



SLOVENSKI STANDARD

SIST EN 60439-2:2000

01-september-2000

Nadomešča:
SIST EN 60439-2:1996

Sestavi nizkonapetostnih stikalnih in krmilnih naprav– 2. del: Posebne zahteve za zbiralčne razdelilne sisteme (zbiralčna vodila)

Low-voltage switchgear and controlgear assemblies -- Part 2: Particular requirements for busbar trunking systems (busways)

Niederspannungs-Schaltgerätekombinationen -- Teil 2: Besondere Anforderungen an Schienenverteiler

Ensembles d'appareillage à basse tension -- Partie 2: Règles particulières pour les canalisations préfabriquées

Ta slovenski standard je istoveten z: EN 60439-2:2000

ICS:

29.130.20	Nizkonapetostne stikalne in krmilne naprave	Low voltage switchgear and controlgear
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EUROPEAN STANDARD

EN 60439-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2000

ICS 29.130.20

Supersedes EN 60439-2:1993

English version

Low-voltage switchgear and controlgear assemblies
Part 2: Particular requirements for busbar trunking systems (busways)
 (IEC 60439-2:2000)

Ensembles d'appareillage à basse tension.
 Partie 2: Règles particulières
 pour les canalisations préfabriquées
 (CEI 60439-2:2000)

Niederspannung-
 Schaltgerätekombinationen
 Teil 2: Besondere Anforderungen
 an Schienenverteiler
 (IEC 60439-2:2000)

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SIST EN 60439-2:2000

This European Standard was approved by CENELEC on 2000-04-01. 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 17D/225/FDIS, future amendment to IEC 60439-2:1987, 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 was approved by CENELEC as amendment A2 to EN 60439-2:1993 on 2000-04-01.

The text of this document, together with that of IEC 60439-2:1987 and its amendment 1:1991, was published by IEC as the third edition of IEC 60439-2 in March 2000. According to a decision of principle taken by the Technical Board of CENELEC, the approval of EN 60439-2:1993/A2 has been converted into the approval of a new EN 60439-2.

This European Standard supersedes EN 60439-2:1993.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2001-01-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2003-04-01

Annexes designated "normative" are part of the body of the standard. Annexes designated "informative" are given for information only. In this standard, annex ZA is normative and annexes J, K, L, M and N are informative. Annex ZA has been added by CENELEC.

Busbar trunking systems (busways) shall comply with all requirements of EN 60439-1, if not otherwise indicated hereinafter and shall also comply with the particular requirements contained in this standard.

The clauses of this standard supplement, modify or replace the corresponding clauses in EN 60439-1.

Where there is no corresponding clause or subclause in this standard, the clause or subclause of the main document applies without modification as far as is reasonable.

In view of the fact that this standard should be read in conjunction with EN 60439-1, the numbering of its clauses and subclauses corresponds to the latter.

Endorsement notice

The text of the International Standard IEC 60439-2:2000 was approved by CENELEC as a European Standard without any modification.

Annex ZA (normative)**Normative references to international publications
with their corresponding European publications**

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

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>
IEC 60269	Series	Low-voltage fuses	EN 60269	Series
IEC 60332-3	1992	Tests on electric cables under fire conditions Part 3: Tests on bunched wires or cables	HD 405.3 S1	1993
IEC 60439-1	1999	Low-voltage switchgear and controlgear assemblies Part 1: Type-tested and partially type-tested assemblies	EN 60439-1	1999
IEC 60570	1995	Electrical supply track systems for luminaires	EN 60570 + A11 + corr. January + A12	1996 1998 1999 2000
IEC 60695-2-1/X	1994	Fire hazard testing Part 2-1: Test methods - Glow wire	EN 60695-2-1/X	1996
IEC 60909 (mod)	1988	Short-circuit current calculation in three-phase a.c. systems	HD 533 S1	1991
IEC 60947-2	1995	Low-voltage switchgear and controlgear Part 2: Circuit-breakers	EN 60947-2 + corr. June	1996 1997
ISO 834-1	1999	Fire-resistance tests Elements of building construction Part 1: General requirements	-	-

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**NORME
INTERNATIONALE
INTERNATIONAL
STANDARD**

**CEI
IEC**

60439-2

Troisième édition
Third edition
2000-03

Ensembles d'appareillage à basse tension –

**Partie 2:
Règles particulières pour les
canalisations préfabriquées**

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**Low-voltage switchgear and
controlgear assemblies –**

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**Part 2:
Particular requirements for
busbar trunking systems (busways)**

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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PRICE CODE

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For price, see current catalogue*

CONTENTS

	Page
FOREWORD	5
Clause	
1 General.....	9
2 Definitions.....	11
3 Classification of ASSEMBLIES.....	13
4 Electrical characteristics of ASSEMBLIES.....	15
5 Information to be given regarding the ASSEMBLIES	19
6 Service conditions.....	19
7 Design and construction.....	21
8 Test specifications	27
 Annex J (informative) Voltage drop of the system.....	 47
Annex K (informative) Method of determination of the magnetic field in the vicinity of busbar trunking system	49
Annex L (informative) Verification of maintenance circuit integrity under fire conditions.....	51
Annex M (informative) Test arrangement (see IEC 60332-3)	53
Annex N (informative) Method of determination of the electrical characteristics of busbar trunking systems by calculations from measurements	57

<https://standards.iteh.ai/catalog/standards/sist/6154d811-2a36-4868-b162-197c725f534a/sist-en-60439-2-2000>

INTERNATIONAL ELECTROTECHNICAL COMMISSION

LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR ASSEMBLIES –**Part 2: Particular requirements for busbar trunking systems (busways)**

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the 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, the IEC publishes International Standards. 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. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60439-2 has been prepared by subcommittee 17D: Low-voltage switchgear and controlgear assemblies, of IEC technical committee 17: Switchgear and controlgear.

This third edition cancels and replaces the second edition published in 1987 and its amendment 1 (1991). This third edition constitutes a technical revision.

The text of this standard is based on the second edition, amendment 1 and the following documents:

FDIS	Report on voting
17D/225/FDIS	17D/228/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 3.

Annexes J, K, L, M and N are for information only.

Busbar trunking systems (busways) shall comply with all requirements of IEC 60439-1, if not otherwise indicated hereinafter and shall also comply with the particular requirements contained in this standard.

The clauses of this standard supplement, modify or replace the corresponding clauses in IEC 60439-1.

Where there is no corresponding clause or subclause in this standard, the clause or subclause of the main document applies without modification as far as is reasonable.

In view of the fact that this standard should be read in conjunction with IEC 60439-1, the numbering of its clauses and subclauses corresponds to the latter.

The committee has decided that the contents of this publication will remain unchanged until 2003-03. At this date, the publication will be

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

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LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR ASSEMBLIES –

Part 2: Particular requirements for busbar trunking systems (busways)

1 General

1.1 Scope and object

Add the following paragraphs:

This International Standard applies to busbar trunking systems (BTS) and their accessories for feeding and distributing electrical power in residential, retail, public, agricultural and industrial premises. It also applies to busbar trunking systems which are designed to incorporate communication and/or control systems or intended to supply luminaires through tap-off units but does not apply to supply track systems in accordance with IEC 60570.

The busbar trunking systems considered in this standard are type-tested ASSEMBLIES (TTA) when tested in accordance with clause 8 of this standard; variations in length and angles of bends are considered to be covered.

Tap-off units may be partially type-tested ASSEMBLIES (PTTA).

1.2 Normative references

Insert in the existing list the titles of the following standards:

<https://standards.iteh.ai/catalog/standards/sist/6154d811-2a36-4868-5534a/sist-en-60439-2-2000>
IEC 60269 (all parts), *Low-voltage fuses*

IEC 60332-3:1992, *Tests on electric cables under fire conditions – Part 3: Tests on bunched wires or cables*

IEC 60439-1:1999, *Low-voltage switchgear and controlgear assemblies – Part 1: Type-tested and partially type-tested assemblies*

IEC 60570:1995, *Electrical supply track systems for luminaires**

IEC 60695-2-1, *Fire hazard testing – Part 2-1: Test methods – Glow wire*

IEC 60909:1988, *Short-circuit current calculation in three-phase a.c. systems*

IEC 60947-2:1995, *Low-voltage switchgear and controlgear – Part 2: Circuit-breakers***

ISO 834-1:1999, *Fire-resistance tests – Elements of building construction – Part 1: General requirements*

* There is a consolidated edition 1.1 (1998) that includes IEC 60570 (1995) and amendment 1 (1998).

** There is a consolidated edition 2.1 (1998) that includes IEC 60947-2 (1995) and amendment 1 (1997).

2 Definitions

2.1.1.2

partially type-tested low-voltage switchgear and controlgear ASSEMBLY (PTTA)

Replace the existing text by:

applicable only for tap-off units

2.3.4

busbar trunking system (busway)

Add before the note the following new item:

- additional conductors for communication and/or control

Add the following definitions:

2.3.5

busbar trunking unit

unit of a busbar trunking system complete with busbars, their supports and insulation, external enclosure and any fixing and connecting means to other units, with or without tap-off facilities

NOTE Trunking units may have different geometrical shapes such as straight length, elbow, tee or cross.

2.3.6

busbar trunking unit with tap-off facilities

busbar trunking unit designed to enable tap-off units to be installed at one or more points as predetermined by the manufacturer

The connection of tap-off units to the busbar trunking unit may or may not require the busbar system to be disconnected from the supply

2.3.7

busbar trunking unit with trolley-type tap-off facilities

busbar trunking unit designed to permit the use of roller- or brush-type tap-off units

2.3.8

busbar trunking adapter unit

busbar trunking unit intended to connect two units of the same system but of different type or of different rated current

2.3.9

busbar trunking thermal expansion unit

busbar trunking unit intended to permit a certain movement in the axial direction of the busbar trunking due to thermal expansion of the system

NOTE The expansion element may apply to the conductor within the enclosure or both enclosure and conductors according to the design.

2.3.10

busbar phase transposition unit

busbar trunking unit intended to change the relative positions of the phase conductors in order to balance the inductive reactances or to transpose the phases (such as L1-L2-L3-N to N-L3-L2-L1)

2.3.11**flexible busbar trunking unit**

busbar trunking unit having conductors and enclosures designed to be bent during installation

2.3.12**busbar trunking feeder unit**

busbar trunking unit serving as any incoming unit. The connection of the feeder unit to the supply may or may not require the supply to be disconnected

2.3.13**tap-off unit**

outgoing unit for tapping-off power from the busbar trunking unit with tap-off facilities (see 2.3.6), such as rollers, brushes or plug-in devices

A tap-off unit may also be permanently connected and can be intended for one or any combinations of power, communication or control circuits.

A tap-off unit may contain accessories, such as protective devices (for example fuse, fuse-switch, switch-fuse, circuit-breaker, residual current circuit-breaker), electronic apparatus for communication or remote control, contactors, socket-outlets, connecting facilities such as prewired, screw-type or screw-less type terminals, etc.

Tap-off units may be partially type-tested assemblies (PTTA).

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2.3.14**busbar trunking unit for building movements**

busbar trunking unit intended to allow for building movements due to thermal expansion and contraction of the building

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2.3.15**busbar trunking fire barrier unit**

busbar trunking unit or a part of a busbar trunking unit, with or without additional parts, intended to prevent the propagation of fire for a specified time under fire conditions

2.3.16**busbar trunking fire resistant unit**

busbar trunking unit, with or without additional parts, intended to maintain electrical circuit integrity for a specified time under fire conditions

3 Classification of ASSEMBLIES

Add to the existing dashed items the following new items:

- the mechanical loads they can withstand in use (see 7.1.1.1 to 7.1.1.3);
- resistance to fire and to flame propagation, if applicable (see 7.1.1.4 to 7.1.1.7).

Add a new paragraph as follows:

Busbar trunking systems and their accessories may be installed, according to the design, in indoor and outdoor locations, in various attitudes, in different mounting conditions; the manufacturer of the BTS shall state the applicable conditions.