

Madalpingelised aparaadikoosted. Osa 3: Jaotuskilbid, mida tohivad käsitada tavaisikud

Low-voltage switchgear and controlgear assemblies - Part 3: Distribution boards intended to be operated by ordinary persons (DBO) (IEC 61439-3:2012)

EESTI STANDARDI EESSÕNA**NATIONAL FOREWORD**

<p>Käesolev Eesti standard EVS-EN 61439-3:2012 sisaldab Euroopa standardi EN 61439-3:2012 ja selle paranduse AC:2019 ingliskeelset teksti.</p>	<p>This Estonian standard EVS-EN 61439-3:2012 consists of the English text of the European standard EN 61439-3:2012 and its corrigendum AC:2019.</p>
<p>Standard on kinnitatud Eesti Standardikeskuse 30.11.2012 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p>	<p>This standard is ratified with the order of Estonian Centre for Standardisation dated 30.11.2012 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p>
<p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 20.04.2012.</p>	<p>Date of Availability of the European standard text 20.04.2012</p>
<p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>The standard is available from Estonian standardisation organisation.</p>

ICS 29.130.20

aparaadikooste, jaotuskilbid, jaotuskilp, lülitusaparaat, madalpinge, tüüpne kooste

Standardite reprodutseerimis- ja levitamiseõigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonilisse süsteemi või edastamine ükskõik millises vormis või millisel teel on keelatud ilma Eesti Standardikeskuse poolt antud kirjaliku loata.

Kui Teil on küsimusi standardite autorikaitse kohta, palun võtke ühendust Eesti Standardikeskusega:
Aru 10 Tallinn 10317 Eesti; www.evs.ee; Telefon: 605 5050; E-post: info@evs.ee

Right to reproduce and distribute belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without permission in writing from Estonian Centre for Standardisation.

If you have any questions about standards copyright, please contact Estonian Centre for Standardisation:
Aru str 10 Tallinn 10317 Estonia; www.evs.ee; Phone: 605 5050; E-mail: info@evs.ee

English version

**Low-voltage switchgear and controlgear assemblies -
Part 3: Distribution boards intended to be operated by ordinary persons
(DBO)
(IEC 61439-3:2012)**

Ensembles d'appareillage à basse tension -
Partie 3: Tableaux de répartition destinés à
être utilisés par des personnes ordinaires
(DBO)
(CEI 61439-3:2012)

Niederspannungs-
Schaltgerätekombinationen -
Teil 3: Installationsverteiler für die
Bedienung durch Laien (IVL)
(IEC 61439-3:2012)

This European Standard was approved by CENELEC on 2012-03-22. 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.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 17D/448/FDIS, future edition 1 of IEC 61439-3, prepared by SC 17D, "Low-voltage switchgear and controlgear assemblies", of IEC/TC 17, "Switchgear and controlgear" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61439-3:2012.

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) 2012-12-22
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2015-03-22

This document supersedes EN 60439-3:1991 + A1:1994 + A2:2001 + corrigendum November 2009.

EN 61439-3:2012 includes the following significant technical changes with respect to EN 60439-3:1991:

– alignment with EN 61439-1:2011.

This standard is to be read in conjunction with EN 61439-1. The provisions of the general rules dealt with in EN 61439-1 (hereinafter referred to as Part 1) are applicable to this standard where they are specifically cited. When this standard states "addition" "modification" or "replacement", the relevant text in Part 1 is to be adapted accordingly.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

This standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC)

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For the relationship with EU Directive(s) see informative Annex ZZ, which is an integral part of this document.

Endorsement notice

The text of the International Standard IEC 61439-3:2012 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 60947-2 NOTE Harmonized as EN 60947-2.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
Addition to Annex ZA of EN 61439-1:2011:				
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 use by unskilled persons (fuses mainly for household or similar applications) - Examples of standardized systems of fuses A to F	HD 60269-3	-
IEC 60898-1 (mod)	2002	Electrical accessories - Circuit breakers for overcurrent protection for household and similar installations - Part 1: Circuit-breakers for a.c. operation	EN 60898-1 + corr. February + A11 + A12	2003 2004 2005 2008
IEC 61008	Series	Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCB's)	EN 61008	Series
IEC 61009	Series	Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses (RCBOs)	EN 61009	Series
IEC 61439-1	2011	Low-voltage switchgear and controlgear assemblies - Part 1: General rules	EN 61439-1	2011
IEC 62423 (mod) + corr. December	2009 2011	Type F and type B residual current operated circuit-breakers with and without integral overcurrent protection for household and similar uses	FprEN 62423	201X ¹⁾

¹⁾ At draft stage.

Annex ZB (informative)

A-deviations

A-deviation: National deviation due to regulations, the alteration of which is for the time being outside the competence of the CENELEC member.

This European Standard falls under Directive 2004/108/EC.

NOTE (from CEN/CENELEC IR Part 2:2011, 2.17) Where standards fall under EC Directives, it is the view of the Commission of the European Communities (OJ No C 59, 1982-03-09) that the effect of the decision of the Court of Justice in case 815/79 Cremonini/Vrankovich (European Court Reports 1980, p. 3583) is that compliance with A-deviations is no longer mandatory and that the free movement of products complying with such a standard should not be restricted except under the safeguard procedure provided for in the relevant Directive.

A-deviations in an EFTA-country are valid instead of the relevant provisions of the European Standard in that country until they have been removed.

<u>Clause</u>	<u>Deviation</u>
---------------	------------------

United Kingdom

UK Electricity, Safety and Quality Regulations S.I. 2002 No. 2965 require electricity suppliers to state the maximum prospective short circuit current at the supply terminals.

This information is given in Electricity Association publication P25. To meet this condition the following requirements are to be incorporated:

3.1	Additional definition
------------	-----------------------

3.1.104 Customer distribution board CDB

An integrated assembly, for the control and distribution of electrical energy, principally in a household or similar premise, incorporating manual means of double-pole isolation on the incoming circuit(s), with polarity observed throughout. They are designed for use exclusively with specific protective devices on the outgoing circuits, and type-tested for use when energized through the specified 100 amp fuse.

NOTE Generally known in the UK as a Consumer unit.

10.11.5	Additional test
----------------	-----------------

10.11.5.7 Verification of the capability of the CDB to withstand a 16 kA fault.

The following test is applied to CDB's as covered by the definition in 3.1.104.

10.11.5.7.1 Test arrangements

The CDB shall be set up as in normal use. It will be sufficient to test a single functional unit if the remaining functional units are constructed in the same way and cannot affect the test result.

10.11.5.7.2 Short-circuit test procedure

The following test procedure is intended to verify the performance of the

incoming device and its connections, and any other item in the CDB not separately rated in excess of 16 kA, when the complete CDB is protected by a fuse-link complying with BS 88.3 (formerly BS 1361). This type test shall be deemed to cover the use of any other short-circuit protective device having a Joule integral (I^2t) and cut-off current not exceeding values given in item b) below, at the rated voltage, prospective current and power factor.

- a) It shall be verified that the representative samples of the final circuit protective devices used for the test comply with Table ZB.1 and Table ZB.2 where applicable.
- b) The reference fuse shall be a 100 A fuse-link complying with type II of BS 88.3. Details of the fuse-links used for the test, i.e. manufacturer's name, reference, rated current, rated voltage and pre-arcing ($I_2 t$), shall be given in the test report.
Where BS 1361 type II fuse-links are available for test / certification purposes, they may be used in place of BS 88-3 fuse-links as key performance characteristics are identical.
- c) The final circuit protective device shall be mounted as in service in the manufacturer's smallest recommended enclosure (metal if offered in the catalogue). The connection on the load side of the protective device under test shall be in accordance with Table ZB.3 and $0,6 \text{ m} \pm 0,05 \text{ m}$ in length.
- d) The test circuit shall be connected as shown in Figure ZB.1 The relative positions of the closing switch, inductive reactor and resistor are not obligatory, but the resistor shall be in series with the master circuit-breaker.
- e) The impedance used for limiting the prospective short-circuit fault current to the required value shall be inserted on the supply side of the circuit.

Resistors shall be connected between line and neutral, after the impedances for adjusting the prospective current, so as to draw current of 10 A per phase at rated voltage from the supply.

If an air-cored inductor is used, a resistor taking approximately 1 % of the current through the inductor shall be connected in parallel with it.

A lower value of shunt current may be used with the consent of the manufacturer.

**Table ZB.1 – Requirements for final circuit protective devices:
Circuit-breakers complying with BS EN 60898
and RCBOs complying with BS EN 61009**

Circuit-breaker or RCBO type	Time h	Test current in multiples of rated current (I_n)	Result
B, C, D	1	1,13	No trip
	1 ^a	1,45	Trip

NOTE Test to be conducted at specified reference ambient temperature.

^a This test shall commence within 5 seconds of the end of the test at 1,13 I_n .