [kW]:	200	200
Maximum Output power [kVA]:	215	215