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REDLINE VERSION

INTERNATIONAL STANDARD

colour inside

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

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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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

FOREWORD

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This redline version of the official IEC Standard allows the user to identify the changes made to the previous edition IEC 61439-7:2018. A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text.

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 second edition cancels and replaces the first edition published in 2018. It constitutes a technical revision.

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

a) a general editorial review and a technical revision.

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

Draft	Report on voting
121B/138/CDV	121B/150/RVC

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

The language used for the development of this International Standard is English.

This document is to be read in conjunction with IEC 61439-1:2020. The provisions of the general rules dealt with in IEC 61439-1:2020 are applicable to this document where they are specifically cited. When this document states "addition", "modification" or "replacement", the relevant text in IEC 61439-1:2020 is to be adapted accordingly.

Subclauses that are numbered with a 701 (702, 703, etc.) suffix are additional to the same subclause in IEC 61439-1:2020.

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 document, the term assembly is defined in 3.1.1 of IEC 61439-1:2020.

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

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 was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

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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

1 Scope

Clause 1 of IEC 61439-1:~~2011~~2020 is applicable except as follows.

Replacement:

This part of IEC 61439 defines the specific requirements for assemblies for the following applications: marinas, camping sites, market squares and electric vehicle charging stations as follows:

- assemblies for which the rated voltage does not exceed 1 000 V AC or 1 500 V 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. to plug and unplug of electrical equipment);
- assemblies intended to be installed and used in market squares, marinas, camping sites and other similar ~~outdoor public sites~~ sites accessible to the public including temporary installations;
- 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.

NOTE 1 Throughout this document, the terms AMHS (see 3.1.701), ACCS (see 3.1.702), AMPS (see 3.1.703), AEVCS (see 3.1.704) are used for low-voltage switchgear and controlgear assemblies intended for use respectively in marinas and similar locations (AMHS), camping sites 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 document is not applicable to assemblies intended to be installed on board of ships, houseboats, pleasure crafts and similar vessels.

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 manufacturing and/or assembling ~~may~~ can be carried out other than by the original manufacturer (see 3.10.1 of IEC 61439-1:~~2011~~2020).

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 an energy 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~~2020 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~~2020, *Low-voltage switchgear and controlgear assemblies – Part 1: General rules*

IEC 62262:2002, *Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code)*
IEC 62262:2002/AMD1:2021

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Edition 2.0 2022-07

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 les applications spécifiques comme les marinas, les terrains de camping, les marchés et pour les bornes de charge de véhicules électriques

IEC 61439-7:2022-07(en-fr)

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COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

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ENSEMBLES D'APPAREILLAGE À BASSE TENSION –

Partie 7: Ensembles pour les applications spécifiques comme les marinas, les terrains de camping, les marchés et pour les bornes de charge de véhicules électriques

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9) L'attention est attirée sur le fait que certains des éléments du présent document de l'IEC peuvent faire l'objet de droits de brevet. L'IEC ne saurait être tenue pour responsable de ne pas avoir identifié de tels droits de brevets.

L'IEC 61439-7 a été établie par le sous-comité 121B: Ensembles d'appareillages à basse tension, du comité d'études 121 de l'IEC: Appareillages et ensembles d'appareillages basse tension.

Cette deuxième édition annule et remplace la première édition parue en 2018. Elle constitue une révision technique.

Cette édition inclut les modifications suivantes par rapport à la spécification technique précédente:

a) une revue rédactionnelle générale et une révision technique ont été effectuées.

Le texte du présent document est issu des documents suivants:

Projet	Rapport de vote
121B/138/CDV	121B/150/RVC

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à son approbation.

La langue employée pour l'élaboration de cette Norme internationale est l'anglais.

Le présent document doit être lu conjointement avec l'IEC 61439-1:2020. Les dispositions des règles générales traitées dans l'IEC 61439-1:2020 s'appliquent uniquement au présent document lorsqu'elles sont spécifiquement citées. Lorsque le présent document mentionne "addition", "modification" ou "remplacement", le texte correspondant de l'IEC 61439-1:2020 doit être adapté en conséquence.

Les paragraphes qui sont numérotés avec le suffixe 701 (702, 703, etc.) s'ajoutent aux mêmes paragraphes de l'IEC 61439-1:2020.

Les nouveaux tableaux et nouvelles figures du présent document sont numérotés à partir de 701.

Les nouvelles annexes du présent document sont désignées AA, BB, etc.

Dans le présent document, le terme "ensemble" est défini en 3.1.1 de l'IEC 61439-1:2020.

L'attention du lecteur est attirée sur le fait que l'Annexe FF énumère tous les articles qui traitent des différences à caractère moins permanent inhérentes à certains pays, concernant le sujet du présent document.

Une liste de toutes les parties de la série IEC 61439, publiées sous le titre général *Ensembles d'appareillage à basse tension*, se trouve sur le site web de l'IEC.

Ce document a été rédigé selon les Directives ISO/IEC, Partie 2, il a été développé selon les Directives ISO/IEC, Partie 1 et les Directives ISO/IEC, Supplément IEC, disponibles sous www.iec.ch/members_experts/refdocs. Les principaux types de documents développés par l'IEC sont décrits plus en détail sous www.iec.ch/publications/.

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ENSEMBLES D'APPAREILLAGE À BASSE TENSION –

Partie 7: Ensembles pour les applications spécifiques comme les marinas, les terrains de camping, les marchés et pour les bornes de charge de véhicules électriques

1 Domaine d'application

L'Article 1 de l'IEC 61439-1:2020 s'applique avec les exceptions suivantes.

Remplacement:

La présente partie de l'IEC 61439 définit les exigences spécifiques applicables aux ensembles destinés aux applications suivantes: marinas, terrains de camping, marchés et emplacements analogues et bornes de charge de véhicules électriques, comme suit:

- ensembles dont la tension assignée ne dépasse pas 1 000 V en courant alternatif ou 1 500 V en courant continu;
- ensembles destinés à être utilisés avec des équipements conçus pour la production, le transport, la distribution et la conversion de l'énergie électrique et la commande des matériels qui consomment de l'énergie électrique;
- ensembles actionnés par des personnes ordinaires (par exemple, brancher ou débrancher du matériel électrique);
- ensembles destinés à être installés et utilisés dans les marchés, marinas, des terrains de camping et autres lieux analogues accessibles au public, y compris les installations temporaires;
- ensembles destinés aux bornes de charge de véhicules électriques (AEVCS) de Mode 3 et de Mode 4. Ils sont conçus pour intégrer la fonctionnalité et les exigences supplémentaires des systèmes de charge conductive pour véhicules électriques conformément à l'IEC 61851-1:2017.

NOTE 1 Dans le présent document, les termes AMHS (voir 3.1.701), ACCS (voir 3.1.702), AMPS (voir 3.1.703), AEVCS (voir 3.1.704) sont utilisés pour désigner les ensembles d'appareillage à basse tension destinés à être utilisés respectivement dans les marinas et emplacements analogues (AMHS), terrains de camping et emplacements analogues (ACCS), marchés et autres lieux publics extérieurs analogues (AMPS), et les bornes de charge (AEVCS). Le terme ensembles est utilisé pour désigner tous ces types de tableaux.

Le présent document ne s'applique pas aux ensembles destinés à être installés à bord des navires, péniches, bateaux de plaisance et embarcations analogues.

Pour le choix approprié des appareils de connexion et des composants, les normes suivantes s'appliquent:

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

Le présent document s'applique à tous les ensembles qu'ils soient conçus, fabriqués et vérifiés individuellement ou qu'ils soient complètement normalisés et fabriqués en masse.

La fabrication et/ou l'assemblage peuvent être réalisés par un tiers qui n'est pas le constructeur d'origine (voir 3.10.1 de l'IEC 61439-1:2020).

Le présent document ne s'applique pas aux appareils pris en considération individuellement ni aux composants autonomes tels que les disjoncteurs, les fusibles-interrupteurs, les matériels électroniques, qui sont conformes aux normes de produits qui les concernent.

NOTE 2 Lorsque le matériel électrique est directement raccordé au réseau d'alimentation public à basse tension et équipé d'un compteur d'énergie aux fins de facturation du fournisseur légal de l'alimentation à basse tension, des exigences particulières supplémentaires fondées sur les réglementations nationales s'appliquent, le cas échéant.

Le présent document ne s'applique pas aux boîtes et enveloppes pour appareillage électrique pour installations électriques fixes pour usages domestiques et analogues, comme cela est défini dans l'IEC 60670-24.

2 Références normatives

Les documents suivants sont cités dans le texte de sorte qu'ils constituent, pour tout ou partie de leur contenu, des exigences du présent document. Pour les références datées, seule l'édition citée s'applique. Pour les références non datées, la dernière édition du document de référence s'applique (y compris les éventuels amendements).

L'Article 2 de l'IEC 61439-1:2020 s'applique avec les exceptions suivantes.

Addition:

IEC 60068-2-27, *Essais d'environnement – Partie 2-27: Essais – Essai Ea et guide: Chocs*

IEC 60068-2-75, *Essais d'environnement – Partie 2-75: Essais – Essai Eh: Essais au marteau*

IEC 61439-1:2020, *Ensembles d'appareillage à basse tension – Partie 1: Règles générales*

IEC 62262:2002, *Degrés de protection procurés par les enveloppes de matériels électriques contre les impacts mécaniques externes (Code IK)*
IEC 62262:2002/AMD1:2021