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NATIONAL STANDARD OF THE
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GB/T 20138-2023 / IEC 62262:2021

Replacing GB/T 20138-2006

**Degrees of protection provided by enclosures for electrical
equipment against external mechanical impacts (IK code)**

电器设备外壳对外界机械碰撞的防护等级(IK 代码)

(IEC 62262:2021, IDT)

Issued on: August 6, 2023

Implemented on: March 1, 2024

**Issued by: State Administration for Market Regulation;
Standardization Administration of PRC.**

Table of Contents

Foreword	3
Introduction	4
1 Scope	5
2 Normative references	5
3 Terms and definitions	6
4 Marking	7
5 General test requirements	8
6 Test to verify the protection against mechanical impacts	9
7 Test apparatus	9
References	10

Foreword

This document was drafted in accordance with the provisions of GB/T 1.1-2020 *Directives for standardization - Part 1: Rules for the structure and drafting of standardizing documents*.

This document replaces GB/T 20138-2006 *Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code)*. Compared with GB/T 20138-2006, in addition to structural adjustments and editorial changes, the main technical changes are as follows:

- The scope of the standard is modified (see Chapter 1; see Chapter 1 of the 2006 edition);
- The IK code level IK11 is added (see 4.2);
- The assessment criteria for the test of protection against mechanical impact is added (see 6.5).

This document is identical to IEC 62262:2021 *Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code)*.

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document was proposed by the China Electrical Equipment Industry Association.

This document is under the jurisdiction of the National Technical Committee on Rotating Machinery of Standardization Administration of China (SAC/TC26).

Drafting organizations of this document: Shanghai Engineering Research Center for Motor System Energy Saving Co., Ltd., Fengqiu Crane (Zhejiang) Pump Co., Ltd., China Ideal Electric Co., Ltd., Wolong Electric Group Co., Ltd., Shanghai Electrical Apparatus Research Institute Group Co., Ltd., Shanghai Dianke Electric Machine Technology Co., Ltd., Jiamusi Electric Machine Co., Ltd., Nanyang Explosion-proof (Suzhou) Special Equipment Co., Ltd., and Heilongjiang University of Science and Technology.

Main drafters of this document: Zhang Xu, Wei Tangyao, Chen Jian, Qi Wenyi, Zhao Xia, Huang Lei, Rao Xuan, Tong Anni and Hu Jing.

The previous versions of this document and the documents it replaces are as follows:

- First published in 2006 as GB/T 20138-2006;
- This is the first revision.

Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code)

1 Scope

This document applies to the classification of protection of the enclosure of electrical equipment with a rated voltage not exceeding 72.5 kV against external mechanical impact.

The purpose of this document is to specify:

- a) Definition of the degree of protection provided by the enclosure of electrical equipment to protect the internal equipment from harmful effects caused by mechanical impact;
- b) The mark of the degree of protection;
- c) Requirements for each type of marking;
- d) Tests that shall be carried out to confirm that the enclosure complies with the requirements of this document.

Each technical committee is responsible for determining the extent and manner in which this classification method is used in the standards it develops, and for defining the "enclosure" of the equipment under its jurisdiction and ensuring that for any specified classification, the tests do not differ from those specified in this document. If necessary, additional requirements may be added to the corresponding product standards.

For certain specific types of equipment, the product committee can specify different requirements while ensuring the same level of safety protection.

This document specifies only enclosures which, in all other respects, meet the requirements of the corresponding product standards for their intended use and which, from the point of view of materials and workmanship, achieve the claimed degree of protection under normal conditions of use.

2 Normative references

The provisions of the following documents constitute the essential clauses of this document through normative references in this text. Among them, for referenced documents with dates, only the versions corresponding to the dates are applicable to

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Contact: Wayne Zheng, Sales@ChineseStandard.net

Linkin: <https://www.linkedin.com/in/waynezhengwenrui/>

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