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Cable cleats for electrical installations

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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CABLE CLEATS FOR ELECTRICAL INSTALLATIONS

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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This commented version (CMV) of the official standard IEC 61914:2021 edition 3.0 allows the user to identify the changes made to the previous IEC 61914:2015 edition 2.0. Futhermore, comments from IEC SC 23A experts are provided to explain the reasons of the most relevant changes.

A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text. Experts' comments are identified by a blue-background number. Mouse over a number to display a pop-up note with the comment.

This publication contains the CMV and the official standard. The full list of comments is available at the end of the CMV.

IEC 61914 has been prepared by subcommittee 23A: Cable management systems, of IEC technical committee 23: Electrical accessories. It is an International Standard.

This third edition cancels and replaces the second edition published in 2015. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) requirements for mandrels used in testing rationalised and detailed in the general test requirements (Clause 5);
b) definition of liner added and test requirements where liners and other optional parts are used;
c) definitions for LV, MV and HV cables added and test requirements where MV & HV cable are used ;
d) new corrosion resistance classes for plated products added;
e) new requirements and test for durability and legibility of markings added;
f) new test requirements for axial load testing of cleats for more than one cable added;
g) lateral load test requirements for intermediate restraints added.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
23A/976/FDIS	23A/982/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

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CABLE CLEATS FOR ELECTRICAL INSTALLATIONS

1 Scope

This International Standard specifies requirements and tests for cable cleats used for securing cables in electrical installations and for intermediate restraints used for ~~securing cable~~ holding cables together in formation in electrical installations. Cable cleats provide resistance to electromechanical forces where declared. This document includes cable cleats that rely on a mounting surface specified by the manufacturer for axial and/or lateral retention of cables.

Various types of cable cleats and intermediate restraints are shown in Annex A.

NOTE Requirements for manufacturers in this document also apply to importers and responsible vendors where appropriate.

This document does not apply to ~~cable glands,~~ cable ties.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 60060-1:2010, *High-voltage test techniques – Part 1: General definitions and test requirements*

IEC 60502-1, *Power cables with extruded insulation and their accessories for rated voltages from 1 kV (U_m = 1,2 kV) up to 30 kV (U_m = 36 kV) – Part 1: Cables for rated voltages of 1 kV (U_m = 1,2 kV) and 3 kV (U_m = 3,6 kV)*

IEC 60695-11-5~~:2004~~, *Fire hazard testing – Part 11-5: Test flames – Needle-flame test method – Apparatus, confirmatory test arrangement and guidance*

ISO 1461, *Hot dip galvanized coatings on fabricated iron and steel articles – Specifications and test methods*

ISO 2081, *Metallic and other inorganic coatings – Electroplated coatings of zinc with supplementary treatments on iron or steel*

ISO 3575, *Continuous hot dip zinc-coated and zinc-iron alloy-coated carbon steel sheet of commercial and drawing qualities*

ISO 4287~~:1997~~, *Geometrical Product Specifications (GPS) – Surface texture: Profile method – Terms, definitions and surface texture parameters*

ISO 4892-2~~:2006~~, *Plastics – Methods of exposure to laboratory light sources – Part 2: Xenon-arc lamps*

ISO 4998, *Continuous hot-dip zinc-coated and zinc-iron alloy-coated carbon steel sheet of structural quality*

ISO 9227~~:2012~~, *Corrosion tests in artificial atmospheres – Salt spray tests*

ISO 14713-1, *Zinc coatings – Guidelines and recommendations for the protection against corrosion of iron and steel in structures – Part 1: General principles of design and corrosion resistance*

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EN 10346, *Continuously hot-dip coated steel flat products for cold forming – Technical delivery conditions*

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Edition 3.0 2021-10

INTERNATIONAL STANDARD

NORME INTERNATIONALE

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Cable cleats for electrical installations

Brides de câbles pour installations électriques

IEC 61914:2021-10(en-fr)

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COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

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BRIDES DE CÂBLES POUR INSTALLATIONS ÉLECTRIQUES

AVANT-PROPOS

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L'IEC 61914 a été établie par le sous-comité 23A: Systèmes de câblage, du comité d'études 23 de l'IEC: Petit appareillage. Il s'agit d'une Norme internationale.

Cette troisième édition annule et remplace la deuxième édition parue en 2015. Cette édition constitue une révision technique.

Cette édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

a) rationalisation des exigences relatives aux mandrins d'essai, détaillées dans la section Généralités sur les essais (Article 5);
b) ajout de la définition de la fourrure et définition des exigences d'essai dans lesquelles les fourrures et autres accessoires sont utilisés;
c) ajout des définitions BT, MT et HT pour les câbles et définition des exigences d'essai en cas d'utilisation de câbles MT et HT;
d) ajout de nouvelles classes de tenue à la corrosion pour les produits revêtus;

e) ajout de nouvelles exigences et d'un essai de durabilité et de lisibilité des marquages;

f) ajout de nouvelles exigences d'essai pour les essais de tenue à la charge axiale des brides pour plusieurs câbles;

g) ajout d'exigences d'essai de tenue à la charge latérale pour les dispositifs intermédiaires de tenue.

Le texte de cette Norme internationale est issu des documents suivants:

FDIS	Rapport de vote
23A/976/FDIS	23A/982/RVD

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

La langue employée pour l'élaboration de cette Norme internationale est l'anglais.

Ce document a été rédigé selon les Directives ISO/IEC, Partie 2, il a été développé selon les Directives ISO/IEC, Partie 1 et les Directives ISO/IEC, Supplément IEC, disponibles sous www.iec.ch/members_experts/refdocs. Les principaux types de documents développés par l'IEC sont décrits plus en détail sous www.iec.ch/standardsdev/publications.

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BRIDES DE CÂBLES POUR INSTALLATIONS ÉLECTRIQUES

1 Domaine d'application

La présente Norme internationale spécifie les exigences et les essais relatifs aux brides de câbles utilisées pour la fixation des câbles dans les installations électriques et aux dispositifs intermédiaires de tenue utilisés pour le maintien des câbles en formation dans des installations électriques. Les brides de câbles fournissent une résistance aux forces électromécaniques lorsque cela est déclaré. Le présent document inclut les brides de câbles qui reposent sur une surface de montage spécifiée par le fabricant pour le maintien axial et/ou latéral des câbles.

Plusieurs types de brides de câbles et de dispositifs intermédiaires de tenue sont présentés à l'Annexe A.

NOTE Les exigences pour les fabricants qui figurent dans le présent document s'appliquent également aux importateurs et aux fournisseurs responsables, le cas échéant.

Le présent document ne couvre pas les colliers.

2 Références normatives

Les documents suivants sont cités dans le texte de sorte qu'ils constituent, pour tout ou partie de leur contenu, des exigences 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).

IEC 60060-1:2010, *Technique des essais à haute tension – Partie 1: Définitions et exigences générales*

IEC 60502-1, *Power cables with extruded insulation and their accessories for rated voltages from 1 kV (U_m = 1,2 kV) up to 30 kV (U_m = 36 kV) – Part 1: Cables for rated voltages of 1 kV (U_m = 1,2 kV) and 3 kV (U_m = 3,6 kV)* (disponible en anglais seulement)

IEC 60695-11-5, *Essais relatifs aux risques du feu – Partie 11-5: Flammes d'essai – Méthode d'essai au brûleur-aiguille – Appareillage, dispositif d'essai de vérification et lignes directrices*

ISO 1461, *Revêtements par galvanisation à chaud sur produits finis en fonte et en acier – Spécifications et méthodes d'essai*

ISO 2081, *Revêtements métalliques et autres revêtements inorganiques – Dépôts électrolytiques de zinc avec traitements supplémentaires sur fer ou acier*

ISO 3575, *Continuous hot dip zinc-coated and zinc-iron alloy-coated carbon steel sheet of commercial and drawing qualities* (disponible en anglais seulement)

ISO 4287, *Spécification géométrique des produits (GPS) – État de surface: Méthode du profil – Termes, définitions et paramètres d'état de surface*

ISO 4892-2, *Plastiques – Méthodes d'exposition à des sources lumineuses de laboratoire – Partie 2: Lampes à arc au xénon*

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ISO 9227:2017, *Essais de corrosion en atmosphères artificielles – Essais aux brouillards salins*

ISO 14713-1*, Revêtements de zinc – Lignes directrices et recommandations pour la protection contre la corrosion du fer et de l'acier dans les constructions – Partie 1: Principes généraux de conception et résistance à la corrosion*

ISO 14713-2, *Revêtements de zinc – Lignes directrices et recommandations pour la protection contre la corrosion du fer et de l'acier dans les constructions – Partie 2: Galvanisation à chaud*

EN 10346:2015, *Produits plats en acier revêtus en continu par immersion à chaud pour formage à froid – Conditions techniques de livraison*