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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 21067-2025

Replacing GB/T 21067-2007

Electrical equipment of industrial machines - Electromagnetic compatibility - General requirements for immunity

工业机械电气设备 电磁兼容 通用抗扰度要求

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Standardization Administration of the PRC

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents". Drafting. This document supersedes GB/T 21067-2007 "General Immunity Requirements for Electromagnetic Compatibility of Electrical Equipment for Industrial Machinery" and is consistent with GB/T 21067- Compared to.2007, aside from structural adjustments and editorial changes, the main technical changes are as follows:

---The terms and definitions for "cable port," "functional grounding port," and "equipment under test" have been removed (see Chapter 3 of the.2007 edition);

---The experimental plan has been expanded (see 5.1);

---The requirements for test conditions have been revised, and requirements for measuring equipment and laboratory environment have been proposed (see 5.2, Chapter 5 of the.2007 edition);

---The test procedures have been expanded, with requirements specified for the entire equipment, the entire electrical system, and electrical and electromechanical components.

(See 5.3);

---Added requirements for test reports (see 5.4);

---Product documentation requirements have been changed (see Chapter 6, Chapter 6 of the.2007 edition);

---The applicability requirement has been removed (see Chapter 7 of the.2007 edition);

---The RF amplitude modulation electromagnetic field content in the enclosure port immunity test has been modified, and the frequency range of the RF electromagnetic field test has been expanded (see...). Table 1 (Table 1 from the.2007 edition);

---The test parameters for voltage sag and short-term voltage interruption in the immunity test requirements for AC power input and output ports have been changed (see...). Table 4 (Table 4 of the.2007 edition);

---The test parameters for electrical fast transient/burst and surge (impulse) tests in the immunity test requirements for DC power supply input and output ports have been changed. (See Table 5, Table 3 in the.2007 edition). Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed by the China Machinery Industry Federation. This document is under the jurisdiction of the National Technical Committee on Standardization of Electrical Systems for Industrial Machinery (SAC/TC231). This document was drafted by: National Machine Tool Quality Supervision and Inspection Center, Shenyang Institute of Computing Technology, Chinese Academy of Sciences Co., Ltd., and Xi'an Jiaotong University. Tongji University, Beijing Machine Tool Research Institute Co., Ltd., Kede CNC Co., Ltd., Central Research Institute of Shanghai Electric Group Co., Ltd. Suzhou Motes Automation Equipment Co., Ltd., Zhejiang Faraday Electric Co., Ltd., and Zhejiang Sanrui Automobile Technology Co., Ltd. The main drafters of this document are. Huang Zuguang, Xue Ruijuan, Zhang Ying, Gao Zhiguo, Wu Zhai, Wu Yiran, Zhang Peisen, Wang Chuting, Bi Xingrui, and Liu Heqiang. Yin Zhenyu, Wang Dawei, Chen Zhong, Xu Zexiang, Meng Yongjian, Zhang Lei. The release history of this document and the document it replaces is as follows:

---First published in.2007 as GB/T 21067-2007;

---This is the first revision. Electromagnetic compatibility of industrial machinery and electrical equipment General immunity requirements

1 Scope

GB/T 21067-2025 is the Chinese national standard covering how much interference a machine's electrics must tolerate - the electrostatic discharge, the radiated field, the fast transients and surges on the supply, and the performance criteria that say what counts as passing and what as a failure. Issued on 31 October 2025, it has been in force since 1 May

2026, replacing GB/T 21067-2007.

This document specifies the general electromagnetic compatibility immunity requirements for electrical, electronic and system components of industrial machinery. This document applies to industrial machinery, electrical equipment, and systems, or electrical appliances, for which there are currently no specific product or product category immunity standards. The components of the equipment and system shall have a nominal power supply voltage not exceeding 1000Va.c. or 1500Vd.c. and a nominal frequency not exceeding.200Hz. Note

1.If relevant specific product or product category electromagnetic compatibility (EMC) immunity standards already exist, the product standard or product category standard will take precedence over this standard in all aspects. document. Note

2.The general immunity requirements for industrial machinery electrical, electronic equipment, and systems in this document are to ensure that they have appropriate immunity levels. However, these... The immunity levels do not cover extreme cases with very low probability of occurring in all locations. The immunity tests in this document do not cover all... Electromagnetic interference phenomena refer only to those relevant to this document. Note

3.This document specifies the testing requirements for each port considered. This document does not include safety considerations. Note

4.In some special cases, the interference level may exceed the test level specified in this document. For example, when installed near GB 4824- The.2019 regulations specify the use of handheld transmitters in industrial, scientific, and medical (ISM) radio frequency equipment within industrial mechanical electrical systems or near electrical systems. Machine. If necessary, consider taking specific mitigation measures.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 4365-2024 Electromagnetic Compatibility (Electromagnetic Engineering Terminology)

GB 4824-2025 Limits and methods of measurement for radio frequency interference characteristics of industrial, scientific and medical devices

GB/T 6113 (all parts) Specification for radio interference and immunity measurement equipment and methods

GB/T 9254.2-2021 Electromagnetic compatibility of information technology equipment,

multimedia equipment and receivers - Part

3 Terms and Definitions

The terms and definitions defined in GB/T 4365-2024 and GB 4824-2025, as well as the following terms and definitions, apply to this document.