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**INDUSTRY STANDARD OF THE
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**Calibration Specification for Electronic Instrument Transformers
(English Translation)**

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9 Re-school time interval (9)

Appendix A Ratio error and phase error measurement Uncertainty evaluation (10)

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Introduction

This specification refers to the use of GB/T 20840.8-2007 "Transformer Part 8. Electronic Current Transformer" and GB/T 20840.7-2007 "Transformer Part 7. Electronic voltage transformer" measurement performance requirements, and with the promulgated JJG313 "measuring current transformer" and JJG314 "measurement with the voltage transformer" in harmony.

This specification is based on JJF 1071-2010 "national measurement calibration standard preparation rules", JJF 1001-2011 "pass Metrological terms and definitions ", JJF 1059.1-2012" Measurement Uncertainty Assessment and Representation ".

This specification is the first release.

Specification for electronic transformer calibration

1 Scope

This specification applies to the rated frequency of 50Hz 0.1 to 5 grade electronic current transformer and electronic voltage Transformer calibration.

2 reference file

This specification refers to the following documents.

Transformers - Part 7. Electronic voltage transformers GB/T Transformers - Part 8. Electronic current transformers GB/T DL/T 860.92-2016 Power automation communication networks and systems - Part 9-2. Specific communication services (SCSM) based on ISO/IEC 8802-3 sampling values Technical condition of electronic current and voltage transformer calibrator GB/T 1394-2014 for dated references, only the dated edition applies to this specification; references that are not dated , The latest version (including all modifications) applies to this specification.

3 terms and units of measurement GB/T 20840.7-2007, GB/T 20840.8-2007 Definitions and definitions The following terms and definitions apply to Fan. For ease of use, the following are repeated in the GB/T 20840.7-2007, GB/T 20840.8-2007 Certain terms and definitions.

3.1 ratio error (epsilon) ratioerror Measure the current/voltage error, it is due to the actual ratio is not equal to the rated ratio generated. Ratio error the fraction epsilon is expressed by the formula (1) $\epsilon = \frac{K_n \cdot F_s - F_p}{F_p} \times 100\%$ (1) where.

Kn --- rated variable ratio;

Fp - the square root value of the primary current/voltage fundamental;

Fs - the fundamental square root value of the digital output of the merging unit.

3.2 phase difference (ϕ) phasedisplacement [GB/T 20840.8-2007, definition 3.1.26] the digital output, for a terminal of a current/voltage occurs instantly with the corresponding digital data set in the merger the difference in the transmission instantaneous delay of the unit output (expressed in angular units of rated frequency).

Note: This definition is strictly correct only for sine wave current/voltage.

3.3 Rated delay time (tdr) rateddelaytime [GB/T 20840.8-2007, Definitions 3.1.27]