

Empty enclosures for low-voltage switchgear and controlgear assemblies — General requirements

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English version

Empty enclosures for low-voltage switchgear and controlgear assemblies — General requirements

Enveloppes destinées aux ensembles d'appareillage
à basse tension — Règles générales pour les
enveloppes vides

Leergehäuse für
Niederspannungsschaltgerätekombinationen —
Allgemeine Anforderungen

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European Committee for Electrotechnical Standardization
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Europäisches Komitee für Electrotechnische Normung

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Foreword

This European Standard was prepared by the Technical Committee CENELEC TC 17D, Low-voltage switchgear and controlgear assemblies.

The text of the draft was submitted to the formal vote and was approved by CENELEC as EN 50298 on 1998-04-01.

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) 1999-04-01
- latest date by which the national standards conflicting with the EN have to be withdrawn

(dow) 1999-04-01

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1 General

1.1 Scope and object

The object of this standard is to specify definitions, classifications, characteristics and test requirements of enclosures to be used as part of switchgear and controlgear assemblies in accordance with the EN 60439 series, the rated voltage of which does not exceed 1 000 V a.c. at frequencies not exceeding 1 000 Hz, or 1 500 V d.c. and suitable for general use for either indoor or outdoor applications.

This standard applies to empty enclosures, prior to the incorporation of switchgear and controlgear components by the user, as supplied by the enclosure manufacturer.

This standard does not apply to enclosures which are covered by other specific products standards (e.g. IEC 60670, household and similar installations).

Compliance with the safety requirements of the applicable product standard is the responsibility of the final assembly manufacturer.

This standard may serve as a basis for other technical committees.

1.2 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).

EN 50102:1995, *Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code)*.

EN 60439 series, *Low-voltage switchgear and controlgear assemblies*.

EN 60439-1:1994, *Part 1: Type-tested and partially type-tested assemblies* (IEC 60439-1:1992 + corrigendum December 1993).

EN 60439-5:1996, *Part 5: Particular requirements for assemblies intended to be installed outdoors in public places — Cable distribution cabinets (CDCs) for power distribution in networks* (IEC 60439-5:1996).

EN 60529:1991, *Degrees of protection provided by enclosures (IP code)* (IEC 60529:1989).

EN 60695-2-1/0:1996, *Fire hazard testing — Part 2: Test methods — Section 1/sheet 0: Glow-wire test methods — General* (IEC 60695-2-1/0:1994).

EN 60695-2-1/1:1996, *Fire hazard testing — Part 2: Test methods — Section 1/sheet 1: Glow-wire end-product test and guidance* (IEC 60695-2-1/1:1994 + corrigendum May 1995).

HD 528 S2:1997, *A method of temperature-rise assessment by extrapolation for partially type-tested assemblies (PTTA) of low-voltage switchgear and controlgear* (IEC 60890:1987 + corrigendum March 1988 + A1:1995).

IEC 60068-2-2:1974 + 2A:1976, *Basic environmental testing procedures — Part 2: Tests — Tests B: Dry heat* (harmonized as EN 60068-2-2:1993).

IEC 60068-2-11:1981, *Basic environmental testing procedures — Part 2: Tests — Test Ka: Salt mist* (harmonized as HD 323.2.11 S1:1988).

IEC 60068-2-30:1980 + A1:1985, *Basic environmental testing procedures — Part 2: Tests — Test Db and guidance: Damp heat, cyclic (12 + 12 hour cycle)* (harmonized as HD 323.2.30 S3:1988).

IEC 60068-2-75:1997, *Environmental testing — Part 2: Tests — Test Eh: Hammer tests* (harmonized as EN 60068-2-75:1997).

IEC 60670:1989, *General requirements for flush mounting boxes for accessories for household and similar fixed electrical installations*.

ISO 178:1993, *Plastics — Determination of flexural properties*.

ISO 179:1993, *Plastics — Determination of Charpy impact strength*.

ISO 2409:1992, *Paints and varnishes — Cross-cut test*.

ISO 4628-3:1982, *Paints and varnishes — Evaluation of degradation of paint coatings — Designation of intensity, quantity and size of common types of defect — Part 3: Designation of degree of rusting*.

ISO 4892-2:1994, *Plastics — Methods of exposure to laboratory light sources — Part 2: Xenon-arc sources*.

ISO 11469:1993, *Plastics — Generic identification and marking of plastic products*.

2 Definitions

2.1

empty enclosure

enclosure intended for the supporting and the installation of electrical equipment in its internal space, and which provides for this internal space a suitable protection against external influences and a specified degree of protection against approach to or contact with live parts and against contact with moving parts

NOTE Throughout this standard, the word “enclosure” is used for “empty enclosure”.

2.2

protected space

the internal space or portion of the internal space of the enclosure, as specified by the manufacturer, intended for the mounting of switchgear and controlgear for which the specified protection is provided by the enclosure

2.3

cover

an external part of the enclosure