

Ümbristega tagatavad kaitseastmed elektriseadmetele väliste mehhaaniliste mõjude vastu (IK kood)

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

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 50102:2002 sisaldab Euroopa standardi EN 50102:1995+A1:1998 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 18.12.2002 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 50102:2002 consists of the English text of the European standard EN 50102:1995+A1:1998.</p> <p>This document is endorsed on 18.12.2002 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala:</p> <p>This standard 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).</p>	<p>Scope:</p> <p>This standard 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).</p>
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ICS 29.020

Võtmesõnad: classification, control, degrees of protection, electrical equipment, enclosure for electrical equipment, mechanical impact, test conditions, tests

Descriptors: Electrical equipment, enclosure for electrical equipment, degree of protection, mechanical impact, classification, tests, test conditions, control

English version

**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)

Schutzarten durch Gehäuse für
elektrische Betriebsmittel (Ausrüstung)
gegen äußere mechanische
Beanspruchungen (IK-Code)

This European Standard was approved by CENELEC on 1994-12-06. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

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CENELEC

European Committee for Electrotechnical Standardization
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Foreword

This European Standard was prepared by CENELEC BTTF 68-3, Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code).

The text of the draft, based on document BT(FR/NOT)141, was submitted to the formal vote in June 1994 and was approved by CENELEC as EN 50102 on 1994-12-06.

The following dates were fixed :

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 1997-04-15
- latest date by which national standards
conflicting with the EN have to be withdrawn (dow) 1997-04-15

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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 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.

1 Scope

This standard 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 is to give :

- a) the *definitions* for 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 enclosure meets the requirements of this standard.

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 "enclosure" as it applies to their equipment. However, it is recommended that for a given classification the tests do not differ from those specified in this standard. If necessary, complementary requirements may be included in the relevant product standard.

For a particular type of equipment a Product Committee may specify different requirements provided that at least the same level of safety is ensured.

This standard 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

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 50 (826)	1982	International Electrotechnical Vocabulary Chapter 826 : Electrical installations of buildings	-	-
IEC 68-1	1988	Environmental testing Part 1: General and guidance	HD 323.1 S2 EN 60068-1	1988 1994
IEC 68-2-62 A1	1991 1993	Part 2 : Test methods Test Ef : Impact, pendulum hammer	EN 60068-2-62	1995
IEC 68-2-63	1991	Part 2 : Test methods Test Eg: Impact spring hammer	EN 60068-2-63	1994
ISO 1052	1982	Steel or general engineering purposes	-	-
ISO 2039/2	1987	Plastics - Determination of hardness Part 2 : Rockwell hardness	-	-

3 Definitions

For the purpose of this standard, the following definitions apply :

3.1 enclosure ¹⁾

A part providing protection of equipment against certain external influences and, in any direction, protection against contact (IEV 826-03-12).

NOTE: This definition from the existing International Electrotechnical Vocabulary (IEV) needs the following explanations under the scope of this standard :

- 1) Enclosures provide protection of equipment against harmful effects of mechanical impacts.
- 2) 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.

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 standardized test methods.

¹ This definition is identical to 3.1 of EN 60529.