SLOVENSKI STANDARD
SIST EN 60071-1:2006/A1:2010

01-april-2010

Koordinacija izolacije - 1. del: Definicije, načela in pravila (IEC 60071-1:2006/A1:2010)

Insulation co-ordination - Part 1: Definitions, principles and rules (IEC 60071-1:2006/A1:2010)

Isolationskoordination - Teil 1: Begriffe, Grundsätze und Anforderungen (IEC 60071-1:2006/A1:2010)

Coordination de l'isolement - Partie 1: Définitions, principes et règles (CEI 60071-1:2006/A1:2010)

Ta slovenski standard je istoveten z: EN 60071-1:2006/A1:2010

ICS:

01.040.29	Elektrotehnika (Slovarji)	Electrical engineering (Vocabularies)
29.080.01	Električna izolacija na splošno	Electrical insulation in general

SIST EN 60071-1:2006/A1:2010 en,fr

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60071-1/A1

February 2010

ICS 29.080.30

English version

Insulation co-ordination - Part 1: Definitions, principles and rules
(IEC 60071-1:2006/A1:2010)

Coordination de l'isolement -
Partie 1: Définitions, principes et règles
(CEI 60071-1:2006/A1:2010)

Isolationskoordination -
Teil 1: Begriffe, Grundsätze
und Anforderungen
(IEC 60071-1:2006/A1:2010)

This amendment A1 modifies the European Standard EN 60071-1:2006; it was approved by CENELEC on 2010-02-01. 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, 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 and the United Kingdom.

CENELEC

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

Central Secretariat: Avenue Marnix 17, B - 1000 Brussels

Ref. No. EN 60071-1:2006/A1:2010 E

Foreword

The text of document 28/198A/FDIS, future amendment 1 to IEC 60071-1:2006, prepared by IEC TC 28, Insulation co-ordination, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as amendment A1 to EN 60071-1:2006 on 2010-02-01.

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

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)	2010-11-01
– latest date by which the national standards conflicting with the amendment have to be withdrawn	(dow)	2013-02-01

Endorsement notice

The text of amendment 1:2010 to the International Standard IEC 60071-1:2006 was approved by CENELEC as an amendment to the European Standard without any modification.

IEC 60071-1

Edition 8.0 2010-01

INTERNATIONAL STANDARD

NORME INTERNATIONALE

AMENDMENT 1
AMENDEMENT 1

Insulation co-ordination – Part 1: Definitions, principles and rules

Coordination de l'isolement – Partie 1: Définitions, principes et règles

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FOREWORD

This amendment has been prepared by IEC technical committee 28: Insulation co-ordination.

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

FDIS	Report on voting
28/198A/FDIS	28/201/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.

The committee has decided that the contents of this amendment and the base 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.

5.6 List of standard rated short-duration power-frequency withstand voltages

Replace the existing text by the following new text:

The following r.m.s. values, expressed in kV, are standardized as withstand voltages: 10, 20, 28, 38, 50, 70, 95, 115, 140, 185, 230, 275, 325, 360, 395, 460, 510, 570, 630, 680.

The following r.m.s. values, expressed in kV, are under consideration as withstand voltages: 710, 790, 830, 880, 960, 975, 1 050, 1 100, 1 200.

5.7 List of standard rated impulse withstand voltages

Replace the existing text by the following new text:

The following peak values, expressed in kV, are standardized as withstand voltages: 20, 40, 60, 75, 95, 125, 145, 170, 200, 250, 325, 380, 450, 550, 650, 750, 850, 950, 1 050, 1 175, 1 300, 1 425, 1 550, 1 675, 1 800, 1 950, 2 100, 2 250, 2 400, 2 550, 2 700, 2 900, 3 100.

Table 3 – Standard insulation levels for range II (U_m > 245 kV)

Replace the existing Table 3 by the following new Table 3:

Highest voltage for equipment U_m kV (r.m.s. value)	Standard rated switching impulse withstand voltage			Standard rated lightning impulse withstand voltage [b] kV (peak value)
	Longitudinal insulation [a] kV (peak value)	Phase-to-earth kV (peak value)	Phase-to-phase (ratio to the phase-to-earth peak value)	
300 [c]	750	750	1,50	850
				950
	750	850	1,50	950
				1 050
362	850	850	1,50	950
				1 050
	850	950	1,50	1 050
				1 175
420	850	850	1,60	1 050
				1 175
	950	950	1,50	1 175
				1 300
	950	1050	1,50	1 300
				1 425
550	950	950	1,70	1 175
				1 300
	950	1 050	1,60	1 300
				1 425
	950 1 050	1 175	1,50	1 425
				1 550
800	1 175	1 300	1,70	1 675
				1 800
	1 175	1 425	1,70	1 800
				1 950
	1 175 1 300	1 550	1,60	1 950
				2 100
1 100	–	1 425 [d]	–	1 950
				2 100
	1 425	1 550	1,70	2 100
				2 250
	1 550	1 675	1,65	2 250
				2 400
	1 675	1 800	1,6	2 400
				2 550

Highest voltage for equipment U_m kV (r.m.s. value)	**Standard rated switching impulse withstand voltage**			**Standard rated lightning impulse withstand voltage** [b] kV (peak value)
	Longitudinal insulation [a] kV (peak value)	**Phase-to-earth** kV (peak value)	**Phase-to-phase** (ratio to the phase-to-earth peak value)	
1 200	1 550	1 675	1,70	2 100
				2 250
	1 675	1 800	1,65	2 250
				2 400
	1 800	1 950	1,60	2 550
				2 700

a Value of the impulse voltage component of the relevant combined test while the peak value of the power-frequency component of opposite polarity is $U_m \times \sqrt{2} / \sqrt{3}$.

b These values apply as for phase-to-earth and phase-to-phase insulation as well; for longitudinal insulation they apply as the standard rated lightning impulse component of the combined standard rated withstand voltage, while the peak value of the power-frequency component of opposite polarity is $0{,}7 \times U_m \times \sqrt{2} / \sqrt{3}$.

c This U_m is a non-preferred value in IEC 60038.

d This value is only applicable to the phase-to-earth insulation of single phase equipment not exposed to air.

Table A.1 – Correlation between standard rated lightning impulse withstand voltages and minimum air clearances

Replace Table A.1 by the following new Table A.1:

Standard rated lightning impulse withstand voltage	Minimum clearance mm	
kV	Rod-structure	Conductor-structure
20	60	
40	60	
60	90	
75	120	
95	160	
125	220	
145	270	
170	320	
200	380	
250	480	
325	630	
380	750	
450	900	
550	1 100	
650	1 300	
750	1 500	
850	1 700	1 600
950	1 900	1 700
1 050	2 100	1 900
1 175	2 350	2 200
1 300	2 600	2 400
1 425	2 850	2 600
1 550	3 100	2 900
1 675	3 350	3 100
1 800	3 600	3 300
1 950	3 900	3 600
2 100	4 200	3 900
2 250	4 500	4 150
2 400	4 800	4 450
2 550	5 100	4 700
2 700	5 400	5 000

NOTE The standard rated lightning impulse withstand voltages are applicable phase-to-phase and phase-to-earth.

For phase-to-earth, the minimum clearance for conductor-structure and rod-structure is applicable.

For phase-to-phase, the minimum clearance for rod-structure is applicable.