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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 20321.1-2006

Replacing GB/T 20321.1-2006, GB/T 20321.2-2006

**Inverter of wind and solar energy supply power system for
off-grid**

(English Translation)

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules for Standardization Documents" drafting:

This document replaces GB/T 20321.1-2006 "Inverters for off-grid wind and solar power generation systems Part 1: Technical requirements" and GB/T 20321.2-2006 "Inverters for off-grid wind and solar power generation systems Part 2: Test methods": This document ends with Based on GB/T 20321.1-2006, it integrates Chapter 5 "Test Contents and Test Methods" of GB/T 20321.2-2006 and Chapter 6 "experiment report": Compared with GB/T 20321.1-2006 and GB/T 20321.2-2006, except for structural adjustment and editorial changes, the main the technical changes are as follows:

- a) Changed the "basic parameters and model compilation method", deleted the square wave, changed "rated capacity VA" to "rated power kW" (see Chapter 4, Chapter 4 of GB/T 20321.1-2006);
- b) Deleted "general requirements" (see 5.1 of GB/T 20321.1-2006);
- c) Changed the index requirements for "output frequency" (see 5.3, 5:4 of GB/T 20321.1-2006);
- d) Deleted "temperature rise" (see 5.7 of GB/T 20321.1-2006);
- e) Changed the overvoltage protection and undervoltage protection requirements in "Protection" (see 5.6, 5:8 of GB/T 20321.1-2006);

- f) Changed the index requirements of "load level" (see 5.7, 5.9 of GB/T 20321.1-2006);
- g) Added "remote monitoring" (see 5.9);
- h) Deleted "high and low temperature" (see 5.11 of GB/T 20321.1-2006);
- i) Delete the "requirements for components and auxiliary parts" (see 5.14 of GB/T 20321.1-2006);
- j) Deleted the "working time before the first failure" (see 5.18 of GB/T 20321.1-2006);
- k) Changed the "test method" (see Chapter 6, Chapter 6 of GB/T 20321.1-2006);
- l) Changed the "inspection rules" (see Chapter 7, Chapter 7 of GB/T 20321.1-2006);
- m) Change "test report" to "test item" (see 7.3, Chapter 6 of GB/T 20321.2-2006):

Please note that some contents of this document may refer to patents: The issuing agency of this document assumes no responsibility for identifying patents:

1 Scope

This document specifies the basic parameters and model compilation of inverters (hereinafter referred to as "inverters") used in off-grid wind and solar power generation systems Methods, technical requirements, test methods, inspection rules, marking, packaging, transportation and storage, and quality assurance period:

This document applies to inverters used in off-grid wind and solar power generation systems:

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text: Among them, dated references for documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to this document:

GB/T 191 Packaging, storage and transportation icon marks GB/T 2423.1 Environmental testing for electrical and electronic products - Part 2: Test methods Test A: Low temperature GB/T 2423.2 Environmental testing for electric and electronic products - Part 2: Test methods Test B: High temperature GB/T 2423.3 Environmental testing - Part 2: Test methods Test Cab: Constant damp heat test GB/T 2423.7-2018 Environmental testing Part 2: Test method Test Ec: Shock caused by rough handling (mainly used for equipment type sample) GB/T 2423.10 Environmental testing Part 2: Test method Test Fc: Vibration (sinusoidal) GB/T 2900.33 Electrotechnical Terminology Power Electronic Technology GB/T 3768 Acoustic sound pressure method for measuring sound power level and sound energy

level of noise sources adopts the simple method of enveloping the measuring surface above the reflecting surface:

easy method

GB/T 3859.3-2013 General requirements for semiconductor converters and grid commutation converters Part 1-3: Transformers and reactors

3 Terms and Definitions

The terms and definitions defined in GB/T 2900.33 and GB/T 3859.3-2013 apply to this document:

4 Basic parameters and model compilation method

4.1

Basic parameters the basic parameters of the inverter are:

---Rated output parameters: the number of output phases, rated power, AC voltage and frequency shall comply with the relevant provisions of Table 1;

---Rated input parameters: The rated input DC voltage of the inverter should be selected according to the provisions in Table 2: