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

GB/T 14598.23-2017

**Electrical relays -- Part 21: Vibration, shock, bump and seismic
tests on measuring relays and protection equipment -- Section
3: Seismic tests**

(English Translation)

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Table of Contents

Foreword
1 Scope
2 Normative references
3 Terms and definitions
4 Single axis sine sweep seismic test requirements (Method A)
4.1 The main parameters
4.2 Test Equipment and Installation
4.3 Test severity level
5 Biaxial multi-frequency random seismic test requirements (Method B)
5.1 The main parameters
5.2 Test Equipment and Installation
5.3 Test severity level
5.4 Conditions test
6 Test severity level of choice
6.1 Selection of test grade recommendation
6.2 Determination of test methods and severity level
7 Test Procedure
8 Pass criterion
Appendix A (informative) Seismic test selection principle

Foreword

GB/T 14598 "measuring relays and protection devices" is divided into the following sections.

- GB/T 14598.1 electrical relays Part 23. Contact performance;
- GB/T 14598.2 measuring relays and protection devices Part 1. General requirements;
- GB/T 14598.3 electrical relays Part 5. Measuring relays and protective devices with the requirements of insulation and testing;
- GB/T 14598.4 electrical relays Part 14. Electrical relay contact life test contact excellent load First value
- GB/T 14598.5 electrical relays Part XV. Electrical relay contact life test test equipment characteristics specification;

- GB/T 14598.6 electrical relays Part XVIII with or without general-purpose relay size;
- GB/T 14598.8 electrical relays Part 20. Protection system;
- GB/T 14598.23 Electrical relays Part 21. Measuring vibration and impact of relays and protection devices, shocks and earthquakes Test No. 3. Earthquake test;
- GB/T 14598.24 Measuring relays and protection equipment Part 24. Power System Transient Data Exchange (COMTRADE) common format;
- GB/T 14598.26 Measuring relays and protection devices - Part 26. Electromagnetic compatibility requirements;
- Measuring relays and protection devices GB/T 14598.27 Part 27. Product safety requirements;
- GB/T 14598.121 Measuring relays and protection equipment Part 121. Distance protection requirements;
- GB/T 14598.127 Measuring relays and protection devices Part 127. Over/under voltage protection function requirements;
- GB/T 14598.149 Measuring relays and protection devices Part 149. Functional requirements of electric relays;
- Measuring relays and protection equipment GB/T 14598.151 Part 151. Over/under current protection function requirements;
- GB/T 14598.300 General requirements for transformer protection devices;
- GB/T 14598.301 microcomputer generator transformer fault recording device technical requirements;
- GB/T 14598.302 arc protection device technical requirements;
- GB/T 14598.303 digital motor general protection device general technical conditions.

This section GB/T 14598 Part 23.

This section drafted in accordance with GB/T 1.1-2009 given rules.

This section uses the translation method identical with IEC 60255-21-3:1993 "Electrical Relays Part 21. Measuring relays and protective equipment Vibration, Shock, Collision and Seismic Testing Part 3. Earthquake Testing. " the documents of our country that are consistent with the corresponding international documents that are normative references in this section are as follows.

- GB/T 2298-2010 Glossary of mechanical vibration, shock and condition monitoring (ISO 2041:2009, IDT);
- GB/T 2423.10-2008 Environmental testing for electric and electronic products Part 2.

Test methods Test Fc. Vibration (sinusoidal) (IEC 60068-2-6:1995, IDT);

--- GB/T 2423.48-2008 Environmental testing for electric and electronic products Part 2.
Test methods Test Ff. Vibration - calendar Method (IEC 60068-2-57:1999, IDT).

This part is proposed by China Electrical Equipment Industry Association.

This part of the National Measurement Relay and Protection Equipment Standardization Technical Committee (SAC/TC154) centralized.

This section is drafted. Xuchang Cape Detection Technology Co., Ltd., Nanjing NARI Electric Co., Ltd., Beijing Sifang Automation Protection Co., Ltd., State Power Nanjing Automation Co., Ltd., Xu Ji Group Co., Ltd., Gansu Provincial Power Company Electric Power Research Hospital, Yunnan Power Grid Co., Ltd. Kunming Power Supply Bureau, Beijing Ziguang Measurement and Control Co., Ltd., Long Park, Shenzhen Rui Bao Automation Co., Ltd., plot into electricity Subsidiary Co., Ltd., Hebei Beheng Electric Technology Co., Ltd., Siemens Power Automation Co., Ltd., Schneider Electric (China) Co., Ltd.

Division, Jiangsu Jinzhi Technology Co., Ltd., Zhuhai Wanlida Electric Automation Co., Ltd., State Power NARI Technology Co., Ltd., Hangzhou billion Constant Technology Co., Ltd., State Grid Electric Power Research Institute, Xuchang Cape Electric Institute, Shijiazhuang Colin Electric Co., Ltd.

1 Scope

This part of GB/T 14598 is part of a series of standards for vibration, shock, bump and seismic requirements and is applicable to measuring relays Seismic testing of products such as devices and protection devices, safety automatic devices and interface equipment.

This part includes two types of seismic test method of choice (see Appendix A).

--- Method A. Single-axis sinusoidal sweep seismic test;

--- Method B. Biaxial multi-frequency random earthquake test.

Earthquake tests can be carried out by either one of two seismic methods.

GB/T 14598 provisions of this part of the test for the type test.

The purpose of this section is to provide.

--- Definition of terms used;

---Test conditions;

--- Standard test severity level;

--- Test procedures;

--- Qualification criteria.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version applies to this article Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 2424.25-2000 Environmental testing for electric and electronic products Part 3. Test guidelines Earthquake test method (IEC 60068-3-3:1991, IDT) GB/T 11287-2000 Electrical relays - Part 21. Vibration, shock, bump and earthquakes of measuring relays and protection devices Test Part 1. Vibration Test (Sine) (IEC 60255-21-1:1988, IDT) GB/T 14537-1993 Impact resistance and impact tests on measuring relays and protection devices (idtIEC 60255-21-2.1988) IEC 60050 International Electrotechnical Vocabulary (Internationalelectrotechnicalvocabulary) Environmental testing Part 2. Test methods Test Fc. Vibration (sinusoidal) [Environmentaltesting-Part 2: Tests-TestFcandguidance.Vibration (sinusoidal)] Environmental testing Part 2. Test methods Test Ff. Vibration - time history method (Environmentaltesting-Part 2. Tests-TestFf.Vibration-Time-historymethod) ISO 2041:1990 Vibration and Shock Vocabulary (Vibrationandshock-Vocabulary)

3 Terms and definitions

GB/T 2424.25-2000, GB/T 11287-2000, GB/T 14537-1993 IEC 60050, IEC 60068-2-6:1982,