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VERITAS**

# Certificate of compliance

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

**Product:** **Grid-tied Photovoltaic (PV) inverter**

**Model:** **SUN2000-15KTL-M3, SUN2000-17KTL-M3, SUN2000-20KTL-M3,**  
**SUN2000-23KTL-M3, SUN2000-28KTL-M3, SUN2000-30KTL-M3,**  
**SUN2000-36KTL-M3, SUN2000-40KTL-M3, SUN2000-42KTL-M3**

**Use in accordance with regulations:**

Automatic disconnection device with three-phase mains surveillance in accordance with Engineering Recommendation G99/1 for photovoltaic systems with a three-phase parallel coupling via an inverter in the public mains supply. The automatic disconnection device is an integral part of the aforementioned inverter. This serves as a replacement for the disconnection device with isolating function that can access the distribution network provider at any time.

**Applied rules and standards:**

**Engineering Recommendation G99 / Issue 1 Amendment 6, 09 March 2020**

Requirements for the connection of generation equipment in parallel with public distribution networks on or after 27 April 2019

for

Type B Power Generating Modules

At the time of issue of this certificate the safety concept of an aforementioned representative product corresponds to the valid safety specifications for the specified use in accordance with regulations.

\* A simulation study is not included.

**Report number:** 20TH0373\_G99/1-6\_0

**Certificate number:** U20-0539

**Certification scheme:** NSOP-0032-DEU-ZE-V01

**Date of issue:** 2020-09-22



**Certification body**

Thomas Lammel

Certification body of Bureau Veritas Consumer Products Services Germany GmbH accredited according to DIN EN ISO/IEC 17065

A partial representation of the certificate requires the written approval of Bureau Veritas Consumer Products Services Germany GmbH



**Annex to the G99/1 certificate of compliance No. U20-0539**

Extract from test report according to the Engineering Recommendation G99

Nr. 20TH0373\_G99/1-6\_0

**Type Approval and declaration of compliance with the requirements of Engineering Recommendation G99**

<b>Details of Power Generating Modules</b>	
<b>Manufacturer / Reference:</b>	Huawei Technologies Co., Ltd. Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129 P.R. China
<b>Technology Type:</b>	Photovoltaic inverter
<b>Firmware version:</b>	V100R001 or higher
<b>Measurement period:</b>	2020-05-11 - 2020-08-30

Unit / Type:	SUN2000-15KTL-M3	SUN2000-17KTL-M3	SUN2000-20KTL-M3
Input DC voltage range [V]..... :	200-1100		
MPP DC voltage range [V]..... :	200-1000		
Input DC current [A] ..... :	max. 26 A x 4		
Nominal output AC voltage [V]..... :	400, 3~ + (N) + PE; 50 Hz		
Nominal Output AC current [A] ..... :	21,7	24,5	28,9
Max. output AC current [A] ..... :	25,2	28,5	33,5
Nominal active output power [kW] :	15,0	17,0	20,0
Max. apparent output power [kVA] :	16,5	18,7	22,0

Unit / Type:	SUN2000-23KTL-M3	SUN2000-28KTL-M3	SUN2000-30KTL-M3
Input DC voltage range [V]..... :	200-1100		
MPP DC voltage range [V]..... :	200-1000		
Input DC current [A] ..... :	max. 26 A x 4		
Nominal output AC voltage [V]..... :	400, 3~ + (N) + PE; 50 Hz	480, 3~ + PE; 50 Hz	400 / 480, 3~ + (N) + PE; 50 Hz
Nominal Output AC current [A] ..... :	33,3	33,1	43,3 / 36,1
Max. output AC current [A] ..... :	35,1	33,5	47,9 / 39,9
Nominal active output power [kW] :	23,0	27,5	30,0
Max. apparent output power [kVA] :	23,0	27,5	33,0

Unit / Type:	SUN2000-36KTL-M3	SUN2000-40KTL-M3	SUN2000-42KTL-M3
Input DC voltage range [V]..... :	200-1100		
MPP DC voltage range [V]..... :	200-1000		
Input DC current [A] ..... :	max. 26 A x 4		
Nominal output AC voltage [V]..... :	400 / 480, 3~ + (N) + PE; 50 Hz	400 / 480, 3~ + (N) + PE; 50 Hz	480, 3~ + PE; 50 Hz
Nominal Output AC current [A] ..... :	52,0 / 43,3	57,8 / 48,1	50,5
Max. output AC current [A] ..... :	58,0 / 48,4	63,8 / 53,2	56,8
Nominal active output power [kW] :	36,0	40,0	42,0
Max. apparent output power [kVA] :	40,0	44,0	47,0



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## Annex to the G99/1 certificate of compliance No. U20-0539

Extract from test report according to the Engineering Recommendation G99

Nr. 20TH0373\_G99/1-6\_0

### Type Approval and declaration of compliance with the requirements of Engineering Recommendation G99

#### Description of the structure of the power generation unit:

The power generation unit is equipped with a PV and line-side EMC filter. The power generation unit has no galvanic isolation between DC input and AC output. Output switch-off is performed with single-fault tolerance based on two series-connected relays in line and neutral. This enables a safe disconnection of the power generation unit from the network in case of error.

#### Description of the differences of the models within a series:

The units in der series are identical hardware platform. The implemented control and firmware is identical in all units. There is no difference regarding AC behaviour between the PGU-types apart from the output voltage deviation and current limitation of each unit.

The above stated Generating Units are tested according the requirements in the Engineering Recommendation G99/1. Any modification that affects the stated tests must be named by the manufacturer/supplier of the product to ensure that the product meets all requirements of the Engineering Recommendation G99/1.