

ICS 29.240.10

CCS K 40



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

GB/T 16896.2-2016

Replacing GB/T 16896.2-2010

**Instruments and software used for measurement in
high-voltage and high-current tests -- Part 2: Requirements for
software for tests with impulse voltages and currents
(English Translation)**

Issued on: February 24, 2016

Implemented on: September 1, 2016

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

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Foreword

GB/T 16896 "high voltage and high current test equipment and software" is divided into two parts.

- Part 1. Requirements for instruments;

Part 2. Requirements for software for impact voltage and inrush current testing.

This part is part 2 of GB/T 16896.

This part is drafted in accordance with the rules given in GB/T 1.1-2009.

This part replaces GB/T 16896.2-2010 "High voltage impact measuring instruments and software Part 2. Software requirements". versus GB/T 16896.2-2010 compared to the editorial changes in the main technical changes are as follows.

--- updated the test data generator software;

- increases the number of standard shock waveforms in the test data generator;
- recalculate all standard values according to the new definition of GB/T 16927.1-2011 and GB/T 16927.4-2014;
- the method of estimating the uncertainty of the parameter evaluation is introduced and consistent with the procedure described in GB/T 16927.2-2013;
- only to retain the data appendix test data generator (TDG) program description, increase the normative Appendix A --- TDG shock wave of the standard values and their acceptable limits and informative Appendix B - Alternatives to the assessment of uncertainty.

This part uses the re-drafting method to modify the use of IEC 61083-2.:2013 "High Voltage and High Current Test Instruments and Software Part 2. Requirements for software for impact voltage and inrush current test ".

Due to national standards and differences in the international standard, in the draft of this standard for the original part of the international standard suspension section added the article number, Resulting in the subsequent part of the article number changes.

The technical differences between this section and IEC 61083-2.:2013 are as follows.

--- on the normative reference documents, this standard has made a technical differences in the adjustment to meet China's technical conditions, adjust the situation the situation is reflected in the 2 "normative reference document", the specific adjustments are as follows.

Replace IEC 61083-1.:2001 with GB/T 16896.1-2005 with international standard modification;

Replace IEC 60060-1.:2010 with GB/T 16927.1-2011 with international standard modification;

Replace IEC 60060-2.:2010 with GB/T 16927.2-2013 with international standard modification;

Replace IEC 60060-3.:2006 with GB/T 16927.3-2010 with equivalent international standards;

Replace GB 62475..2010 with GB/T 16927.4-2014 with international standard modification;

- Added reference to JJF1059.1-2012.
- Added the description of the Data Appendix C Test Data Generator (TDG) program.

This part is made by China Electrical Equipment Industry Association.

This part of the national high-voltage test technology and insulation with the Standardization Technical Committee (SAC/TC163) centralized.

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This standard is replaced by the previous version of the standard release.

--- GB/T 16896.2-2010.

High voltage and high current test equipment and software Part 2. Test for impulse voltage and inrush current with the requirements of the software

1 Scope

To meet GB/T 16927.1-2011, GB/T 16927.2-2013, GB/T 16927.3-2010 and GB/T 16927.4-the software for measuring uncertainty and procedures specified in 2014, this part of GB/T 16896 specifies the impact voltage and impulse current test wave Shape and standard values.

This part applies to the calculation of the impact test recorded in the impact voltage and impact current parameters of the software.

This section does not apply to hardware with built-in firmware that can not accept external input data.

This section includes.

- to determine the necessary tests to show that the performance of the software in line with the relevant national standards;
- define terms related to digital processing;
- the standard value of the standard shock wave and the acceptable limits;
- Requirements for performance records;
- a method of assessing software components for measuring uncertainty.

2 Normative reference documents

The following documents are indispensable for the application of this document. For dated references, only the dated edition applies to this article. For undated references, the latest edition (including all modifications) applies to this document.

GB/T 16896.1-2005 High voltage shock measuring instruments and software - Part 1. Requirements for instruments (IEC 61083-1.

2001, MOD)

GB/T 16927.1-2011 High voltage test technology - Part 1. General definition and test requirements (IEC 60060-1.:2010, MOD) GB/T 16927.2-2013 High voltage test technology - Part 2. Measuring systems (IEC 60060-2.:2010, MOD) GB/T 16927.3-2010 High voltage test technology - Part 3. Definitions and requirements for field testing (IEC 60060-3.:2006, MOD) GB/T 16927.4-2014 High voltage and high current test techniques - Part 4. Definitions and requirements for test currents and measuring systems (IEC 62475.:2010, MOD) Evaluation and Representation of Measurement Uncertainty JJF1059.1-2012

3 Terms and definitions

The following terms and definitions apply to this document.

Note: The relevant parameters given in the relevant provisions of GB/T 16927.1-2011, GB/T 16927.3-2010 and GB/T 16927.4-2014 See Table 1 and Table 2 for other definitions.