

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

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**Low-voltage switchgear and controlgear assemblies –  
Part 7: Assemblies for specific applications such as marinas, camping sites,  
market squares, electric vehicle charging stations**

**Ensembles d'appareillage à basse tension –  
Partie 7: Ensembles pour installations publiques particulières telles que les  
marinas, les terrains de camping, les marchés et les emplacements analogues et  
pour bornes de charge de véhicules électriques**



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IEC Central Office  
3, rue de Varembe  
CH-1211 Geneva 20  
Switzerland

Tel.: +41 22 919 02 11  
[info@iec.ch](mailto:info@iec.ch)  
[www.iec.ch](http://www.iec.ch)

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INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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ICS 29.130.20

ISBN 978-2-8322-6335-8

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR ASSEMBLIES –****Part 7: Assemblies for specific applications such as marinas, camping sites, market squares, electric vehicle charging stations**

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International Standard IEC 61439-7 has been prepared by subcommittee 121B: Low-voltage switchgear and controlgear assemblies, of IEC technical committee 121: Switchgear and controlgear and their assemblies for low voltage.

This first edition cancels and replaces the relevant technical specification published in 2014. It constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous technical specification:

- a) a new classification of the stationary ASSEMBLIES in accordance with their mechanical resistance (5.702);
- b) a new Table 702 with the list of tests and relevant severities to which the ASSEMBLIES have to be subjected according to the classification mentioned at point a);

- c) a new Annex (CC) with a new endurance test for the individual switching devices intended to be used in AEVSC, if they have not already been tested against this requirement;
- d) a general editorial review and a technical revision.

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

FDIS	Report on voting
121B/74/FDIS	121B/77/RVD

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

This standard is to be read in conjunction with IEC 61439-1:2011. The provisions of the general rules dealt with in IEC 61439-1:2011 are applicable to this standard where they are specifically cited. When this document states "addition", "modification" or "replacement", the relevant text in IEC 61439-1:2011 is to be adapted accordingly.

Subclauses that are numbered with a 701 (702, 703, etc.) suffix are additional to the same subclause in IEC 61439-1:2011.

Tables and figures in this document that are new are numbered starting with 701.

New annexes in this document are lettered AA, BB, etc.

In this standard, the term ASSEMBLY written in small capitals is defined in 3.1.1 of IEC 61439-1:2011.

The reader's attention is drawn to the fact that Annex EE lists all of the "in-some-country" clauses on differing practices of a less permanent nature relating to the subject of this standard

A list of all parts of the IEC 61439 series, under the general title *Low-voltage switchgear and controlgear assemblies*, can be found on the IEC website.

This document 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 website under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

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

## LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR ASSEMBLIES –

### Part 7: Assemblies for specific applications such as marinas, camping sites, market squares, electric vehicle charging stations

#### 1 Scope

Clause 1 of IEC 61439-1:2011 is applicable except as follows.

##### *Replacement:*

NOTE 1 Throughout this document, the terms AMHS (see 3.1.701), ACCS (see 3.1.702), AMPS (see 3.1.703), AEVCS (see 3.1.7704) are used for low-voltage switchgear and controlgear assemblies intended for use respectively in marinas and similar locations (AMHS), campsites and similar locations (ACCS), market squares and other similar external public sites (AMPS) and charging stations (AEVCS). The term ASSEMBLIES is used for indicating all these boards.

This Part of IEC 61439 defines the specific requirements of ASSEMBLIES as follows:

- ASSEMBLIES for which the rated voltage does not exceed 1 000 V in the case of AC or 1 500 V in the case of DC;
- ASSEMBLIES intended for use in connection with the generation, transmission, distribution and conversion of electric energy, and for the control of electric energy consuming equipment;
- ASSEMBLIES operated by ordinary persons (e.g. plug and unplug of electrical equipment);
- ASSEMBLIES intended to be installed and used in market squares, marinas, campsites and other similar outdoor public sites;
- ASSEMBLIES intended for charging stations for electric vehicles (AEVCS) for Mode 3 and Mode 4. They are designed to integrate the functionality and additional requirements for electric vehicle conductive charging systems according to IEC 61851-1:2017.

For the correct SELECTION of the switching devices and components, the following standards apply:

- IEC 60364-7-709 (AMHS) OR
- IEC 60364-7-708 (ACCS) OR
- IEC 60364-7-740 (AMPS) OR
- IEC 60364-7-722 (AEVCS).

This document applies to all ASSEMBLIES whether they are designed, manufactured and verified on a one-off basis or fully standardised and manufactured in quantity.

The manufacture and/or assembly may be carried out other than by the original manufacturer (see 3.10.1 of IEC 61439-1:2011).

This document does not apply to individual devices and self-contained components such as circuit breakers, fuse switches, electronic equipment, which comply with their relevant product standards.

NOTE 2 Where electrical equipment is directly connected to public low voltage supply system and equipped with a meter for billing of the legal provider of the low voltage supply, additional particular requirements based on national regulations apply, if any.

This document does not apply to boxes and enclosures for electrical accessories for household and similar fixed electrical installations as defined in IEC 60670-24.

## 2 Normative references

The following documents are referred to in the 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.

Clause 2 of IEC 61439-1:2011 is applicable except as follows.

*Addition:*

IEC 60068-2-27, *Environmental testing – Part 2-27: Tests – Test Ea and guidance: Shock*

IEC 60068-2-75, *Environmental testing – Part 2-75: Tests – Test Eh: Hammer tests*

IEC 61439-1:2011, *Low-voltage switchgear and controlgear assemblies – Part 1: General rules*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in 61439-1:2017 and the following 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>

Clause 3 of IEC 61439-1:2011 is applicable except as follows.

### 3.1 General terms

*Additional terms:*

#### 3.1.701

##### **low voltage switchgear and controlgear ASSEMBLY for marinas and harbors sites AMHS**

combination of one or more transforming or switching devices together with associated control, measuring, signaling, protective and regulating equipment, with all their internal electrical and mechanical interconnections and structural parts, designed and built for use in all marinas, harbors and similar sites

Note 1 to entry: This note applies to the French language only.

#### 3.1.702

##### **low voltage switchgear and controlgear ASSEMBLY for camping and caravan sites ACCS**

combination of one or more transforming or switching devices together with associated control, measuring, signaling, protective and regulating equipment, with all their internal electrical and mechanical interconnections and structural parts, designed and built for use in all camping, caravan and similar sites

Note 1 to entry: This note applies to the French language only.



**3.1.703****low voltage switchgear and controlgear ASSEMBLY for markets and other outdoor public sites****AMPS**

combination of one or more transforming or switching devices together with associated control, measuring, signaling, protective and regulating equipment, with all their internal electrical and mechanical interconnections and structural parts, designed and built for use in all market squares and other similar outdoor public sites

Note 1 to entry: This note applies to the French language only.

**3.1.704****low voltage switchgear and controlgear ASSEMBLY for electric vehicles charging stations****AEVCS**

combination of one or more transforming or switching devices together with associated control, measuring, signaling, protective and regulating equipment, with all their internal electrical and mechanical interconnections and structural parts, designed and built for electric vehicle charging stations

Note 1 to entry: This note applies to the French language only.

**3.3 External design of ASSEMBLIES**

*Modification:*

**3.3.1****open-type ASSEMBLY**

This term of IEC 61439-1:2011 does not apply.

**3.3.2****dead-front ASSEMBLY**

This term of IEC 61439-1:2011 does not apply.

**3.5 Conditions of installation of ASSEMBLIES****3.5.3****stationary ASSEMBLY**

*Additional terms:*

**3.5.3.701****ground and floor mounted ASSEMBLY**

stationary ASSEMBLY permanently connected to the supply with a part embedded in the ground or intended to be fixed directly on the floor or a base

Note 1 to entry: This type of ASSEMBLY includes poles and columns.

**3.5.3.702****wall mounted ASSEMBLY**

stationary ASSEMBLY intended to be fixed directly on the wall

Note 1 to entry: The supply is permanently connected.

**3.5.4****movable ASSEMBLY**

This term of IEC 61439-1:2011 does not apply.

*Additional terms:*