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

GB/T 14598.2-2025

Replacing GB/T 14598.2-2011

**Measuring relays and protection equipment - Part 1: Common
requirements
(English Translation)**

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document is Part 1 of GB/T 14598. GB/T 14598 has been published in the following parts.

- GB/T 14598.2 Measuring relays and protection devices Part 1: General requirements;
- GB/T 14598.3 Electrical relays Part 5: Insulation coordination requirements and tests for measuring relays and protection devices;
- GB/T 14598.8 Electrical relays Part 20: Protection systems;
- GB/T 14598.23 Electrical relays Part 21: Vibration, shock, impact and earthquake of measuring relays and protective devices Test Part 3: Earthquake Test;
- GB/T 14598.24 Measuring relays and protection devices Part 24: Transient data exchange in power systems (COMTRADE) Common format;
- GB/T 14598.26 Measuring relays and protection devices Part 26: Electromagnetic compatibility requirements;

- GB/T 14598.27 Measuring relays and protection devices Part 27: Product safety requirements;
- GB/T 14598.118 Measuring relays and protection devices Part 118: Synchronous phasor measurement in power systems;
- GB/T 14598.121 Measuring relays and protection devices Part 121: Requirements for distance protection functions;
- GB/T 14598.127 Measuring relays and protection devices Part 127: Over/undervoltage protection function requirements;
- GB/T 14598.149 Measuring relays and protection devices Part 149: Functional requirements of electric heating relays;
- GB/T 14598.151 Measuring relays and protection devices Part 151: Over/under current protection function requirements;
- GB/T 14598.181 Measuring relays and protection devices Part 181: Requirements for frequency protection functions;
- GB/T 14598.300 General technical requirements for transformer protection devices;
- GB/T 14598.301 Technical requirements for continuous recording devices in power systems;
- GB/T 14598.302 Technical requirements for arc protection devices;
- GB/T 14598.303 General technical requirements for digital integrated motor protection devices;
- GB/T 14598.1871 Measuring relays and protection devices Part 187-1. Functional requirements for differential protection of motors, Generator and transformer ratio brake differential protection and differential quick-break protection.

This document replaces GB/T 14598.2-2011 "Measuring relays and protection devices Part 1: General requirements" and Compared with GB/T 14598.2-2011, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

- Added description of typical application scenarios of measuring relays and protection devices specified in this document (see Chapter 1);
- Added the definition of communication port terms (see 3.1.10) and network security requirements (see 6.7);
- Added the definition of low power transformer terminology (see 3.1.20, 3.1.21, 3.1.22), and changed the secondary relay requirements accordingly (see 5.2.1.2, 5.3.2, 5.2.1.2, 5.3.1.2 of the 2011 edition) and setting requirements (see A.2.3, A.2.4, A.2.6, 2011 edition) A.2);

- Added the definition of terms for merging units (see 3.1.23) and related requirements (see 6.5.1, 7.2, B.1);
- Changed the test reference condition items, added battery monitoring port, switch input, switch output, wired network port, Maintenance port, human-machine interface HMI (display), grounding port (see Table 11 in 7.1 and Table 10 in 7.2 of the 2011 edition);
- Deleted transportation, storage, installation, operation and maintenance (Chapter 9 of the 2011 edition)
- Added the requirement to provide detailed description of derating (if any) in the instruction manual (see Chapter 9);
- Changed the type test guidelines for setting the setting value of protection equipment (see Appendix A, Appendix A of the 2011 edition);
- Added operating environment for different installation locations (see Appendix B);
- Deleted the informative appendix inherent accuracy, action accuracy and overall system accuracy (Appendix B of the 2011 edition);
- Deleted the informative appendix reliability test guide (Appendix C of the 2011 edition).

This document is equivalent to IEC 60255-1:2022 "Measuring relays and protection devices Part 1: General requirements".

The following minimal editorial changes were made to this document.

- In order to correct the typo in the original IEC text, 3.1.17 was modified to change "151-06-31" to "151-16-31".

Introduction

The IEC 60255 series of standards specifies the technical requirements and power system solutions for measuring relays and protection devices, as well as related IEC 60255-1~IEC 60255-99 specifies the basic general requirements for relays and protection devices.

Requirements, mainly including basic functions, mechanical properties, electromagnetic compatibility performance, product safety requirements, common format for transient data exchange, etc.;

IEC 60255-100~IEC 60255-199 specifies frequency protection, overcurrent/undercurrent protection, overvoltage/undervoltage protection, and distance protection.

Functional performance requirements and test methods for major protection modules (the last two digits of the standard number correspond to IEEE Std C 37.2-2008 [25]) IEC 60255-200~IEC 60255-299 have carried out special research in the form of technical reports, and have made some research on other protective equipment.