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Electrical test methods for electric cables – Part 3: Test methods for partial discharge measurements on lengths of extruded power cables

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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Part 3: Test methods for partial discharge measurements on lengths of extruded power 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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This Redline version provides you with a quick and easy way to compare all the changes between this standard and its previous edition. A vertical bar appears in the margin wherever a change has been made. Additions and deletions are displayed in red, with deletions being struck through.

International Standard IEC 60885-3 has been prepared by IEC technical committee 20: Electric cables.

This second edition of IEC 60885-3 cancels and replaces the first edition, published in 1988 and constitutes a technical revision.

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

- The definition of sensitivity as twice the background noise level has been removed and replaced by a practical assessment of sensitivity based on the minimum level of detectable discharge.
- References to measurements of pulse heights in mm on an oscilloscope have been replaced by measurements of partial discharge magnitude in pC.
- The order of the clauses has been revised in line with the general numbering scheme of IEC standards and to provide clarity in order to facilitate its practical use. Section 3 of the first edition (Application guide) has been removed as it is considered that background information is better obtained from the original references as listed in the bibliography.

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

FDIS	Report on voting
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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.

A list of all parts in the IEC 60885 series, published under the general title *Electrical test methods for electric cables*, can be found on the IEC website.

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ELECTRICAL TEST METHODS FOR ELECTRIC CABLES –

Part 3: Test methods for partial discharge measurements on lengths of extruded power cables

~~1 SECTION ONE – GENERAL~~

1 Scope

This part of IEC 60885 specifies the ~~essential requirements~~ test methods for partial discharge (PD) measurements on lengths of extruded power cable, but does not include measurements made on installed cable systems.

Reference is made to IEC 60270 which gives the techniques and considerations applicable to partial discharge measurements in general. ~~The first edition of IEC 60270 appeared in 1968. All references in this standard apply to the second edition (1981).~~

2 Normative references

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.

IEC 60270:2000, *High-voltage test techniques – Partial discharge measurements*

Edition 2.0 2015-04

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Electrical test methods for electric cables – Part 3: Test methods for partial discharge measurements on lengths of extruded power cables

Méthodes d'essais électriques pour les câbles électriques – Partie 3: Méthodes d'essais pour la mesure des décharges partielles sur des longueurs de câbles de puissance extrudés

IEC 60885-3:2015-03(en-fr)

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ELECTRICAL TEST METHODS FOR ELECTRIC CABLES –

Part 3: Test methods for partial discharge measurements on lengths of extruded power cables

1 Scope

This part of IEC 60885 specifies the test methods for partial discharge (PD) measurements on lengths of extruded power cable, but does not include measurements made on installed cable systems.

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COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

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MÉTHODES D'ESSAIS ÉLECTRIQUES POUR LES CÂBLES ÉLECTRIQUES –

Partie 3: Méthodes d'essais pour la mesure des décharges partielles sur des longueurs de câbles de puissance extrudés

AVANT-PROPOS

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La Norme internationale IEC 60885-3 a été établie par le comité d'études 20 de l'IEC: Câbles électriques.

Cette deuxième édition de l'IEC 60885-3 annule et remplace la première édition parue en 1988. Cette édition constitue une révision technique.

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

- La définition de la sensibilité considérée comme le double du niveau de bruit de fond a été supprimée et remplacée par une évaluation pratique de la sensibilité en fonction du niveau minimum de décharge détectable.

- Les références aux mesures des hauteurs d'impulsions en mm sur un oscilloscope ont été remplacées par des mesures de la grandeur de la décharge partielle en pC.
- L'ordre des articles a été révisé pour reprendre le schéma de numérotation général des normes de l'IEC et pour clarifier le texte pour en faciliter l'utilisation pratique. La Section 3 de la première édition (Guide d'application) a été supprimée car il est considéré que les références originales telles qu'énumérées dans la bibliographie fournissent des informations de meilleure qualité sur l'environnement technique.

Le texte de la présente norme est issu des documents suivants:

FDIS	Rapport de vote
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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/IEC, Partie 2.

Une liste de toutes les parties de la série IEC 60885, publiées sous le titre général *Méthodes d'essais électriques pour les essais électriques*, peut être consultée sur le site web de l'IEC.

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MÉTHODES D'ESSAIS ÉLECTRIQUES POUR LES CÂBLES ÉLECTRIQUES –

Partie 3: Méthodes d'essais pour la mesure des décharges partielles sur des longueurs de câbles de puissance extrudés

1 Domaine d'application

La présente partie de l'IEC 60885 spécifie les méthodes d'essai pour les mesures des décharges partielles sur des longueurs de câbles de puissance extrudés, mais ne traite pas des mesures effectuées sur des systèmes de câbles installés.

Il est fait référence à l'IEC 60270 qui donne les techniques et considérations générales applicables aux mesures des décharges partielles.

2 Références normatives

Les documents suivants sont cités en référence de manière normative, en intégralité ou en partie, dans le présent document et sont indispensables pour son application. 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 60270:2000, *Techniques des essais à haute tension – Mesures des décharges partielles*