

**SLOVENSKI
STANDARD**

SIST EN 60694:2001/A2:2002

prva izdaja
februar 2002

Common specifications for high-voltage switchgear and controlgear standards

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ICS 29.130.10

Referenčna številka
SIST EN 60694:2001/A2:2002(en)

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EUROPEAN STANDARD

EN 60694/A2

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2001

ICS 29.130.10

English version

**Common specifications for high-voltage switchgear
and controlgear standards**
(IEC 60694:1996/A2:2001)

Spécifications communes aux normes
de l'appareillage à haute tension
(CEI 60694:1996/A2:2001)

Gemeinsame Bestimmungen für
Hochspannungsschaltgeräte
(IEC 60694:1996/A2:2001)

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This amendment A2 modifies the European Standard EN 60694:1996; it was approved by CENELEC on 2001-09-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 amendment 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 17A/599/FDIS, future amendment 2 to IEC 60694:1996, prepared by SC 17A, High-voltage switchgear and controlgear, 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 60694:1996 on 2001-09-01.

The following dates were fixed:

- latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2002-06-01
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 2004-09-01

Annexes designated "normative" are part of the body of the standard.

In this standard, annex ZA is normative.

Annex ZA has been added by CENELEC.

Endorsement notice

The text of amendment 2:2001 to the International Standard IEC 60694:1996 was approved by CENELEC as an amendment to the European Standard without any modification.

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Annex ZA (normative)

Normative references to international publications with their corresponding European publications

Add:

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-2	Series	Environmental testing Part 2: Tests	-	-
IEC 60068-2-1	1990	Part 2: Tests - Tests A: Cold	EN 60068-2-1	1993
IEC 60068-2-2 + IEC 60068-2-2A	1974 1976	Part 2: Tests - Test B: Dry heat	EN 60068-2-2	1993
IEC 60068-2-3	1969	Part 2: Tests - Test Ca: Damp heat, steady state	HD 323.2.3 S2 ¹⁾	1987
IEC 60068-2-30	1980	Part 2: Tests - Test Db and guidance: Damp heat, cyclic (12 + 12 hour cycle)	EN 60068-2-30 ²⁾	1999
IEC 60255-21-1	1988	Electrical relays Part 21: Vibration, shock, bump and seismic tests on measuring relays and protection equipment -- Section 1: Vibration tests (sinusoidal)	EN 60255-21-1	1995
IEC 60255-21-3	1993	Part 21: Vibration, shock, bump and seismic tests on measuring relays and protection equipment -- Section 3: Seismic tests	EN 60255-21-3	1995
IEC 60512-2	1985	Electromechanical components for electronic equipment - Basic testing procedures and measuring methods Part 2: General examination, electrical continuity and contact resistance tests, insulation tests and voltage stress tests	-	-
IEC 61810-7	1997	Electromechanical all-or-nothing relays Part 7: Test and measurement procedures	-	-

1) HD 323.2.3 S2 includes A1:1984 to IEC 60068-2-3:1969.

2) EN 60068-2-30 includes A1:1985 to IEC 60068-2-30:1980.

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NORME
INTERNATIONALE
INTERNATIONAL
STANDARD

CEI
IEC
60694

1996

AMENDEMENT 2
AMENDMENT 2
2001-07

Amendement 2

**Spécifications communes aux normes
de l'appareillage à haute tension**

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Amendment 2
(standards.iteh.ai)

**Common specifications for high-voltage
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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

CODE PRIX
PRICE CODE

K

*Pour prix, voir catalogue en vigueur
For price, see current catalogue*

FOREWORD

This amendment has been prepared by subcommittee 17A: High-voltage switchgear and controlgear, of IEC technical committee 17: Switchgear and controlgear.

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

FDIS	Report on voting
17A/599/FDIS	17A/609/RVD

Full information on the voting for the approval of this amendment 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.

The committee has decided that the contents of the base publication and its amendments will remain unchanged until 2007. At this date, the publication will be

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

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1.2 Normative references

Insert, in the existing list, the following references:

IEC 60068-2 (all parts), *Environmental testing – Part 2: Tests*

IEC 60068-2-1:1990, *Environmental testing – Part 2: Tests. Tests A: Cold*

IEC 60068-2-2:1974, *Environmental testing – Part 2: Tests. Tests B: Dry heat*

IEC 60068-2-3:1969, *Environmental testing – Part 2: Tests. Test Ca: Damp heat, steady state*

IEC 60068-2-30:1980, *Environmental testing – Part 2: Tests. Test Db and guidance: Damp heat, cyclic (12 + 12-hour cycle)*

IEC 60255-21-1:1988, *Electrical relays – Part 21: Vibration, shock, bump and seismic tests on measuring relays and protection equipment – Section One: Vibration tests (sinusoidal)*

IEC 60255-21-3:1993, *Electrical relays – Part 21: Vibration, shock, bump and seismic tests on measuring relays and protection equipment – Section 3: Seismic tests*

IEC 60512-2:1985, *Electromechanical components for electronic equipment; basic testing procedures and measuring methods – Part 2: General examination, electrical continuity and contact resistance tests, insulation tests and voltage stress tests*

IEC 61810-7:1997, *Electromechanical all-or-nothing relays – Part 7: Tests and measurement procedures*

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6.2.10 Test on auxiliary and control circuits

Replace the title and text of this subclause as follows:

6.2.10 Dielectric tests on auxiliary and control circuits

Auxiliary and control circuits of switchgear and controlgear shall be subjected to impulse voltage withstand tests as well as to short duration power frequency voltage withstand tests. Each test shall be performed:

- a) between the auxiliary and control circuits connected together as a whole and the frame of the switching device;
- b) if practicable, between each part of the auxiliary and control circuits, which in normal use may be insulated from the other parts, and the other parts connected together and to the frame.

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The impulse voltage withstand tests shall be performed. The impulse voltage peak value shall be 5 kV. The auxiliary and control circuits shall withstand the tests without permanent damage. After the tests, they shall still be fully operational.

The power frequency tests shall be performed according to IEC 61180-1. The test voltage shall be 2 kV with a duration of 1 min.

The auxiliary and control circuits of switchgear and controlgear shall be considered to have passed the tests if no disruptive discharge occurs during each test.

Normally, the test voltage of motors and other devices used in the auxiliary and control circuits shall be the same as the test voltage of those circuits. If such apparatus has already been tested in accordance with the appropriate specification, it may be disconnected for these tests. Lower test voltage values are under consideration for auxiliary components. If it can be verified that the dielectric stress permits it, lower voltage values may be used, by agreement between manufacturer and user.

NOTE Possible lower values are 2,5 kV for the impulse test and 1 kV for the power frequency test.

The selection criterion is based on the magnitude of the largest common mode voltage, at industrial frequency, expected to occur between two points of the earthing circuitry of the substation (for example, during a primary short circuit or due to the presence of a shunt reactor).