

Conductors of insulated cables

The European Standard EN 60228:2005 has the status of a British Standard

ICS 29.060.20

National foreword

This British Standard was published by BSI. It is the UK implementation of EN 60228:2005, incorporating corrigendum May 2005. It is identical with IEC 60228:2004. It supersedes BS 6360:1991, which will be withdrawn on 1 December 2007.

The UK participation in its preparation was entrusted by Technical Committee GEL/20, Electric cables, to Subcommittee GEL/20/16, Medium/high voltage cables.

A list of organizations represented on this subcommittee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 24 March 2005

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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)

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CENELEC

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

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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.

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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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.

CONDUCTORS OF INSULATED CABLES

1 Scope

This International Standard specifies the nominal cross-sectional areas, in the range 0,5 mm² to 2 500 mm², for conductors in electric power cables and cords of a wide range of types. Requirements for numbers and sizes of wires and resistance values are also included. These conductors include solid and stranded copper, aluminium and aluminium alloy conductors in cables for fixed installations and flexible copper conductors.

The standard does not apply to conductors for telecommunication purposes.

The applicability of this standard to a particular type of cable is as specified in the standard for the type of cable.

Unless indicated to the contrary in a particular clause, this standard relates to the conductors in the finished cable and not to the conductor as made or supplied for inclusion into a cable.

Informative annexes are included giving supplementary information covering temperature correction factors for resistance measurement (Annex B) and dimensional limits of circular conductors (Annex C).

2 Terms and definitions

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

2.1

metal-coated

coated with a thin layer of suitable metal, such as tin or tin alloy

2.2

nominal cross-sectional area

value that identifies a particular size of conductor but is not subject to direct measurement

NOTE Each particular size of conductor in this standard is required to meet a maximum resistance value.

3 Classification

The conductors have been divided into four classes, 1, 2, 5 and 6. Those in classes 1 and 2 are intended for use in cables for fixed installations. Classes 5 and 6 are intended for use in flexible cables and cords but may also be used for fixed installations.

- Class 1: solid conductors.
- Class 2: stranded conductors.
- Class 5: flexible conductors.
- Class 6: flexible conductors which are more flexible than class 5.