



**NSAI**  
Standards

Irish Standard  
I.S. EN 61386-22:2004

Conduit systems for cable management  
-- Part 22: Particular requirements -  
Pliable conduit systems (IEC 61386  
-22:2002 (EQV))

## I.S. EN 61386-22:2004

*Incorporating amendments/corrigenda issued since publication:*

EN 61386-22:2004/A11:2010

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I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

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English version

**Conduit systems for cable management -  
Part 22: Particular requirements -  
Pliable conduit systems**

Systèmes de conduits pour la gestion du câblage -  
Partie 22: Règles particulières -  
Systèmes de conduits cintrables

Elektroinstallationsrohrsysteme für elektrische Energie und für Informationen -  
Teil 22: Besondere Anforderungen für biegsame Elektroinstallationsrohrsysteme

This amendment A11 modifies the European Standard EN 61386-22:2004; it was approved by CENELEC on 2010-12-01. 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

**Management Centre: Avenue Marnix 17, B - 1000 Brussels**

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## Foreword

This amendment to the European Standard EN 61386-22:2004 was prepared by the Technical Committee CENELEC TC 213, Cable management systems. It was submitted to the Unique Acceptance Procedure and was approved by CENELEC as amendment A11 to EN 61386-22:2004 on 2010-12-01.

This amendment (affecting only the foreword) has been issued to allow the use of EN 61386-22:2004 in conjunction with EN 61386-1:2008.

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) 2011-12-01
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 2013-12-01

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## Foreword

**Replace** the 4<sup>th</sup> paragraph by the following:

This part 22, which specifies particular requirements for pliable conduit systems, is to be used in conjunction with EN 61386-1:2008; it may also be used in conjunction with EN 61386-1:2004 until EN 61386-1:2004 is withdrawn, the date of the withdrawal being no later than 2011-06-01.

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EUROPEAN STANDARD

**EN 61386-22**

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2004

ICS 29.120.10

Supersedes EN 50086-2-2:1995 + A11:1998  
Incorporates Corrigendum April 2004

English version

**Conduit systems for cable management**  
**Part 22: Particular requirements –**  
**Pliable conduit systems**  
(IEC 61386-22:2002)

Systèmes de conduits pour la gestion  
du câblage  
Partie 22: Règles particulières –  
Systèmes de conduits cintrables  
(CEI 61386-22:2002)

Elektroinstallationsrohrsysteme für  
elektrische Energie und für Informationen  
Teil 22: Besondere Anforderungen für  
biegsame Elektroinstallationsrohrsysteme  
(IEC 61386-22:2002)

This European Standard was approved by CENELEC on 2003-09-23. 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 the International Standard IEC 61386-22:2002, prepared by SC 23A, Cable management systems, of IEC TC 23, Electrical accessories, was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 61386-22 on 2003-09-23.

This European Standard supersedes EN 50086-2-2:1995 + corrigendum February 2001 + A11:1998 + A11:1998/corrigendum February 2001.

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) 2004-10-01
- latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2008-06-30

This part 22, which specifies particular requirements for pliable conduit systems, is to be used in conjunction with EN 61386-1:2004.

This part 22 supplements or modifies the corresponding clauses of EN 61386-1. Where a particular clause or subclause of part 1 is not mentioned in this part 22, that clause or subclause applies as far as is reasonable. Where this part 22 states "addition", "modification" or "replacement", the relevant text of part 1 is to be adapted accordingly.

Subclauses, tables and figures which are in addition to those in part 1 are numbered starting with 101. Additional annexes are lettered AA, BB, etc.

A conduit system which complies with this standard is deemed safe for use when installed in accordance with national wiring regulations, whilst applying the manufacturer's installation instructions and conduit classification.

In this standard, the following print types are used:

- requirements: in roman type;
- *test specifications: in italic type;*
- notes: in smaller roman type.

Annexes ZAA and ZBB have been added by CENELEC.

The contents of the corrigendum of April 2004 have been included in this copy.

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### Endorsement notice

The text of the International Standard IEC 61386-22:2002 was approved by CENELEC as a European Standard without any modification.

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## COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

## SYSTÈMES DE CONDUITS POUR INSTALLATIONS ÉLECTRIQUES –

Partie 22: Règles particulières —  
Systèmes de conduits cintrables

## AVANT-PROPOS

- 1) La CEI (Commission Électrotechnique 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 61386-22 a été établie par le sous-comité 23A: Systèmes de câblage, du comité d'études 23 de la CEI: Petit appareillage.

Le texte de cette norme est issu des documents suivants:

FDIS	Rapport de vote
23A/370/FDIS	23A/373/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.

La présente partie 22, qui donne les règles particulières pour les systèmes de conduits cintrables, doit être utilisée conjointement avec la CEI 61386-1, *Systèmes de conduits pour installations électriques – Partie 1: Règles générales*, et ses amendements.<sup>1</sup> Elle a été établie sur la base de la première édition (1996) de cette norme et de son amendement 1 (2000).

<sup>1</sup> A noter que le titre générique de la série CEI 61386 a été modifié depuis la parution de la partie 1, et que toutes les nouvelles parties porteront ce nouveau titre générique.

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**CONDUIT SYSTEMS FOR CABLE MANAGEMENT –****Part 22: Particular requirements –  
Pliable conduit systems**

## 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 61386-22 has been prepared by subcommittee 23A: Cable management systems, of IEC technical committee 23: Electrical accessories.

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

FDIS	Report on voting
23A/370/FDIS	23A/373/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.

This part 22, which specifies particular requirements for pliable conduit systems, is to be used in conjunction with IEC 61386-1, *Conduit systems for electrical installations – Part 1: General requirements*, and its amendments <sup>1</sup>. It was established on the basis of the first edition (1996) of that standard and its amendment 1 (2000).

<sup>1</sup> Please note that the generic title of the IEC 61386 series has been changed to *Conduit systems for cable management* since the publication of part 1, hence all other parts of the series are now published under this new title.

La présente partie 22 complète ou modifie les articles correspondants de la CEI 61386-1. Lorsqu'un article ou un paragraphe particulier de la partie 1 n'est pas mentionné dans la présente partie 22, cet article ou ce paragraphe s'applique autant qu'il est possible. Lorsque la présente partie 22 annonce "addition", "modification" ou "remplacement", le texte correspondant de la partie 1 doit être adapté en conséquence.

Les paragraphes, tableaux et figures complémentaires à ceux de la partie 1 sont numérotés à partir de 101.

Un système de conduits qui satisfait aux essais de la présente norme est considéré sans risque quand il est installé dans le respect des réglementations nationales sur le câblage, tout en appliquant les instructions d'installation du fabricant et la classification des systèmes de conduits.

NOTE Les caractères d'imprimerie suivants sont utilisés:

- Prescriptions: caractères romains
- *Modalités d'essai: caractères italiques*
- Commentaires: petits caractères romains

Le comité a décidé que le contenu de cette publication ne sera pas modifié avant 2006-12. A cette date, la publication sera

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

This part 22 supplements or modifies the corresponding clauses of IEC 61386-1. Where a particular clause or subclause of part 1 is not mentioned in this part 22, that clause or subclause applies as far as is reasonable. Where this part 22 states "addition", "modification" or "replacement", the relevant text of part 1 is to be adapted accordingly.

Subclauses, tables and figures, which are in addition to those in part 1, are numbered starting with 101.

A conduit system which complies with this standard, is deemed safe for use when installed in accordance with national wiring regulations, whilst applying the manufacturer's installation instructions and conduit classification.

NOTE The following print types are used:

- requirements: in roman type
- *test specifications: in italic type*
- notes: in small roman type

The committee has decided that the contents of this publication will remain unchanged until 2006-12. At this date, the publication will be

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

## SYSTÈMES DE CONDUITS POUR INSTALLATIONS ÉLECTRIQUES –

### Partie 22: Règles particulières – Systèmes de conduits cintrables

#### 1 Domaine d'application

L'article de la partie 1 est applicable avec l'exception suivante:

*Addition:*

La présente partie de la CEI 61386 spécifie les règles pour les systèmes de conduits cintrables, y compris les systèmes de conduits transversalement élastiques.

#### 2 Références normatives

L'article de la partie 1 est applicable.

#### 3 Définitions

L'article de la partie 1 est applicable.

#### 4 Prescriptions générales

L'article de la partie 1 est applicable.

#### 5 Généralités sur les essais

L'article de la partie 1 est applicable.

#### 6 Classification

L'article de la partie 1 est applicable avec les exceptions suivantes:

**6.1.1 1**, **6.1.2 1**, **6.1.3 1**, **6.1.3 4**, **6.1.4 1** et **6.1.5 1** ne sont pas applicables.

NOTE Les systèmes de conduits cintrables selon 6.1.1 2 et 6.1.2 2 et la classification 1X du tableau 1 de 6.2.1 ne sont pas autorisés en France.

#### 7 Marquage et documentation

L'article de la partie 1 est applicable avec les exceptions suivantes:

*Addition:*

**7.1.101** Le conduit doit être marqué selon 7.1, sur toute la longueur, à intervalles réguliers, de préférence de 1 m mais pas supérieurs à 3 m. Lorsque cela est techniquement impossible, une étiquette avec le marquage doit être attachée à chaque extrémité du produit ou à l'emballage.

*La vérification est effectuée par examen.*

## CONDUIT SYSTEMS FOR CABLE MANAGEMENT –

### Part 22: Particular requirements – Pliable conduit systems

#### 1 Scope

This clause of part 1 is applicable, except as follows:

*Addition:*

This part of IEC 61386 specifies the requirements for pliable conduit systems including self-recovering conduit systems.

#### 2 Normative references

This clause of part 1 is applicable.

#### 3 Definitions

This clause of part 1 is applicable.

#### 4 General requirements

This clause of part 1 is applicable.

#### 5 General conditions for tests

This clause of part 1 is applicable.

#### 6 Classification

This clause of part 1 is applicable, except as follows:

**6.1.1 1**, **6.1.2 1**, **6.1.3 1**, **6.1.3 4**, **6.1.4 1** and **6.1.5 1** are not applicable.

NOTE Pliable conduit systems according to 6.1.1.2 and 6.1.2.2 and classification 1X from 6.2.1, table 1 are not allowed in France.

#### 7 Marking and documentation

This clause of part 1 is applicable, except as follows:

*Addition:*

**7.1.101** The conduit shall be marked in accordance with 7.1 along its entire length at regular intervals of preferably 1 m but not longer than 3 m. Where this is technically impractical, the mark shall be on a label attached to the product at each end or on the packaging.

*Compliance is checked by inspection.*

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