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NATIONAL METROLOGY TECHNICAL SPECIFICATION OF THE

PEOPLE'S REPUBLIC OF CHINA

JJF 1923-2021

Calibration Specification for Verification Equipment of Electrical Measuring Devices

电测量仪表校验装置校准规范

(English Translation)

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Introduction

This specification is based on JJF 1071-2010 "Rules for Compilation of National Metrology Calibration Specifications", JJF 1059.1-2012 "Measurement Uncertainty Evaluation and Representation" was compiled.

This specification is published for the first time.

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Calibration specification for calibration devices for electrical measuring instruments

1 Scope

This specification applies to the calibration of the calibration device for electrical measuring instruments of class 0.05 and below (hereinafter referred to as the calibration device).

The calibration device has single-phase or three-phase AC voltage, current, frequency, power and phase output functions, and can have direct Current voltage, DC current output function.

In this specification, the upper limit of AC voltage is 1000V, the upper limit of AC current is 100A, and the frequency range is 40Hz~ 70Hz; the upper limit of DC voltage is 1000V, and the upper limit of DC current is 100A.

2 Reference documents this specification references the following documents.

GB/T 15637-2012 General Specification for Digital Multimeter Calibrator for dated references, only the dated version applies to this specification; for undated references the latest version (including all amendments) applies to this specification.

3 Overview

The calibration device is composed of a signal output unit, a standard measurement unit and a control display unit, etc. It is generally used for calibration/Calibrate single-phase or three-phase voltmeter, ammeter, power meter and other AC and DC measuring instruments, its structure can be divided into meter source There are two types. integrated type and table source separated type.

4 Metrology characteristics

4.1 Accuracy class

The accuracy level and maximum allowable error of the calibration device are shown in Table 1.

Table 1 Accuracy class and maximum allowable error of calibration device

Features

maximum allowable error Level 0.05 Level 0.1 Level 0.2 AC voltage, current ±0.05% ±0.1% ±0.2% Active power ±0.05% ±0.1% ±0.2% Reactive power ±0.1% ±0.2% ±0.5% Phase/(°) ±0.1 ±0.2 ±0.5 Frequency/Hz ±0.01 ±0.02 ±0.05 DC voltage, current ±0.05% ±0.1% ±0.2% Note. The maximum allowable error of other functions except phase and frequency refers to the guide error, which is expressed as a percentage.

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