



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

GB/T 18268.1-2025

Replacing GB/T 18268.1-2010

**Electrical equipment for measurement, control and laboratory
use - EMC requirements - Part 1: General requirements**

测量、控制和实验室用的电设备 电磁兼容性要求 第1部分：通用要求

(English Translation)

Issued on: June 30, 2025

Implemented on: January 1, 2026

Issued by: SAMR; SAC

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Foreword

This document was drafted in accordance with the rules provided in GB/T 1.1-2020 Directives for Standardization - Part 1: Rules for the Structure and Drafting of Standardizing Documents.

This document is Part 1 of GB/T 18268 Electrical Equipment for Measurement, Control and Laboratory Use - EMC Requirements. GB/T 18268 has issued the following parts.

---Part 1: General Requirements;

---Part 21: Particular Requirements - Test Configurations, Operational Conditions and Performance Criteria for Sensitive Test and Measurement Equipment for EMC Unprotected Applications;

---Part 22: Particular Requirements - Test Configurations, Operational Conditions and Performance Criteria for Portable Testing, Measuring and Monitoring Equipment Used in Low-voltage Distribution Systems;

---Part 23: Particular Requirements - Test Configurations, Operational Conditions and Performance Criteria for Transducers with Integrated or Remote Signal Conditioning;

---Part 24: Particular Requirements - Test Configurations, Operational Conditions and Performance Criteria for Insulation Monitoring Devices according to IEC 61557-8 and for Equipment for Insulation Fault Location according to IEC 61557-9;

---Part 25: Particular Requirements - Test Configurations, Operational Conditions and Performance Criteria for Field Devices with Interfaces according to IEC 61784-1, CP3/2;

---Part 26: Particular Requirements - In Vitro Diagnostic (IVD) Medical Equipment;

---Part 31: Immunity Requirements for Safety-related Systems and for Equipment Intended to Perform Safety-related Functions (functional safety) - General Industrial Applications;

---Part 32: Immunity Requirements for Safety-related Systems and for Equipment Intended to Perform Safety-related Functions (functional safety) - Industrial Applications with Specified Electromagnetic Environment.

This document serves as a replacement for GB/T 18268.1-2010 Electrical Equipment for Measurement, Control and Laboratory Use - EMC Requirements - Part 1: General Requirements. In comparison with GB/T 18268.1-2010, apart from structural adjustments and editorial modifications, the main technical changes are as follows.

---The immunity test values are modified (see Table 1, Table 2 and Table 3; 6.2 of Version 2010);

---The performance criteria are modified (see 6.4; 6.4 of Version 2010);

---The requirements for emission limits are modified (see 7.2; 7.2 of Version 2010);

---The requirements for portable test and measurement equipment are modified (see Appendix A; Appendix A of Version 2010).

This document identically adopts IEC 61326-1:2020 Electrical Equipment for Measurement, Control and Laboratory Use - EMC Requirements - Part 1: General Requirements.

Please be noted that certain content of this document may involve patents. The issuing institution of this document does not undertake the responsibility of identifying these patents.

1 Scope

This document specifies requirements for immunity and emissions regarding electromagnetic compatibility (EMC) for electrical equipment, operating from a supply or battery of less than 1,000 V AC or 1,500 V DC or from the circuit being measured.

Equipment intended for professional, industrial-process, industrial-manufacturing and educational use is covered by this document. It includes equipment and computing devices for ---measurement and test;

---control;

---laboratory use;

---accessories intended for use with the above (such as sample handling equipment), intended to be used in industrial and non-industrial locations.

Computing devices and assemblies and similar equipment within the scope of information technology equipment (ITE) and complying with applicable ITE EMC standards can be used in systems within the scope of this document without additional testing, if they are suitable for the intended electromagnetic environment.

It is generally considered that this product family standard takes precedence over the corresponding generic EMC standards. The following equipment is covered by this document.

a) Electrical measurement and test equipment.

This is equipment which, by electrical means, measures, indicates or records one or more electrical or non-electrical quantities, also non-measuring equipment such as signal generators, measurement standards, power supplies and transducers.

b) Electrical control equipment.

This is equipment which controls one or more output quantities to specific values, with each value determined by manual settings, by local or remote programming, or by one or more input variables. This includes industrial process measurement and control (IPMC) equipment, which consists of devices such as.