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

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



EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 62262:2008 sisaldab Euroopa standardi EN 62262:2002 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 19.08.2008 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 24.07.2002.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 62262:2008 consists of the English text of the European standard EN 62262:2002.

This standard is ratified with the order of Estonian Centre for Standardisation dated 19.08.2008 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 24.07.2002.

The standard is available from Estonian standardisation organisation.

ICS 29.020

Võtmesõnad:

Standardite reprodutseerimis- ja levitamisõigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonilisse süsteemi või edastamine ükskõik millises vormis või millisel teel on keelatud ilma Eesti Standardikeskuse poolt antud kirjaliku loata.

Kui Teil on küsimusi standardite autorikaitse kohta, palun võtke ühendust Eesti Standardikeskusega: Aru 10 Tallinn 10317 Eesti; www.evs.ee; Telefon: 605 5050; E-post: info@evs.ee



Corrigendum to EN 50102:1995 + A1:1998

English	version

Foreword

Add:

By Technical Board decision D112/248 the text of the International Standard IEC 62262:2002, which is identical with EN 50102:1995 + A1:1998, was approved by CENELEC as EN 62262 on 2002-07-02. As a consequence EN 50102:1995 + A1:1998 are renumbered as EN 62262:2002.

The following date was fixed:

- latest date by which the existence of EN 62262 has to be announced at national level

(doa) 2002-10-01

July 2002

EUROPEAN STANDARD NORME EUROPÉENNE **EUROPÄISCHE NORM**

EN 50102/A1

October 1998

ICS 29.020

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 amendment A1 modifies the European Standard EN 50102:1995; it was approved by CENELEC on 1998-10-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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.

This amendment exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization Comité Européen de Normalisation Electrotechnique Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

^{© 1998} CENELEC - All rights of exploitation in any form and by any means reserved worldwide for CENELEC members.

Foreword

This amendment was prepared by CENELEC BTTF 68-3, IK code.

The text of the draft was submitted to the formal vote and was approved by CENELEC as amendment A1 to EN 50102:1995 on 1998-10-01.

The following dates were fixed:

latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement

(dop) 1999-10-01

latest date by which the national standards conflicting Sapretien oenerated by the with the amendment have to be withdrawn

(dow) 1999-10-01

EN 50102:1995/A1:1998

Text of EN 50102:1995/A1

Contents Delete lines 7.1, 7.2, 7.3

2 Normative references

Delete the references to IEC 68-2-62 + A1, IEC 68-2-63, ISO 1052 and ISO 2039/2.

Add:

IEC 60068-2-75 1997 Environmental testing EN 60068-2-75 1997 Part 2: Tests - Test Eh: Hammer tests

4 Designations

Table 1, replace "0,15" by "0,14".

7 Test apparatus

Replace by:

7 Test apparatus

The test shall be done by using one of the test apparatus as described in EN 60068-2-75.

Annex A Delete the whole annex.

EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

EN 50102

March 1995

ICS 29.020

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.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization Comité Européen de Normalisation Electrotechnique Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

¹⁹⁹⁵ Copyright reserved to CENELEC members

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

andar, be with. - latest date by which national standards conflicting with the EN have to be withdrawn

Contents

Clause	Page
Introduction	4
1 Scope	4
2 Normative references	5
3 Definitions	5
3.1 Enclosure3.2 Degree of protection against mechanical impacts3.3 IK code	5 5 6
4 Designations	6
4.1 Arrangement of the IK code4.2 Characteristic group numerals of the IK code and their meanings4.3 Application of the IK code4.4 Marking	6 6 6
5 General requirements for tests	7
5.1 Atmospheric conditions for tests5.2 Enclosures under test5.3 Specifications to be given in the relevant product standard	7 7 7
6 Test to verify the protection against mechanical impacts	7
7 Test apparatus	8
7.1 Spring hammer7.2 Pendulum hammer7.3 Vertical hammer	9 9 9
Annex A (informative) Shapes of striking elements	10

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 responsability 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).

Publication	<u>Year</u>	<u>Title</u>	EN/HD	<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.