GB

NATIONAL STANDARD OF THE

PEOPLE'S REPUBLIC OF CHINA

ICS 17.220
K 04

GB/T 12113-2003 / IEC 60990:1999

Replacing GB/T 12113-1996

Methods of measurement of touch current and protective conductor current

接触电流和保护导体电流的测量方法

(IEC 60990:1999, IDT)

Issued on: November 24, 2003 **Implemented on: August 01, 2004**

Issued by: General Administration of Quality Supervision, Inspection and Quarantine of the PRC

Table of Contents

Foreword

This Standard is identical to the second edition (English edition) of IEC 60990:1999 "Methods of measurement of touch current and protective conductor current".

This Standard is a revision of GB/T 12113-1996 "Methods of measurement of touch-current and protective conductor current" (identical to IEC 60990:1990).

The revised "Methods of measurement of touch current and protective conductor current" has further explained the measurement of touch current and the calibration of measuring instruments and networks. For example, in order to accommodate some test situations, provision of an earthing alternative for testing; provision of a more detailed description of the design and calibration of the measurement network. This allows deletion of component tolerances from the network diagrams; provides the measurement network, instrument performance and initial calibration, and calibration methods and criteria in the confirmation system.

This Standard is a recommended standard developed in order to coordinate the various equipment committees in formulating or revising the "leakage current" measurement method, which includes the reason and purpose for the development of this Standard and the basis for different measurement methods. Therefore, using IEC 60990 identically has certain guiding significance for implementing the safety standards of various equipment and formulating corresponding leakage current measurement methods. In order to promote international trade and communication, participate in international product safety certification, and coordinate with international standards, this Standard is identical to IEC 60990:1999.

This Standard, from the date of implementation, shall replace and repeal GB/T 12113-1996.

Annexes A, B, C, and L of this Standard are normative annexes.

Annexes D, E, F, G, H, J, K, and M of this Standard are informative annexes.

This Standard was proposed by Ministry of Industry and Information Technology of the PRC.

This Standard shall be under the jurisdiction of China Electronics Standardization Institute (CESI).

Drafting organization of this Standard: China Electronics Standardization Institute (CESI).

Methods of measurement of touch current and protective conductor current

1 Scope

This Standard defines measurement methods for

- d.c. or a.c. of sinusoidal or non-sinusoidal waveform, which could flow through the human body, and

- current flowing through a protective conductor.

The measuring methods recommended for TOUCH CURRENT are based upon the possible effects of current flowing through a human body. In this Standard, measurements of current through networks representing the impedance of the human body are referred to as measurements of TOUCH CURRENT. These networks are not necessarily valid for the bodies of animals.

The specification or implication of specific limit values is not within the scope of this Standard. IEC 60479-1 provides information regarding the effects of current passing through the human body from which limit values may be derived.

This Standard is applicable to all classes of EQUIPMENT, according to IEC 60536.

The methods of measurement in this Standard are not intended to be used for

- TOUCH CURRENTS having less than 1 s duration,

- patient currents as defined in GB 9706.1,

- a.c. at frequencies below 15 Hz,

- a.c. in combination with d.c. The use of a single network for a composite indication of the effects of combined a.c. and d.c. has not been investigated,

- currents above those chosen for ELECTRIC BURN limits.

This basic safety publication is primarily intended for use by technical committees in the preparation of standards in accordance with the principles laid down in IEC Guide 104 and ISO/IEC Guide 51. It is not intended for use by manufacturers or certification bodies.

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