

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE



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

**Degrés de protection procurés par les enveloppes de matériels électriques contre les impacts mécaniques externes (Code IK)**



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# REDLINE VERSION

## VERSION REDLINE



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

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

# DEGREES OF PROTECTION PROVIDED BY ENCLOSURES FOR ELECTRICAL EQUIPMENT AGAINST EXTERNAL MECHANICAL IMPACTS (IK CODE)

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**IEC 62262 edition 1.1 contains the first edition (2002-02) [documents 70/99/FDIS and 70/100/RVD] and its amendment 1 (2021-09) [documents 70/157/FDIS and 70/158/RVD].**

**In this Redline version, a vertical line in the margin shows where the technical content is modified by amendment 1. Additions are in green text, deletions are in strikethrough red text. A separate Final version with all changes accepted is available in this publication.**

International Standard IEC 62262 has been prepared by IEC technical committee 70: Degrees of protection provided by enclosures.

It is based on the CENELEC publication EN 50102.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 3.

The committee has decided that the contents of the base publication and its amendment will remain unchanged until the stability date indicated on the IEC web site under [webstore.iec.ch](http://webstore.iec.ch) in the data related to the specific publication. At this date, the publication will be

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## INTRODUCTION

This standard describes a system for classifying the degrees of protection provided by enclosures for electrical equipment against external mechanical impacts. Whilst this system is suitable for use with most types of electrical equipment, it should not be assumed that all the listed degrees of protection are applicable to a particular type of equipment. The manufacturer of the equipment should be consulted to determine the degrees of protection available and the parts of equipment to which the stated degree of protection applies.

The adoption of this classification system, wherever possible, should promote uniformity in the methods of describing the protection provided by the enclosure and in the tests to prove the various degrees of protection. It should also reduce the number of types of test devices necessary to test a wide range of products.

# DEGREES OF PROTECTION PROVIDED BY ENCLOSURES FOR ELECTRICAL EQUIPMENT AGAINST EXTERNAL MECHANICAL IMPACTS (IK CODE)

## 1 Scope

This ~~standard~~ document refers to the classification of the degrees of protection provided by enclosures against external mechanical impacts when the rated voltage of the protected equipment is not greater than 72,5 kV.

~~This standard is only applicable to enclosures of equipment where the specific standard establishes degrees of protection of the enclosure against mechanical impacts (expressed in this standard as "impacts").~~

The object of this ~~standard~~ document is to give

- a) the definitions for the degrees of protection provided by enclosures of electrical equipment as regards protection of the equipment inside the enclosure against harmful effects of mechanical impacts;
- b) the designations for the degrees of protection;
- c) the requirements for each designation;
- d) the tests to be performed to verify that the enclosure meets the requirements of this ~~standard~~ document.

It will remain the responsibility of individual technical committees to decide on the extent and manner in which the classification is used in their standards and to define the "enclosure" as it applies to their equipment. ~~However, it is recommended and to ensure that,~~ for a given classification, the tests do not differ from those specified in this ~~standard~~ document. If necessary, complementary requirements ~~may~~ can be included in the relevant product standard.

For a particular type of equipment, a product committee ~~may~~ can specify different requirements provided that at least the same level of safety is ensured.

This ~~standard~~ document deals only with enclosures that are in all other respects suitable for their intended use as specified in the relevant product standard and which, from the point of view of materials and workmanship, ensure that the claimed degrees of protection are maintained under the normal conditions of use.

~~This standard is also applicable to empty enclosures provided that the general test requirements are met and that the selected degree of protection is suitable for the type of equipment.~~

## 2 Normative references

The following ~~referenced~~ documents are ~~indispensable for~~ referred to in the ~~application~~ text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

~~IEC 60050(826):1982, International Electrotechnical Vocabulary — Chapter 826: Electrical installations of buildings~~

IEC 60068-1:1988, Environmental testing – Part 1: General and guidance

### 3 Terms and definitions

For the purposes of this ~~standard~~ document, the following terms and definitions apply:

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

#### 3.1

##### **enclosure<sup>1</sup>**

part providing protection of equipment against certain external influences and, in any direction, protection against direct contact

~~[IEV 826-03-12]~~

Note 1 to entry: This definition ~~from the existing International Electrotechnical Vocabulary (IEV)~~ needs the following explanations under the scope of this ~~standard~~ document:

- a) Enclosures provide protection of equipment against harmful effects of mechanical impacts;
- b) Barriers, shapes of openings or any other means – whether attached to the enclosure or formed by the enclosed equipment – suitable to prevent or limit the penetration of the specified test probes are considered as a part of the enclosure, except when they can be removed without the use of a key or tool.

[SOURCE: IEC 60529:1989, 3.1, modified – Reference to IEV 826-03-12 has been deleted and the note has been replaced with a new Note 1 to entry.]

#### 3.2

##### **degree of protection against mechanical impacts**

the extent (level) of protection of the equipment provided by an enclosure against harmful mechanical impacts and verified by standardised test methods

#### 3.3

##### **IK code**

coding system to indicate the degree of protection provided by an enclosure against harmful external mechanical impacts

### 4 Designations

~~The degree of protection provided by an enclosure against impacts is indicated by the IK code in the following way:~~

#### 4.1 Arrangement of the IK code

The degree of protection provided by an enclosure against mechanical impacts is indicated by the IK code in the following way:

IK                      05

Codes letters (international mechanical protection)

Characteristic group numeral (00 to ~~10~~ 11)

<sup>1</sup> ~~This definition is identical to 3.1 of IEC 60529.~~