

ICS 17.220.20

CCS N23



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

GB/T 13970-2008

Replacing GB/T 13970-1992

Basic parameter terms of digital instruments

数字仪表基本参数术语

Issued on: August 19, 2008

Implemented on: March 1, 2009

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

Table of Contents

1	Scope	
2	Normative references	
3	Terms and Definitions	
4	And the measured power type related terms	
4.1	A direct current DC current - DC voltage conversion method	
7	Rated working conditions and terms	3
8	calibration-related characteristics of the term	3
9	and the measuring input power characteristics related terms	3
10	and Measurement (conversion) range correlation properties terminology	4
11	and the sampling time characteristics transform related terms	4
12	terms and accuracy-related features	

Foreword

This standard replaces GB/T 13970-1992 "Basic parameters series digital instrument." This standard and GB/T 13970-1992 main differences.

--- According to GB/T 1.1-2000. provisions "Standardization Guide Part 1 standard structure and write rules", modification series Write format;

--- The standard name to read. "The basic parameters of the term digital instrument";

--- Increasing the standard preface;

--- Normative references, increasing the GB/T 13978, GB/T 14913 standard;

--- Added some terminology inductors, capacitors, etc., and the introduction of "uncertainty" concept;

--- Delete "Transform Characteristics" section;

--- Added Appendix A "basic uncertainty and job uncertainty representation." Appendix A of this standard is a normative appendix. The standard proposed by China Machinery Industry Federation. This standard by the National Electrical Instrument Standardization Technical Committee (SAC/TC104) centralized. This standard was drafted. Harbin Electrical Instrument Research Institute, Shenzhen Century Man Communication Equipment Co., Ltd., Shanghai Sida Electronic Instrument Co., , Dongguan Huayi Instrument Technology Co., lied Technology (Dongguan) Co., Ltd., the National Electrical Instrument for Quality Supervision and Inspection Center, Hubei Electric Power Research Institute, Jiangxi Electric Power Research Institute, Shanghai EF Electronics Technology Co., Ltd., Jiangsu Province of Quantitative Research Institute, Shanghai Institute of Measurement and Testing Technology, Shandong Institute of Metrology. The main drafters of this standard. Guo Li Lu,

Liuxian Cheng, Shen Li, Shao Fengyun Sit Jin, Sun Ping, Li Lin to Lei, Zhang Qin, Ma Xuefeng, Ye Jiang Xue, Zhudeng Wei, Hulin Sheng. This standard replaces the standards previously issued as follows:

--- GB/T 13970-1992. The basic parameters of the term digital instruments

1 Scope

GB/T 13970-2008 is the Chinese national standard on basic parameter terms of digital instruments, in the field of metrology and measurement. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 19 August 2008 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 March 2009. Classification: ICS 17.220.20, CCS N23. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the basic parameters of the term digital instrument performance characteristics. This standard applies to the following basic electricity measuring analog to digital converter Or digital meter. DC and AC current; DC and AC voltage; DC and AC power; Power factor or phase; frequency; Resistance, impedance or components thereof. This standard also applies to the basic measurement of electricity meter multi-purpose. In the multi-function instrument, this standard applies only to the above-mentioned basic power measurement functions section. This standard is also applicable to the above basic power as non-power analog measuring instruments. This standard does not specify the term digital instrument parameters with attachments (for example, shunt, high voltage probe, filters, etc.) performance characteristics. This standard does not apply based on the amount of electrical energy is converted to a digital manner of electrical measuring instruments.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 4208-1993 shell protection (IP code)

GB/T 4793.1 measurement, control and laboratory use safety requirements for electrical

equipment - Part 1. General requirements

GB/T 13978-2008 General technical conditions for digital multimeter

GB/T 14913 DC digital voltmeter and analog to digital converter

3 Terms and Definitions

GB/T 13978-2008, terms and definitions GB/T 14913 in established apply to this standard.

4 And the measured power type related terms

The main types of measured power of representation and terminology in Table 1. Table 1 tested parameters indicate the main types and terminology Terms in the units and parameters Note

4.1 A direct current DC current - DC voltage conversion method

4.2 DC voltage V [the instrument's measurements (conversion) the scope of the normalization process of its adapting] AC current

4.3 A AC current - DC voltage conversion;

- a) the average response;
- b) True RMS response;
- c) other response