

ICS 29.120.70

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

GB/T 14598.24-2017

Replacing GB/T 22386-2008

**Measuring relays and protection equipment -- Part 24: Common
format for transient data exchange (COMTRADE) for power
systems**

(English Translation)

Issued on: July 31, 2017

Implemented on: February 1, 2018

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China, Standardization
Administration of the People's Republic of China**

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Foreword

"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 14598.24 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;
- GB 14598.27 Measuring relays and protection devices - 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 computer transformer protection device general technical requirements;
- 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 24.

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

This section instead of GB/T 22386-2008 "power system transient data exchange common format", compared with GB/T 22386-2008, the main technical differences.

- The new version allows the use of a single file format (with .CFF suffix) file instead of four separate files;

A single file with a .CFF suffix contains 4 partitions, corresponding to .CFG, .INF, .HDR, and .DAT, respectively. DAT partition both can be ASCII format can also be Binary format;

- Support binary32 and float32 data types;
- . CFG file format revision. The end of the .CFG added time-related two lines of a total of four domain content;
- . CFG part of the file can be amended as a mandatory option;
- Added UnicodeUTF-8 format support.

This section uses the translation method identical with IEC 60255-24:2013 "Measuring relays and protection devices Part 24. Power System temporarily Common Format Data Exchange (COMTRADE) "(in English).

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 part of the main drafting unit. Nanrui Nanjing Electric Co., Ltd. following security, Xuchang Cape Detection Technology Co., Ltd., Beijing Sifugi following Paul from Motion Co., Ltd., Xuchang Cape Electric Institute, Xuji Electric Co., Ltd., China Southern Power Grid Power Dispatching Control Center, the country Gansu Provincial Power Company, State Grid Shandong Electric Power Company, State Grid Hebei Electric Power Co., Ltd., State Grid Hebei Electric Power Company, State Power Nanjing Automatic Co., Ltd., Long Park, Shenzhen Rui Bao Automation Co., Ltd., Beijing Purple Measurement and Control

Co., Ltd., Semiconductor Co., Ltd., the East Electronics Co., Ltd., State Grid Electric Power Research Institute, Schneider Electric China Ltd., Siemens Power Automation Co., Ltd., State Power NARI Technology Co., Ltd., Baoding Lang Baidi Electric Co., Ltd., Wuhan Zhongyuan Huadian Technology Co., Ltd., Wuhan Guodian Electric Co., Ltd.

Introduction

With the rapid development of the application of digital technology, various protection, recording, measuring and controlling equipment of substation in the transient event of power system Will accumulate a large number of digital records. In addition, analog and digital power system simulations produce digital records as well. The use of these records are facing the problem of handling different data formats generated, stored and transmitted by various systems.

Measuring relays and protection devices Part 24. Power system transient data Exchange (COMTRADE) common format

1 Scope

This section GB/T 14598 defines a file format that applies to contain the transient obtained from the power system or power system model Waveform and event data files. This section provides an easy-to-interpret data exchange format suitable for storage in a variety of current applications Files on physical media, such as removable media, USB storage, flash memory, CDs and DVDs. This section does not communicate through the Internet format.

This section GB/T 14598 defines a common exchange format for a variety of fault, test and simulation data files and Exchange media. With the continuous development and application of fault and transient digital data recording and testing in the power industry, a data exchange the standard format of the demand. The application of these data will improve the analysis of the power system and its protection control measures in case of disturbance, Testing, evaluation and simulation of the automation level. Because each data source may use a different proprietary format, define a can promote these data A common format for switching between different devices is necessary, which facilitates the exchange and use of private data between different applications and also permits private the system uses data from other systems.

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.

IEEEEC37.118-2005 Power system synchronous phasor device (IEE
EStandardforSynchrophasorsforPower Systems) IEEEC37.232-2007 Recommended