Irish Standard
I.S. EN 60702-2:2002&A1:2015

Mineral insulated cables and their terminations with a rated voltage not exceeding 750 V - Part 2: Terminations

I.S. EN 60702-2:2002&A1:2015

Incorporating amendments/corrigenda/National Annexes issued since publication:

EN 60702-2:2002/A1:2015

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

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This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):

NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.

This document is based on:	*Published:*
EN 60702-2:2002	2002-03-08

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2015-03-17	NOTE: If blank see CEN/CENELEC cover page

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60702-2:2002/A1

February 2015

ICS 29.060.20

English Version

Mineral insulated cables and their terminations with a rated voltage not exceeding 750 V - Part 2: Terminations (IEC 60702-2:2002/A1:2015)

Câbles à isolant minéral et leurs terminaisons de tension assignée ne dépassant pas 750 V - Partie 2: Terminaisons (IEC 60702-2:2002/A1:2015)

Mineralisolierte Leitungen mit einer Bemessungsspannung bis 750 V - Teil 2: Endverschlüsse (IEC 60702-2:2002/A1:2015)

This amendment A1 modifies the European Standard EN 60702-2:2002; it was approved by CENELEC on 2015-02-19. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre 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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Ref. No. EN 60702-2:2002/A1:2015 E

Foreword

The text of document 20/1529/FDIS, future edition 2 of IEC 60702-2/A1, prepared by IEC TC 20, Electric cables" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60702-2:2002/A1:2015.

The following dates are fixed:

• latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2015-11-19
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2018-02-19

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

This standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

Endorsement notice

The text of the International Standard IEC 60702-2:2002/A1:2015 was approved by CENELEC as a European Standard without any modification.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

Replace the existing list of references with the following references:

Publication	Year	Title	EN/HD	Year
IEC 60079-0 (mod)	-	Explosive atmospheres -- Part 0: Equipment - General requirements	EN 60079-0	-
IEC 60364-5-54	-	Low-voltage electrical installations -- Part 5-54: Selection and erection of electrical equipment - Earthing arrangements and protective conductors	HD 60364-5-54	-
IEC 60423	-	Conduit systems for cable management - Outside diameters of conduits for electrical installations and threads for conduits and fittings	EN 60423	-
IEC 60702-1	-	Mineral insulated cables and their terminations with a rated voltage not exceeding 750 V -- Part 1: Cables	EN 60702-1	-

EUROPEAN STANDARD **EN 60702-2**

NORME EUROPÉENNE

EUROPÄISCHE NORM March 2002

ICS 29.060.20 Supersedes HD 586.2 S1:1994

English version

Mineral insulated cables and their terminations with a rated voltage not exceeding 750 V Part 2: Terminations

(IEC 60702-2:2002)

Câbles à isolant minéral et leurs terminaisons de tension assignée ne dépassant pas 750 V
Partie 2: Terminaisons
(CEI 60702-2:2002)

Mineralisolierte Leitungen mit einer Bemessungsspannung bis 750 V
Teil 2: Endverschlüsse
(IEC 60702-2:2002)

This European Standard was approved by CENELEC on 2002-03-01. 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, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, 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

Ref. No. EN 60702-2:2002 E

Foreword

The text of document 20/491/FDIS, future edition 2 of IEC 60702-2, prepared by IEC TC 20, Electric cables, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60702-2 on 2002-03-01.

This European Standard supersedes HD 586.2 S1:1994 and its corrigendum November 1995.

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) 2002-12-01

– latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2005-03-01

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.

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Endorsement notice

The text of the International Standard IEC 60702-2:2002 was approved by CENELEC as a European Standard without any modification.

———————

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE 1 When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 When a standard cited below belongs to the EN 50000 series, this European Standard applies instead of the relevant International Standard.

Publication	Year	Title	EN/HD	Year
IEC 60079-0	1998	Electrical apparatus for explosive gas atmospheres Part 0: General requirements [1)]	EN 50014 A1 A2	1997 1999 1999
IEC 60364-5-54 (mod)	1980	Electrical installation of buildings Part 5: Selection and erection of electrical equipment -- Chapter 54: Earthing arrangements and protective conductors	HD 384.5.54 S1	1988
IEC 60423 (mod)	1993	Conduits for electrical purposes - Outside diameters of conduits for electrical installations and threads for conduits and fittings	EN 60423	1994
IEC 60702-1	2002	Mineral insulated cables and their terminations with a rated voltage not exceeding 750 V Part 1: Cables	EN 60702-1	2002

1) The title of EN 50014 is: Electrical apparatus for potentially explosive atmospheres - General requirements.

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NORME INTERNATIONALE

INTERNATIONAL STANDARD

CEI
IEC
60702-2

Deuxième édition
Second edition
2002-02

Câbles à isolant minéral et leurs terminaisons de tension assignée ne dépassant pas 750 V –

Partie 2: Terminaisons

Mineral insulated cables and their terminations with a rated voltage not exceeding 750 V –

Part 2: Terminations

Numéro de référence
Reference number
CEI/IEC 60702-2:2002

Numérotation des publications

Depuis le 1er janvier 1997, les publications de la CEI sont numérotées à partir de 60000. Ainsi, la CEI 34-1 devient la CEI 60034-1.

Editions consolidées

Les versions consolidées de certaines publications de la CEI incorporant les amendements sont disponibles. Par exemple, les numéros d'édition 1.0, 1.1 et 1.2 indiquent respectivement la publication de base, la publication de base incorporant l'amendement 1, et la publication de base incorporant les amendements 1 et 2.

Informations supplémentaires sur les publications de la CEI

Le contenu technique des publications de la CEI est constamment revu par la CEI afin qu'il reflète l'état actuel de la technique. Des renseignements relatifs à cette publication, y compris sa validité, sont disponibles dans le Catalogue des publications de la CEI (voir ci-dessous) en plus des nouvelles éditions, amendements et corrigenda. Des informations sur les sujets à l'étude et l'avancement des travaux entrepris par le comité d'études qui a élaboré cette publication, ainsi que la liste des publications parues, sont également disponibles par l'intermédiaire de:

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Publication numbering

As from 1 January 1997 all IEC publications are issued with a designation in the 60000 series. For example, IEC 34-1 is now referred to as IEC 60034-1.

Consolidated editions

The IEC is now publishing consolidated versions of its publications. For example, edition numbers 1.0, 1.1 and 1.2 refer, respectively, to the base publication, the base publication incorporating amendment 1 and the base publication incorporating amendments 1 and 2.

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The technical content of IEC publications is kept under constant review by the IEC, thus ensuring that the content reflects current technology. Information relating to this publication, including its validity, is available in the IEC Catalogue of publications (see below) in addition to new editions, amendments and corrigenda. Information on the subjects under consideration and work in progress undertaken by the technical committee which has prepared this publication, as well as the list of publications issued, is also available from the following:

- **IEC Web Site (www.iec.ch)**
- **Catalogue of IEC publications**

  The on-line catalogue on the IEC web site (www.iec.ch/catlg-e.htm) enables you to search by a variety of criteria including text searches, technical committees and date of publication. On-line information is also available on recently issued publications, withdrawn and replaced publications, as well as corrigenda.
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NORME INTERNATIONALE

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CEI
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Câbles à isolant minéral et leurs terminaisons de tension assignée ne dépassant pas 750 V –

Partie 2: Terminaisons

Mineral insulated cables and their terminations with a rated voltage not exceeding 750 V –

Part 2: Terminations

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International Electrotechnical Commission
Международная Электротехническая Комиссия

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COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

CÂBLES À ISOLANT MINÉRAL ET LEURS TERMINAISONS DE TENSION ASSIGNÉE NE DÉPASSANT PAS 750 V –

Partie 2: Terminaisons

AVANT-PROPOS

1) La CEI (Commission Electrotechnique Internationale) est une organisation mondiale de normalisation composée de l'ensemble des comités électrotechniques nationaux (Comités nationaux de la CEI). La CEI a pour objet de favoriser la coopération internationale pour toutes les questions de normalisation dans les domaines de l'électricité et de l'électronique. A cet effet, la CEI, entre autres activités, publie des Normes internationales. Leur élaboration est confiée à des comités d'études, aux travaux desquels tout Comité national intéressé par le sujet traité peut participer. Les organisations internationales, gouvernementales et non gouvernementales, en liaison avec la CEI, participent également aux travaux. La CEI collabore étroitement avec l'Organisation Internationale de Normalisation (ISO), selon des conditions fixées par accord entre les deux organisations.
2) Les décisions ou accords officiels de la CEI concernant les questions techniques représentent, dans la mesure du possible, un accord international sur les sujets étudiés, étant donné que les Comités nationaux intéressés sont représentés dans chaque comité d'études.
3) Les documents produits se présentent sous la forme de recommandations internationales. Ils sont publiés comme normes, spécifications techniques, rapports techniques ou guides et agréés comme tels par les Comités nationaux.
4) Dans le but d'encourager l'unification internationale, les Comités nationaux de la CEI s'engagent à appliquer de façon transparente, dans toute la mesure possible, les Normes internationales de la CEI dans leurs normes nationales et régionales. Toute divergence entre la norme de la CEI et la norme nationale ou régionale correspondante doit être indiquée en termes clairs dans cette dernière.
5) La CEI n'a fixé aucune procédure concernant le marquage comme indication d'approbation et sa responsabilité n'est pas engagée quand un matériel est déclaré conforme à l'une de ses normes.
6) L'attention est attirée sur le fait que certains des éléments de la présente Norme internationale peuvent faire l'objet de droits de propriété intellectuelle ou de droits analogues. La CEI ne saurait être tenue pour responsable de ne pas avoir identifié de tels droits de propriété et de ne pas avoir signalé leur existence.

La Norme internationale CEI 60702-2 a été établie par le comité d'études 20 de la CEI: Câbles électriques.

Cette deuxième édition de la CEI 60702-2 annule et remplace la première édition de la CEI 60702-2 publiée en 1986 et constitue une révision technique.

Le texte de cette norme est issu des documents suivants:

FDIS	Rapport de vote
20/491/FDIS	20/511/RVD

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à l'approbation de cette norme.

Cette publication a été rédigée selon les Directives ISO/CEI, Partie 3.

Le comité a décidé que le contenu de cette publication ne sera pas modifié avant 2012. A cette date, la publication sera

- reconduite;
- supprimée;
- remplacée par une édition révisée, ou
- amendée.

INTERNATIONAL ELECTROTECHNICAL COMMISSION

MINERAL INSULATED CABLES AND THEIR TERMINATIONS WITH A RATED VOLTAGE NOT EXCEEDING 750 V –

Part 2: Terminations

FOREWORD

1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the 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, the IEC publishes International Standards. 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. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60702-2 has been prepared by IEC technical committee 20: Electric cables.

This second edition of IEC 60702-2 cancels and replaces the first edition of IEC 60702-2 published in 1986 and constitutes a technical revision.

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

FDIS	Report on voting
20/491/FDIS	20/511/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 3.

The committee has decided that the contents of this publication will remain unchanged until 2012. At this date, the publication will be

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

CÂBLES À ISOLANT MINÉRAL ET LEURS TERMINAISONS DE TENSION ASSIGNÉE NE DÉPASSANT PAS 750 V –

Partie 2: Terminaisons

1 Domaine d'application

La présente norme spécifie les prescriptions pour les terminaisons destinées à être utilisées avec les câbles à isolant minéral conformes aux prescriptions de la CEI 60702-1.

2 Références normatives

Les documents de référence suivants sont indispensables pour l'application du présent document. Pour les références datées, seule l'édition citée s'applique. Pour les références non datées, la dernière édition du document de référence s'applique (y compris les éventuels amendements).

CEI 60079-0:1998, *Matériel électrique pour atmosphères explosives gazeuses – Partie 0: Règles générales*

CEI 60364-5-54:1980, *Installations électriques des bâtiments – Cinquième partie: Choix et mise en œuvre des matériels électriques – Chapitre 54: Mises à la terre et conducteurs de protection*

CEI 60423:1993, *Conduits de protection des conducteurs – Diamètres extérieurs des conduits pour installations électriques et filetages pour conduits et accessoires*

CEI 60702-1:2002, *Câbles à isolant minéral et leurs terminaisons de tension nominale ne dépassant pas 750 V – Partie 1: Câbles*

3 Définitions

Pour les besoins de la présente partie de la CEI 60702, les définitions suivantes s'appliquent.

3.1
terminaison
équipement d'extrémité complet pour un câble à isolant minéral, comprenant normalement une extrémité étanche et un presse-étoupe ou un dispositif composite extrémité étanche/presse-étoupe, mais excluant le contre-écrou et toute boîte de jonction associée ou tout autre accessoire

3.2
extrémité étanche
partie de la terminaison conçue pour assurer l'étanchéité de l'extrémité du câble contre l'entrée d'humidité. Il faut que la conception soit telle qu'elle assure une isolation entre âmes conductrices et entre les âmes conductrices et la gaine et assure l'isolation de l'âme au-delà de l'extrémité étanche. Elle peut également comporter un système de connexion à un conducteur de protection

MINERAL INSULATED CABLES AND THEIR TERMINATIONS WITH A RATED VOLTAGE NOT EXCEEDING 750 V –

Part 2: Terminations

1 Scope

This standard specifies requirements for terminations for use with mineral insulated cables complying with the requirements of IEC 60702-1.

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 60079-0:1998, *Electrical apparatus for explosive gas atmospheres – Part 0: General requirements*

IEC 60364-5-54:1980, *Electrical installations of buildings – Part 5: Selection and erection of electrical equipment – Chapter 54: Earthing arrangements and protective conductors*

IEC 60423:1993, *Conduits for electrical purposes – Outside diameters of conduits for electrical installations and threads for conduits and fittings*

IEC 60702-1:2002, *Mineral insulated cables and their terminations with a rated voltage not exceeding 750 V – Part 1: Cables*

3 Definitions

For the purpose of this part of IEC 60702, the following definitions apply.

3.1
termination
complete end fitting for a mineral insulated cable, normally comprising a seal and a gland or a composite seal/gland device, but excluding the locknut and any associated junction box or accessory

3.2
seal
part of a termination designed to seal the end of the cable against entry of moisture. The design must be such as to provide insulation between conductors and between conductors and sheath and provide conductor insulation external to the seal. It may also have a means of providing a protective conductor