SLOVENSKI STANDARD
SIST EN 61467:2009

01-februar-2009

Izolatorji za nadzemne vode – Izolatorski nizi in izolatorske verige za vode z nazivno napetostjo nad 1 000 V – Preskusi z izmeničnim oblokom (IEC 61467:2008)

Insulators for overhead lines - Insulator strings and sets for lines with a nominal voltage greater than 1 000 V - AC power arc tests (IEC 61467:2008)

Isolatoren für Freileitungen - Isolatorstränge und -ketten für Leitungen mit einer Nennspannung größer 1 000 V - Wechselstrom-Hochleistungs-Lichtbogenprüfungen (IEC 61467:2008)

Isolateurs pour lignes aériennes - Chaînes d'isolateurs et chaînes d'isolateurs équipées pour lignes de tension nominale supérieure à 1 000 V - Essais d'arc de puissance en courant alternatif (IEC 61467:2008)

Ta slovenski standard je istoveten z: **EN 61467:2008**

ICS:

29.080.10	Izolatorji	Insulators
29.240.20	Daljnovodi	Power transmission and distribution lines

SIST EN 61467:2009 **en,fr**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61467

November 2008

ICS 29.080.10; 29.240.20

English version

Insulators for overhead lines - Insulator strings and sets for lines with a nominal voltage greater than 1 000 V - AC power arc tests

(IEC 61467:2008)

Isolateurs pour lignes aériennes - Chaînes d'isolateurs et chaînes d'isolateurs équipées pour lignes de tension nominale supérieure à 1 000 V - Essais d'arc de puissance en courant alternatif (CEI 61467:2008)

Isolatoren für Freileitungen - Isolatorstränge und -ketten für Leitungen mit einer Nennspannung größer 1 000 V - Wechselstrom-Hochleistungs-Lichtbogenprüfungen (IEC 61467:2008)

This European Standard was approved by CENELEC on 2008-11-01. 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, Bulgaria, 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 and the 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

Ref. No. EN 61467:2008 E

Foreword

The text of document 36B/277/FDIS, future edition 1 of IEC 61467, prepared by SC 36B, Insulators for overhead lines, of IEC TC 36, Insulators, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61467 on 2008-11-01.

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)	2009-08-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2011-11-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61467:2008 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 standards indicated:

IEC 60383-1	NOTE Harmonized as EN 60383-1:1996 (not modified).
IEC 60383-2	NOTE Harmonized as EN 60383-2:1995 (not modified).

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application 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.

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

Publication	Year	Title	EN/HD	Year
IEC/TR 60797	-[1)]	Residual strength of string insulator units of glass or ceramic material for overhead lines after mechanical damage of the dielectric	-	-
IEC 60826	-[1)]	Design criteria of overhead transmission lines	-	-

[1)] Undated reference.

IEC 61467

Edition 1.0 2008-08

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Insulators for overhead lines – Insulator strings and sets for lines with a nominal voltage greater than 1 000 V – AC power arc tests

Isolateurs pour lignes aériennes – Chaînes d'isolateurs et chaînes d'isolateurs équipées pour lignes de tension nominale supérieure à 1 000 V – Essais d'arc de puissance en courant alternatif

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INSULATORS FOR OVERHEAD LINES – INSULATOR STRINGS AND SETS FOR LINES WITH A NOMINAL VOLTAGE GREATER THAN 1 000 V – AC POWER ARC TESTS

FOREWORD

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International Standard IEC 61467 has been prepared by subcommittee 36B: Insulators for overhead lines, of IEC technical committee 36: Insulators.

This first edition cancels and replaces IEC/TR 61467, which was published as a technical report in 1997. It constitutes a technical revision and now has the status of an International Standard.

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

FDIS	Report on voting
36B/277/FDIS	36B/280/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 2.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

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

INSULATORS FOR OVERHEAD LINES – INSULATOR STRINGS AND SETS FOR LINES WITH A NOMINAL VOLTAGE GREATER THAN 1 000 V – AC POWER ARC TESTS

1 Scope and object

This International Standard applies to insulator strings and sets comprising string insulator units of ceramic material, glass or composite material for use on a.c. overhead lines and traction lines with a nominal voltage above 1 000 V and a frequency between 15 Hz and 100 Hz.

This standard also applies to insulator strings or sets of similar design used in substations.

This standard establishes a standard test procedure for power arc tests on insulator sets. It also establishes a standard test procedure for power arc tests on short strings.

This standard does not apply to insulator sets mounted on non-metallic poles or towers.

This standard cannot be directly applied to line post insulators or sets, or to insulating structures such as braced line-posts, since their mounting arrangement cannot be reproduced by the standard arrangements as described herein. However, this standard can be used as a basis for agreement for tests on such insulators and arrangements.

The object of this standard is

– to define the terms used,

– to prescribe a standard test procedure,

– to prescribe criteria to evaluate the results of the tests.

Power arc tests are not an obligatory element of line insulator specifications. The standard test procedures and the evaluation criteria described in this standard are intended to provide testing guidance when power arc tests are felt to be necessary. It is not the object of this standard to introduce a general obligation to execute these tests.

2 Normative references

The following referenced documents are indispensable for the application 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.

IEC 60797, *Residual strength of string insulator units of glass or ceramic material for overhead lines after mechanical damage of the dielectric*

IEC 60826, *Design criteria of overhead transmission lines*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

NOTE Definitions of other terms used in this standard can be found in IEC 60050-471, IEC 60383-1 and IEC 60383-2.

3.1
test
one application of the specified test current for the specified duration to the insulator string or set

3.2
test sequence
three successive tests on the same insulator string or set

3.3
test series
a group of test sequences used to characterize the power arc performance of an insulator string or set

3.4
per cent initial asymmetry of current
deviation of the current from a symmetrical wave during the first cycle of a power arc

NOTE Per cent initial asymmetry is expressed as a function of the absolute peak value of the current of the first cycle (I_m) divided by the r.m.s. value of the current (I) as follows:

$$\left(\frac{|I_m|}{I \times \sqrt{2}} - 1\right) \times 100$$

3.5
supply circuit
electrical connection through which the current of a power arc flows to the line side of the test object from the power source

3.6
return circuit
electrical connection through which the current of power arc flows from the earth side of the test object to the power source

3.7
balanced circuit
supply or return circuit in which the current flow is in two diametrically opposed directions

3.8
unbalanced circuit
supply or return circuit in which the current flow is principally in one direction

3.9
short string (cap and pin units)
string of three to six insulator units having a minimum arcing distance of 400 mm

3.10
short string (long rod and composite units)
string of one or more insulator units having an arcing distance between 400 mm and 1 000 mm

4 Symbols and abbreviations

The following symbols and abbreviations are principally used in the tables and figures hereafter.

Unless otherwise stated currents and voltages are expressed as r.m.s values.