

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

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

**Enveloppes vides destinées aux ensembles d'appareillage à basse tension –  
Exigences générales**



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INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

COMMISSION  
ELECTROTECHNIQUE  
INTERNATIONALE

PRICE CODE  
CODE PRIX

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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### **EMPTY ENCLOSURES FOR LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR ASSEMBLIES – GENERAL REQUIREMENTS**

#### FOREWORD

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International Standard IEC 62208 has been prepared by subcommittee 17D: Low-voltage switchgear and controlgear assemblies, of IEC technical committee 17: Switchgear and controlgear.

This second edition cancels and replaces the first edition published in 2002.

This edition constitutes a technical revision and includes the following significant technical changes with respect to the last edition:

- consideration of the restructured series of standards IEC 61439;
- alignment of test procedures with the newest relevant standards.

The text of this standard is based on the following documents:

FDIS	Report on voting
17D/442/FDIS	17D/447/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
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- replaced by a revised edition, or
- amended.

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## EMPTY ENCLOSURES FOR LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR ASSEMBLIES – GENERAL REQUIREMENTS

### 1 Scope

This International 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 specifies general definitions, classifications, characteristics and test requirements of enclosures to be used as part of switchgear and controlgear assemblies (e.g. in accordance with the IEC 61439 series), the rated voltage of which does not exceed 1 000 V a.c. or 1 500 V d.c., and suitable for general use for either indoor or outdoor applications.

NOTE 1 Additional requirements may apply for specific applications.

NOTE 2 The United States of America (USA) uses enclosure "Type" designations according to NEMA 250. The NEMA Enclosure Type designations specify additional environmental requirements for conditions such as corrosion, rust, icing, oil, and coolants. For this reason, the IEC Enclosure Classification Designations IP are used with an enclosure Type designation number appropriate for these markets.

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

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

NOTE 3 This standard may serve as a basis for other technical committees.

### 2 Normative references

The following referenced documents are indispensable for the application 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 60068-2-2:2007, *Environmental testing – Part 2-2: Tests – Test B: Dry heat*

IEC 60068-2-11:1981, *Basic environmental testing procedures – Part 2-11: Tests – Test Ka: Salt mist*

IEC 60068-2-30:2005, *Environmental testing – Part 2-30: Tests – Test Db: Damp heat, cyclic (12 h + 12 h cycle)*

IEC 60085:2007, *Electrical insulation – Thermal evaluation and designation*

IEC 60529:1989, *Degrees of protection provided by enclosures (IP Code)*<sup>1</sup>

IEC 60695-2-10:2000, *Fire hazard testing – Part 2-10: Glowing/hot-wire based test methods – Glow-wire apparatus and common test procedure*

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<sup>1</sup> There is a consolidated edition 2.1 (2001) that includes IEC 60529 (1989) and its Amendment 1 (1999).

IEC 60695-2-11:2000, *Fire hazard testing – Part 2-11: Glowing/hot-wire based test methods – Glow-wire flammability test methods for end-products*

IEC 61439-1:2011, *Low-voltage switchgear and controlgear assemblies – Part 1: General rules<sup>2</sup>*

IEC 62262:2002, *Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code)*

ISO 178:2001, *Plastics – Determination of flexural properties*

ISO 179 (all parts), *Plastics – Determination of Charpy impact properties*

ISO 2409:2007, *Paints and varnishes – Cross-cut test*

ISO 4628-3:2003, *Paints and varnishes – Evaluation of degradation of coatings – Designation of quantity and size of defects, and of intensity of uniform changes in appearance – Part 3: Assessment of degree of rusting*

ISO 4892-2:2006, *Plastics – Methods of exposure to laboratory light sources – Part 2: Xenon-arc sources*  
Amendment 1 (2009)

ISO 11469:2000, *Plastics – Generic identification and marking of plastic products*

### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

#### 3.1

##### **empty enclosure**

enclosure intended for support and installation of electrical equipment, whose internal space provides suitable protection against external influences as well as a specified degree of protection against approach to or contact with live parts and against contact with moving parts

NOTE 1 Throughout this standard, the word enclosure is used for empty enclosure.

NOTE 2 The terms boxes, cubicles, desks or cabinets are alternative terms for enclosures.

#### 3.2

##### **protected space**

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

#### 3.3

##### **cover**

external part of the enclosure

#### 3.4

##### **door**

hinged or sliding cover

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<sup>2</sup> To be published.