SLOVENSKI STANDARD
SIST EN 60228:2005

01-april-2005

Nadomešča:
SIST HD 383 S2:1998
SIST HD 383 S2:1998/A1:1998
SIST HD 383 S2:1998/A2:1998

Vodniki izoliranih kablov (IEC 60228:2004, spremenjen) (vsebuje popravek AC:2005)

Conductors of insulated cables

Leiter für Kabel und isolierte Leitungen

Ames des câbles isolés

Ta slovenski standard je istoveten z: **EN 60228:2005**

ICS:

29.060.20 Kabli Cables

SIST EN 60228:2005 **en**

EUROPEAN STANDARD **EN 60228**

NORME EUROPÉENNE

EUROPÄISCHE NORM February 2005

ICS 29.060.20

Supersedes HD 383 S2:1986 + A1:1989 + A2:1993
Incorporates Corrigendum May 2005

English version

Conductors of insulated cables
(IEC 60228:2004)

Ames des câbles isolés
(CEI 60228:2004)

Leiter für Kabel und isolierte Leitungen
(IEC 60228:2004)

This European Standard was approved by CENELEC on 2004-12-07. 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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, 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 20/718/FDIS, future edition 3 of IEC 60228, prepared by IEC TC 20, Electric cables, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60228 on 2004-12-07.

A draft amendment, prepared by the Technical Committee CENELEC TC 20, Electric cables, was submitted to the formal vote and was approved by CENELEC for inclusion into EN 60228 on 2004-12-07.

This European Standard supersedes HD 383 S2:1986 + A1:1989 + A2:1993.

The principal changes with respect to HD 383 S2 are

– addition of a definition for nominal cross-sectional area;

– an increase in the range of conductor sizes in Tables 1 and 2;

– addition of a note that solid aluminium alloy conductors, having the same dimensions as aluminium conductors, will have a higher resistance;

– strengthening of the recommendations for dimensional limits of compacted stranded copper conductors.

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) 2005-09-01

– latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2007-12-01

Annex ZA, Special national conditions, has been added by CENELEC.

The contents of the corrigendum of May 2005 have been included in this copy.

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Endorsement notice

The text of the International Standard IEC 60228:2004 was approved by CENELEC as a European Standard without any modification.

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Annex ZA
(normative)

Special national conditions

Special national condition: National characteristic or practice that cannot be changed even over a long period, e.g. climatic conditions, electrical earthing conditions. If it affects harmonization, it forms part of the European Standard.

For the countries in which the relevant special national conditions apply these provisions are normative, for other countries they are informative.

Clause	Special national condition
Table 3	**Cyprus, Ireland, United Kingdom**

Add:

1,25	0,21	15,6	16,1

NOTE This conductor is for cables which are intended for use on appliances fitted with 13 A plugs conforming to BS 1363-1 or I.S. 401.

Table C.1 **Cyprus, Ireland, United Kingdom**

Add:

1,25	–	–	1,7

IEC 60228

Edition 3.0 2004-11

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Conductors of insulated cables

Ames des câbles isolés

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

PRICE CODE
CODE PRIX

R

ICS 29.060.20

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

CONDUCTORS OF INSULATED CABLES

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of 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, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). 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. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 60228 has been prepared by IEC technical committee 20: Electric cables.

This third edition cancels and replaces the IEC 60228 (1978), its Amendment 1 (1993) and its first supplement, IEC 60228A (1982).

The principal changes with respect to the previous edition are as follows:

a) the consolidation of material from IEC 60228A;
b) addition of a definition for nominal cross-sectional area;
c) an increase in the range of conductor sizes in Tables 1 and 2;
d) addition of a note that solid aluminum alloy conductors, having the same dimensions as aluminum conductors, will have a higher resistance;
e) strengthening of the recommendations for dimensional limits of compacted stranded copper conductors.

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

FDIS	Report on voting
20/718/FDIS	20/737/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.

Conductors described in IEC 60228 are specified in metric sizes. Canada at present uses conductor sizes and characteristics according to the American Wire Gauge (AWG) system and kcmil for larger sizes as shown below. The use of these sizes is currently prescribed uniformly across Canada for installations by sub-national regulations. IEC TC 20 cable product standards do not prescribe cables with AWG/kcmil conductors.

AWG				kcmil			
Conductor size	**Nominal cross-sectional area mm²**	**Conductor size**	**Nominal cross-sectional area mm²**	**Conductor size**	**Nominal cross-sectional area mm²**	**Conductor size**	**Nominal cross-sectional area mm²**
-	-	-	-	250	127	750	380
-	-	-	-	300	152	800	405
20	0,519	4	21,2	350	177	900	456
18	0,823	3	26,7	400	203	1000	507
16	1,31	2	33,6	450	228	1200	608
14	2,08	1	42,4	500	253	1250	633
12	3,31	1/0	53,5	550	279	1500	760
10	5,26	2/0	67,4	600	304	1750	887
8	8,37	3/0	85,0	650	329	2000	1010
6	13,3	4/0	107	700	355	-	-

INTRODUCTION

IEC 60228 is intended as a fundamental reference standard for IEC Technical Committees and National Committees in drafting standards for electric cables, and to the National Committees in drafting specifications for use in their own countries. These committees should select from the tables of this general standard the conductors appropriate to the particular applications with which they are concerned and either include the applicable details in their cable specifications or make appropriate references to this standard.

In preparing this edition the main objects have been to incorporate IEC 60228A into it and maintain a simplified yet informative standard so far as is compatible with technical and economic considerations.