SVENSK STANDARD

SS-EN IEC 61439-3, utg 2:2025

2025-06-04

COMMENTED VERSION

Kopplingsutrustningar för högst 1000 V växelspänning eller 1500 V likspänning – Del 3: Elcentraler avsedda att betjänas av ordinära personer

Low-voltage switchgear and controlgear assemblies – Part 3: Distribution boards intended to be operated by ordinary persons (DBO)

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IEC 61439-3

Edition 2.0 2024-03
COMMENTED VERSION

INTERNATIONAL STANDARD

colour inside

Low-voltage switchgear and controlgear assemblies – Part 3: Distribution boards intended to be operated by ordinary persons (DBO)

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 29.130.20

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CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR ASSEMBLIES –

Part 3: Distribution boards intended to be operated by ordinary persons (DBO)

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as “IEC Publication(s)”). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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This commented version (CMV) of the official standard IEC 61439-3:2024 edition 2.0 allows the user to identify the changes made to the previous IEC 61439-3:2012 edition 1.0. Furthermore, comments from IEC TC SC 121B experts are provided to explain the reasons of the most relevant changes, or to clarify any part of the content.

A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text. Experts' comments are identified by a blue-background number. Mouse over a number to display a pop-up note with the comment.

This publication contains the CMV and the official standard. The full list of comments is available at the end of the CMV.

IEC 61439-3 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. It is an International Standard.

This second edition cancels and replaces the first edition published in 2012. This edition constitutes a technical revision.

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

a) alignment with the structure of IEC 61439-1:2020;
b) inclusion in the scope of more examples of the type of protection and control devices;
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d) addition of a new Annex BB related to DBOs used in a prosumer's electrical installation (PEI);
e) addition of a new Annex CC related to rated current of a DBO with additional source of supply in parallel/simultaneously with another source that is connected to the DBO e.g. PV.

The text of this International Standard is based on the following documents:

Draft	Report on voting
121B/193/FDIS	121B/195/RVD

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LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR ASSEMBLIES –

Part 3: Distribution boards intended to be operated by ordinary persons (DBO)

1 Scope

This part of IEC 61439 defines the specific requirements for distribution boards intended to be operated by ordinary persons (abbreviated DBO throughout this document, see 3.1.101) as follows:

– assemblies intended to be operated by ordinary persons (e.g. switching operations and replacing fuse-links), e.g. in domestic (household) applications;

– assemblies containing outgoing circuits with protective devices intended to be operated by ordinary persons, complying e.g. with IEC 60898-1, the IEC 61008 series, the IEC 61009 series, IEC 62606, IEC 62423 and IEC 60269-3;

– assemblies for applications where the ~~rated~~ nominal **1** voltage to earth does not exceed 300 V AC (see Table G.1 of IEC 61439-1:2020);

NOTE The voltage limits for DC applications are under consideration.

– assemblies with a rated current (I_{nc}) of the outgoing circuits not exceeding 125 A and a rated current (I_{nA}) not exceeding 250 A;

– assemblies intended for use in connection with the generation, transmission, distribution and conversion of electrical energy, and for the control of equipment consuming electrical energy and for associated data processing; **2**

– enclosed, stationary assemblies;

– assemblies for indoor or outdoor use.

~~DBOs may also include control and/or signaling devices associated with the distribution of electrical energy.~~

~~DBOs may be assembled outside the factory of the original manufacturer.~~ **3**

DBOs can contain protection devices, control devices, signalling devices alone or a combination of devices e.g. circuit-breakers, load shedding relay, energy management, communication devices, lighting control. **4**

This document does not apply to an empty enclosure nor to individual devices and self-contained components, such as circuit-breakers, fuse-switches, electronic equipment~~, etc~~. which comply with the relevant product standards, it describes the integration of devices, or self-contained components, or both, into a DBO or into an empty enclosure forming a DBO.

This document applies to DBOs designed, manufactured, and verified on a one-off basis or fully standardized and manufactured in quantity.

This document does not apply to the specific types of assemblies covered by other parts of the IEC 61439 series.

NOTE Enclosures for electrical accessories for household and similar fixed electrical installations are covered 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 61439-1:2020 is applicable in addition to the following.

Addition:

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

IEC 60269-3, *Low-voltage fuses – Part 3: Supplementary requirements for fuses for use by unskilled persons (fuses mainly for household and similar applications) – Examples of standardized systems of fuses A to F*

IEC 60364-8-82, *Low-voltage electrical installations – Part 8-82: Functional aspects – Prosumer's low-voltage electrical installations*

IEC 60898-1~~:2010~~, *Electrical accessories – Circuit-breakers for overcurrent protection for household and similar installations – Part 1: Circuit-breakers for a.c. operation*

IEC 60669-2-4, *Switches for household and similar fixed electrical installations – Part 2-4: Particular requirements – Isolating switches*

IEC 60947-3, *Low-voltage switchgear and controlgear – Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units*

IEC 61008 (all parts), *Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs)*

IEC 61009 (all parts), *Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses (RCBOs)*

IEC 61439-1:~~2011~~2020, *Low-voltage switchgear and controlgear assemblies – Part 1: General rules*

IEC 62423:2009, *Type F and type B residual current operated circuit-breakers with and without integral overcurrent protection for household and similar uses*

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

IEC 62606, *General requirements for arc fault detection devices*

SVENSK STANDARD

SS-EN IEC 61439-3, utg 2:2025

Fastställd	Sida	Ansvarig kommitté
2025-06-04	1 (44)	SEK TK 121B

Kopplingsutrustningar för högst 1000 V växelspänning eller 1500 V likspänning – Del 3: Elcentraler avsedda att betjänas av ordinära personer

Low-voltage switchgear and controlgear assemblies – Part 3: Distribution boards intended to be operated by ordinary persons (DBO)

Som svensk standard gäller europastandarden EN IEC 61439-3:2024. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 61439-3:2024.

Nationellt förord

Europastandarden EN IEC 61439-3:2024

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 61439-3, Second edition, 2024 - Low-voltage switchgear and controlgear assemblies - Part 3: Distribution boards intended to be operated by ordinary persons (DBO)**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 61439-3, utg 1:2012 med eventuella tillägg, ändringar och rättelser gäller ej fr o m 2027-11-30.

ICS 29.130.20

Denna standard är fastställd av SEK Svensk Elstandard,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
Postadress: Box 1042, 172 21 Sundbyberg
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E-post: sek@elstandard.se. Internet: elstandard.se

Standarder underlättar utvecklingen och höjer elsäkerheten

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Var med och påverka!

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SEK Svensk Elstandard

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 61439-3

November 2024

ICS 29.130.20

Supersedes EN 61439-3:2012;
EN 61439-3:2012/AC:2019-04

English Version

Low-voltage switchgear and controlgear assemblies - Part 3: Distribution boards intended to be operated by ordinary persons (DBO) (IEC 61439-3:2024)

Ensembles d'appareillage à basse tension - Partie 3: Tableaux de répartition destinés à être utilisés par des personnes ordinaires (DBO) (IEC 61439-3:2024)

Niederspannungs-Schaltgerätekombinationen - Teil 3: Installationsverteiler für die Bedienung durch Laien (DBO) (IEC 61439-3:2024)

This European Standard was approved by CENELEC on 2024-10-16. 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.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. EN IEC 61439-3:2024 E

European foreword

The text of document 121B/193/FDIS, future edition 2 of IEC 61439-3, prepared by SC 121B "Low-voltage switchgear and controlgear assemblies" of IEC/TC 121 "Switchgear and controlgear and their assemblies for low voltage" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61439-3:2024.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2025-11-30
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2027-11-30

This document supersedes EN 61439-3:2012 and all of its amendments and corrigenda (if any).

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Endorsement notice

The text of the International Standard IEC 61439-3:2024 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standard indicated:

IEC 60664-1:2020	NOTE	Approved as EN IEC 60664-1:2020 (not modified)
IEC 60670-24	NOTE	Approved as EN 60670-24
IEC 61009-1:2010	NOTE	Approved as EN 61009-1:2012 +A11:2015

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cencenelec.eu.

Clause 2 of EN IEC 61439-1:2021 is applicable, except as follows:

Add the following references:

Publication	Year	Title	EN/HD	Year
IEC 60068-2-75	-	Environmental testing - Part 2-75: Tests - Test Eh: Hammer tests	EN 60068-2-75	-
IEC 60269-3	-	Low-voltage fuses - Part 3: Supplementary requirements for fuses for operation by unskilled persons (fuses mainly for household and similar applications) - Examples of standardized systems of fuses A to F	HD 60269-3	-
IEC 60364-8-82	-	Low-voltage electrical installations - Part 8-82: Functional aspects - Prosumer's low-voltage electrical installations	HD 60364-8-82	-
IEC 60669-2-4	-	Switches for household and similar fixed electrical installations - Part 2-4: Particular requirements - Isolating switches	EN 60669-2-4	-
IEC 60898-1	-	Electrical accessories - Circuit-breakers for overcurrent protection for household and similar installations - Part 1: Circuit-breakers for a.c. operation	EN 60898-1	-
IEC 60947-3	-	Low-voltage switchgear and controlgear - Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units	EN IEC 60947-3	-
IEC 61008	series	Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs) - Part 1: General rules	EN 61008	series
IEC 61009	series	Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses (RCBOs) - Part 1: General rules	EN 61009	series

Publication	Year	Title	EN/HD	Year
IEC 61439-1	2020	Low-voltage switchgear and controlgear assemblies - Part 1: General rules	EN IEC 61439-1	2021
IEC 62262	-	Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code)	EN 62262	-
IEC 62423 (mod)	2009	Type F and type B residual current operated circuit-breakers with and without integral overcurrent protection for household and similar uses	EN 62423	2012
-	-		+ A11	2021
-	-		+ A12	2022
IEC 62606	-	General requirements for arc fault detection devices	EN 62606	-

IEC 61439-3

Edition 2.0 2024-03

INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

Low-voltage switchgear and controlgear assemblies – Part 3: Distribution boards intended to be operated by ordinary persons (DBO)

Ensembles d'appareillage à basse tension – Partie 3: Tableaux de répartition destinés à être utilisés par des personnes ordinaires (DBO)

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

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– enclosed, stationary assemblies;

– assemblies for indoor or outdoor use.

DBOs can contain protection devices, control devices, signalling devices alone or a combination of devices e.g. circuit-breakers, load shedding relay, energy management, communication devices, lighting control.

This document does not apply to an empty enclosure nor to individual devices and self-contained components, such as circuit-breakers, fuse-switches, electronic equipment. which comply with the relevant product standards, it describes the integration of devices, or self-contained components, or both, into a DBO or into an empty enclosure forming a DBO.

This document applies to DBOs designed, manufactured, and verified on a one-off basis or fully standardized and manufactured in quantity.

This document does not apply to the specific types of assemblies covered by other parts of the IEC 61439 series.

NOTE Enclosures for electrical accessories for household and similar fixed electrical installations are covered 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 61439-1:2020 is applicable in addition to the following.

Addition:

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

IEC 60269-3, *Low-voltage fuses – Part 3: Supplementary requirements for fuses for use by unskilled persons (fuses mainly for household and similar applications) – Examples of standardized systems of fuses A to F*

IEC 60364-8-82, *Low-voltage electrical installations – Part 8-82: Functional aspects – Prosumer's low-voltage electrical installations*

IEC 60898-1, *Electrical accessories – Circuit-breakers for overcurrent protection for household and similar installations – Part 1: Circuit-breakers for a.c. operation*

IEC 60669-2-4, *Switches for household and similar fixed electrical installations – Part 2-4: Particular requirements – Isolating switches*

IEC 60947-3, *Low-voltage switchgear and controlgear – Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units*

IEC 61008 (all parts), *Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs)*

IEC 61009 (all parts), *Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses (RCBOs)*

IEC 61439-1:2020, *Low-voltage switchgear and controlgear assemblies – Part 1: General rules*

IEC 62423:2009, *Type F and type B residual current operated circuit-breakers with and without integral overcurrent protection for household and similar uses*

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

IEC 62606, *General requirements for arc fault detection devices*