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GROUP SAFETY PUBLICATION

Safety requirements for electrical equipment for measurement, control, and laboratory use –
Part 2-030: Particular requirements for equipment having testing ~~and~~ or measuring circuits

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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SAFETY REQUIREMENTS FOR ELECTRICAL EQUIPMENT FOR MEASUREMENT, CONTROL, AND LABORATORY USE –

Part 2-030: Particular requirements for equipment having testing ~~and~~ or measuring circuits

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.
2) The formal decisions or agreements of 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 IEC National Committees.
3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
6) All users should ensure that they have the latest edition of this publication.
7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

DISCLAIMER
This Redline version is not an official IEC Standard and is intended only to provide the user with an indication of what changes have been made to the previous version. Only the current version of the standard is to be considered the official document.

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 are in green text, deletions are in strikethrough red text.

International Standard IEC 61010-2-030 has been prepared by IEC technical committee 66: Safety of measuring, control and laboratory equipment.

It has the status of a group safety publication in accordance with IEC Guide 104.

This second edition cancels and replaces the first edition published in 2010. This edition constitutes a technical revision.

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

a) Reference to IEC 61010-031 for probe assemblies and IEC 61010-032 for current sensors has been added.
b) Indirect bonding for testing and measuring circuits has been modified, in particular to take into account the duration of current flow versus body current for a.c. and d.c. currents according to IEC TS 60479-1 and IEC TS 60479-2.
c) CLEARANCE and CREEPAGE DISTANCE for WET LOCATIONS and for measuring circuit TERMINAL exceeding 1 000 V a.c. or d.c have been specified.
d) The voltage source for testing overvoltage limiting component or circuit may be limited to 400 V.
e) Requirements against TRANSIENT OVERVOLTAGES for MAINS voltage measuring circuits have been added.
f) Requirements for measuring circuits from 1 000 V d.c. to 1 500 V d.c. have been added.
g) The corrigendum has been included in Tables K.102 to K.104.
h) Requirements for reduction of TRANSIENT OVERVOLTAGES have been modified.
i) An informative Annex CC about the dimensions of banana TERMINALS has been added.
j) Flowchart for insulation according to the type of circuit has been added in a new Annex DD.

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

FDIS	Report on voting
66/613/FDIS	66/621/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 Part 2-030 is to be used in conjunction with the latest edition of IEC 61010-1. It was established on the basis of the third edition (2010) of IEC 61010-1, including its amendment 1 (2016).

This Part 2-030 supplements or modifies the corresponding clauses in IEC 61010-1 so as to convert that publication into the IEC standard: *Particular requirements for equipment having testing or measuring circuits.*

Where a particular subclause of Part 1 is not mentioned in this part 2, that subclause applies as far as is reasonable. Where this part states “addition”, “modification”, “replacement”, or “deletion” the relevant requirement, test specification or note in Part 1 should be adapted accordingly.

In this standard:

a) the following print types are used:
   – requirements: in roman type;
   – NOTES: in small roman type;
   – *conformity and test: in italic type;*
   – terms used throughout this standard which have been defined in Clause 3: SMALL ROMAN CAPITALS;
b) subclauses, figures, tables and notes which are additional to those in Part 1 are numbered starting from 101. Additional annexes are lettered starting from AA and additional list items are lettered from aa).

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts of the IEC 61010 series, under the general title *Safety requirements for electrical equipment for measurement, control, and laboratory use*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

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

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

IEC 61010-1 specifies the safety requirements that are generally applicable to all equipment within its scope. For certain types of equipment, the requirements of IEC 61010-1 and its amendment will be supplemented or modified by the special requirements of one, or more than one, particular Part 2 of the standard which are read in conjunction with the Part 1 requirements.

This Part 2-030 specifies the safety requirements for equipment with testing or measuring circuits which are connected for test or measurement purposes to devices or circuits outside the measurement equipment itself.

Part 2-032 specifies the safety requirements for HAND-HELD and hand-manipulated current sensors (see Clause 1 of Part 2-032). Requirements of Part 2-030 have been included in Part 2-032. Equipment within the scopes of Part 2-030 and Part 2-032 are considered to be covered by the requirements of Part 2-032.

Part 2-033 specifies the safety requirements for HAND-HELD MULTIMETERS and other METERS that have a primary purpose of measuring voltage on a live MAINS. Requirements of Part 2-030 have been included in Part 2-033. Parts of equipment within the scopes of Part 2-030 and Part 2-033 are considered to be covered by the requirements of Part 2-033.

Part 2-034 specifies the safety requirements for measurement equipment for insulation resistance and test equipment for electric strength which are connected to units, lines or circuits for test or measurement purposes. Requirements of Part 2-030 have been included in Part 2-034. Equipment within the scopes of Part 2-030 and Part 2-034 are considered to be covered by the requirements of Part 2-034.

However, for equipment within the scope of Part 2-032, Part 2-033 and Part 2-034, the standards are read in conjunction.

SAFETY REQUIREMENTS FOR ELECTRICAL EQUIPMENT FOR MEASUREMENT, CONTROL, AND LABORATORY USE –

Part 2-030: Particular requirements for equipment having testing ~~and~~ or measuring circuits

1 Scope and object

This clause of Part 1 is applicable except as follows:

1.1.1 Equipment included in scope

Replacement:

Replace the text with the following:

This group safety publication is primarily intended to be used as a product safety standard for the products mentioned in the scope, but shall also be used by technical committees in the preparation of their publications for products similar to those mentioned in the scope of this standard, in accordance with the principles laid down in IEC Guide 104 and ISO/IEC Guide 51.

This part of IEC 61010 specifies safety requirements for equipment having testing ~~and~~ or measuring circuits which are connected for test or measurement purposes to devices or circuits outside the measurement equipment itself.

These include measuring circuits which are part of electrical test and measurement equipment, laboratory equipment, or process control equipment. The existence of these circuits in equipment requires additional protective means between the circuit and an OPERATOR.

NOTE ~~1~~ These testing and measuring circuits ~~may~~ can, for example:

– measure voltages in circuits of other equipment,

– measure temperature of a separate device via a thermocouple,

– measure force on a separate device via a strain gauge,

– inject a voltage onto a circuit to analyse a new design.

~~NOTE 2 Testing and measuring circuits that are not within the scope of this Part 2 are considered to be covered by the requirements of Part 1.~~

~~NOTE 3~~ Equipment ~~containing~~ having these testing and measuring circuits may be intended for performing tests and measurements on hazardous conductors, including MAINS conductors and telecommunication network conductors. See Annex BB for considerations of HAZARDS involved in various tests and measurements.

2 Normative references

This clause of Part 1 is applicable except as follows:

Replacement:

Replace

IEC 60364-4-44, *Low-voltage electrical installations – Part 4-44: Protection for safety – Protection against voltage disturbances and electromagnetic disturbances*

with the following new reference:

IEC 60364-4-44:2007, *Low-voltage electrical installations – Part 4-44: Protection for safety – Protection against voltage disturbances and electromagnetic disturbances*
IEC 60364-4-44:2007/AMD1:2015

Addition:

Add the following new normative reference:

IEC 61010-2-032, *Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 2-032: Particular requirements for hand-held and hand-manipulated current sensors for electrical test and measurement*

IEC 61010-2-030

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GROUP SAFETY PUBLICATION
PUBLICATION GROUPÉE DE SÉCURITÉ

Safety requirements for electrical equipment for measurement, control, and laboratory use –
Part 2-030: Particular requirements for equipment having testing or measuring circuits

Exigences de sécurité pour appareils électriques de mesurage, de régulation et de laboratoire –
Partie 2-030: Exigences particulières pour les appareils équipés de circuits d'essai ou de mesure



IEC 61010-2-030:2017-01(en-fr)

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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SAFETY REQUIREMENTS FOR ELECTRICAL EQUIPMENT FOR MEASUREMENT, CONTROL, AND LABORATORY USE –

Part 2-030: Particular requirements for equipment having testing or measuring circuits

FOREWORD

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b) Indirect bonding for testing and measuring circuits has been modified, in particular to take into account the duration of current flow versus body current for a.c. and d.c. currents according to IEC TS 60479-1 and IEC TS 60479-2.

c) CLEARANCE and CREEPAGE DISTANCE for WET LOCATIONS and for measuring circuit TERMINAL exceeding 1 000 V a.c. or d.c have been specified.

d) The voltage source for testing overvoltage limiting component or circuit may be limited to 400 V.

e) Requirements against TRANSIENT OVERVOLTAGES for MAINS voltage measuring circuits have been added.

f) Requirements for measuring circuits from 1 000 V d.c. to 1 500 V d.c. have been added.

g) The corrigendum has been included in Tables K.102 to K.104.

h) Requirements for reduction of TRANSIENT OVERVOLTAGES have been modified.

i) An informative Annex CC about the dimensions of banana TERMINALS has been added.

j) Flowchart for insulation according to the type of circuit has been added in a new Annex DD.

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

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This Part 2-030 supplements or modifies the corresponding clauses in IEC 61010-1 so as to convert that publication into the IEC standard: *Particular requirements for equipment having testing or measuring circuits.*

Where a particular subclause of Part 1 is not mentioned in this part 2, that subclause applies as far as is reasonable. Where this part states “addition”, “modification”, “replacement”, or “deletion” the relevant requirement, test specification or note in Part 1 should be adapted accordingly.

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   - NOTES: in small roman type;
   - *conformity and test: in italic type;*
   - terms used throughout this standard which have been defined in Clause 3: SMALL ROMAN CAPITALS;

b) subclauses, figures, tables and notes which are additional to those in Part 1 are numbered starting from 101. Additional annexes are lettered starting from AA and additional list items are lettered from aa).

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- reconfirmed,
- withdrawn,
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INTRODUCTION

IEC 61010-1 specifies the safety requirements that are generally applicable to all equipment within its scope. For certain types of equipment, the requirements of IEC 61010-1 and its amendment will be supplemented or modified by the special requirements of one, or more than one, particular Part 2 of the standard which are read in conjunction with the Part 1 requirements.

This Part 2-030 specifies the safety requirements for equipment with testing or measuring circuits which are connected for test or measurement purposes to devices or circuits outside the measurement equipment itself.

Part 2-032 specifies the safety requirements for HAND-HELD and hand-manipulated current sensors (see Clause 1 of Part 2-032). Requirements of Part 2-030 have been included in Part 2-032. Equipment within the scopes of Part 2-030 and Part 2-032 are considered to be covered by the requirements of Part 2-032.

Part 2-033 specifies the safety requirements for HAND-HELD MULTIMETERS and other METERS that have a primary purpose of measuring voltage on a live MAINS. Requirements of Part 2-030 have been included in Part 2-033. Parts of equipment within the scopes of Part 2-030 and Part 2-033 are considered to be covered by the requirements of Part 2-033.

Part 2-034 specifies the safety requirements for measurement equipment for insulation resistance and test equipment for electric strength which are connected to units, lines or circuits for test or measurement purposes. Requirements of Part 2-030 have been included in Part 2-034. Equipment within the scopes of Part 2-030 and Part 2-034 are considered to be covered by the requirements of Part 2-034.

However, for equipment within the scope of Part 2-032, Part 2-033 and Part 2-034, the standards are read in conjunction.

SAFETY REQUIREMENTS FOR ELECTRICAL EQUIPMENT FOR MEASUREMENT, CONTROL, AND LABORATORY USE –

Part 2-030: Particular requirements for equipment having testing or measuring circuits

1 Scope and object

This clause of Part 1 is applicable except as follows:

1.1.1 Equipment included in scope

Replacement:

Replace the text with the following:

This group safety publication is primarily intended to be used as a product safety standard for the products mentioned in the scope, but shall also be used by technical committees in the preparation of their publications for products similar to those mentioned in the scope of this standard, in accordance with the principles laid down in IEC Guide 104 and ISO/IEC Guide 51.

This part of IEC 61010 specifies safety requirements for equipment having testing or measuring circuits which are connected for test or measurement purposes to devices or circuits outside the measurement equipment itself.

These include measuring circuits which are part of electrical test and measurement equipment, laboratory equipment, or process control equipment. The existence of these circuits in equipment requires additional protective means between the circuit and an OPERATOR.

NOTE These testing and measuring circuits can, for example:

– measure voltages in circuits of other equipment,
– measure temperature of a separate device via a thermocouple,
– measure force on a separate device via a strain gauge,
– inject a voltage onto a circuit to analyse a new design.

Equipment having these testing and measuring circuits may be intended for performing tests and measurements on hazardous conductors, including MAINS conductors and telecommunication network conductors. See Annex BB for considerations of HAZARDS involved in various tests and measurements.

2 Normative references

This clause of Part 1 is applicable except as follows:

Replacement:

Replace

IEC 60364-4-44*, Low-voltage electrical installations – Part 4-44: Protection for safety – Protection against voltage disturbances and electromagnetic disturbances*

with the following new reference:

IEC 60364-4-44:2007*, Low-voltage electrical installations – Part 4-44: Protection for safety – Protection against voltage disturbances and electromagnetic disturbances*
IEC 60364-4-44:2007/AMD1:2015

Addition:

Add the following new normative reference:

IEC 61010-2-032, *Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 2-032: Particular requirements for hand-held and hand-manipulated current sensors for electrical test and measurement*

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COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

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EXIGENCES DE SÉCURITÉ POUR APPAREILS ÉLECTRIQUES DE MESURAGE, DE RÉGULATION ET DE LABORATOIRE –

Partie 2-030: Exigences particulières pour les appareils équipés de circuits d'essai ou de mesure

AVANT-PROPOS

1) La Commission Electrotechnique Internationale (IEC) est une organisation mondiale de normalisation composée de l'ensemble des comités électrotechniques nationaux (Comités nationaux de l'IEC). L'IEC 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, l'IEC – entre autres activités – publie des Normes internationales, des Spécifications techniques, des Rapports techniques, des Spécifications accessibles au public (PAS) et des Guides (ci-après dénommés "Publication(s) de l'IEC"). 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 l'IEC, participent également aux travaux. L'IEC 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 l'IEC concernant les questions techniques représentent, dans la mesure du possible, un accord international sur les sujets étudiés, étant donné que les Comités nationaux de l'IEC intéressés sont représentés dans chaque comité d'études.
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La Norme internationale IEC 61010-2-030 a été établie par le comité d'études 66 de l'IEC: Sécurité des appareils de mesure, de commande et de laboratoire.

Elle a le statut d'une publication groupée de sécurité conformément au Guide IEC 104.

Cette deuxième édition annule et remplace la première édition parue en 2010. Cette édition constitue une révision technique.

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

a) Une référence à l'IEC 61010-031 pour les sondes équipées et à l'IEC 61010-2-032 pour les capteurs de courant a été ajoutée.

b) La liaison indirecte pour les circuits d'essai et de mesure a été modifiée, notamment pour prendre en compte la durée de l'écoulement du courant par rapport au courant passant par le corps pour le courant alternatif et le courant continu conformément à l'IEC TS 60479-1 et l'IEC TS 60479-2.

c) Des LIGNES DE FUITE et DISTANCES D'ISOLEMENT pour les EMPLACEMENTS HUMIDES et pour la BORNE du circuit de mesure de tension supérieure à 1000 V en courant alternatif ou en courant continu ont été spécifiées.

d) La source de tension pour les essais du composant ou du circuit de limitation des surtensions peut être limitée à 400 V.

e) Des exigences relatives aux SURTENSIONS TRANSITOIRES applicables aux circuits de mesure de la tension RESEAU ont été ajoutées.

f) Des exigences applicables aux circuits de mesure entre 1 000 V et 1 500 V en courant continu ont été ajoutées.

g) Le corrigendum a été inclus dans les Tableaux K.102 à K.104.

h) Les exigences applicables à la réduction des SURTENSIONS TRANSITOIRES ont été modifiées.

i) Une Annexe CC informative relative aux dimensions des BORNES «banane» a été ajoutée.

j) Un organigramme de l'isolation selon le type de circuit a été ajouté dans une nouvelle Annexe DD.

Le texte de cette norme est issu des documents suivants:

FDIS	Rapport de vote
66/613/FDIS	66/621/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.

La présente Partie 2-030 doit être utilisée conjointement avec la dernière édition de l'IEC 61010-1. Elle a été établie sur la base de la troisième édition (2010) de l'IEC 61010-1, y compris son amendement 1 (2016).

La présente Partie 2-030 complète ou modifie les articles correspondants de l'IEC 61010-1 de façon à la transformer en norme IEC: *Exigences particulières pour les appareils équipés de circuits d'essai ou de mesure*.

Lorsqu'un paragraphe particulier de la Partie 1 n'est pas mentionné dans la présente partie 2, ce paragraphe s'applique pour autant qu'il est raisonnable. Lorsque la présente partie spécifie "addition", "modification", "remplacement" ou "suppression", il convient d'adapter en conséquence l'exigence, la modalité d'essai ou la note correspondante de la Partie 1.

Dans la présente norme:

a) les caractères d'imprimerie suivants sont employés:
   - exigences: caractères romains;
   - NOTES: petits caractères romains;
   - *conformité et essai: caractères italiques;*
   - termes définis à l'Article 3 et utilisés tout au long de la présente norme: PETITES CAPITALES EN CARACTÈRES ROMAINS;

b) les paragraphes, figures, tableaux et notes complémentaires à ceux de la Partie 1 sont numérotés à partir de 101. Les annexes complémentaires sont nommées à partir de AA et les listes de termes additionnels à partir de aa).

Cette publication a été rédigée selon les Directives ISO/IEC, Partie 2.

Une liste de toutes les parties de la série IEC 61010, publiées sous le titre général *Exigences de sécurité pour appareils électriques de mesurage, de régulation et de laboratoire*, peut être consultée sur le site web de l'IEC.

Le comité a décidé que le contenu de cette publication ne sera pas modifié avant la date de stabilité indiquée sur le site web de l'IEC sous "http://webstore.iec.ch" dans les données relatives à la publication recherchée. À cette date, la publication sera

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

IMPORTANT – Le logo *"colour inside"* qui se trouve sur la page de couverture de cette publication indique qu'elle contient des couleurs qui sont considérées comme utiles à une bonne compréhension de son contenu. Les utilisateurs devraient, par conséquent, imprimer cette publication en utilisant une imprimante couleur.

INTRODUCTION

L'IEC 61010-1 spécifie les exigences de sécurité qui sont d'application générale à tous les appareils qu'elle concerne. Pour certains types d'appareils, les exigences de l'IEC 61010-1 et son amendement sont complétées ou modifiées par les exigences particulières d'une ou de plusieurs Parties 2 particulières de la norme, qui sont utilisées conjointement avec les exigences de la Partie 1.

La présente Partie 2-030 spécifie les exigences de sécurité pour les appareils équipés de circuits d'essai ou de mesure qui sont reliés à des fins d'essai ou de mesurage à des dispositifs ou à des circuits extérieurs à l'appareil de mesure même.

La Partie 2-032 spécifie les exigences de sécurité applicables aux capteurs de courant PORTATIFS et manipulés à la main (voir l'Article 1 de la Partie 2-032). Les exigences de la Partie 2-030 ont été incluses dans la Partie 2-032. Les appareils relevant des domaines d'application des Parties 2-030 et 2-032 sont considérés comme étant couverts par les exigences de la Partie 2-032.

La Partie 2-033 spécifie les exigences de sécurité pour les MULTIMETRES PORTATIFS et autres MESUREURS qui ont pour objectif principal de mesurer la tension d'un RESEAU sous tension. Les exigences de la Partie 2-030 ont été incluses dans la Partie 2-033. Les pièces des appareils relevant des domaines d'application des Parties 2-030 et 2-033 sont considérées comme étant couvertes par les exigences de la Partie 2-033.

La Partie 2-034 spécifie les exigences de sécurité applicables aux appareils de mesure de la résistance d'isolement et aux appareils d'essai de rigidité diélectrique qui sont connectés aux unités, aux lignes ou aux circuits à des fins d'essai ou de mesurage. Les exigences de la Partie 2-030 ont été incluses dans la Partie 2-034. Les appareils relevant des domaines d'application des Parties 2-030 et 2-034 sont considérés comme étant couverts par les exigences de la Partie 2-034.

Cependant, pour les appareils relevant des domaines d'application des Parties 2-032, 2-033 et 2-034, les normes sont utilisées conjointement.

EXIGENCES DE SÉCURITÉ POUR APPAREILS ÉLECTRIQUES DE MESURAGE, DE RÉGULATION ET DE LABORATOIRE –

Partie 2-030: Exigences particulières pour les appareils équipés de circuits d'essai ou de mesure

1 Domaine d'application et objet

L'article de la Partie 1 est applicable à l'exception de ce qui suit:

1.1.1 Appareils inclus dans le domaine d'application

Remplacement:

Remplacer le texte par ce qui suit:

La présente publication groupée de sécurité est avant tout destinée à être utilisée en tant que norme en matière de sécurité des produits pour les produits cités dans le domaine d'application. Elle doit également être utilisée par les comités d'études dans le cadre de l'élaboration de leurs publications pour des produits similaires à ceux cités dans le domaine d'application de la présente norme, conformément aux principes établis dans le Guide IEC 104 et le Guide ISO/IEC 51.

La présente partie de l'IEC 61010 spécifie les exigences de sécurité pour les appareils équipés de circuits d'essai ou de mesure qui sont reliés à des fins d'essai ou de mesurage à des dispositifs ou à des circuits extérieurs à l'appareil de mesure.

Ceux-ci comprennent les circuits de mesure qui font partie d'appareils électriques d'essai et de mesure, d'appareils de laboratoire ou d'appareils de contrôle de processus. L'existence de ces circuits dans l'appareil exige des moyens de protection additionnels entre le circuit et un OPERATEUR.

NOTE Ces circuits d'essai et de mesure peuvent, par exemple:

– mesurer des tensions sur des circuits d'autres matériels,
– mesurer la température d'un dispositif séparé par l'intermédiaire d'un thermocouple,
– mesurer la force d'un dispositif séparé avec une jauge de contrainte,
– injecter une tension sur un circuit pour analyser un nouveau montage.

Les appareils équipés de ces circuits d'essai et de mesure peuvent être destinés à effectuer des essais et des mesurages sur des conducteurs dangereux, y compris des conducteurs du RESEAU et des conducteurs de réseaux de télécommunication. Voir l'Annexe BB sur les DANGERS encourus lors de divers essais et mesurages.

2 Références normatives

L'article de la Partie 1 est applicable à l'exception de ce qui suit:

Remplacement:

Remplacer

IEC 60364-4-44, *Installations électriques à basse tension – Partie 4-44: Protection pour assurer la sécurité – Protection contre les perturbations de tension et les perturbations électromagnétiques*

par la nouvelle référence suivante:

IEC 60364-4-44, *Installations électriques à basse tension – Partie 4-44: Protection pour assurer la sécurité – Protection contre les perturbations de tension et les perturbations électromagnétiques*
IEC 60364-4-44:2007/AMD1:2015

Addition:

Ajouter la nouvelle référence normative suivante:

IEC 61010-2-032, *Règles de sécurité pour appareils électriques de mesurage, de régulation et de laboratoire – Partie 2-032: Exigences particulières pour les capteurs de courant, portatifs et manipulés à la main, de test et de mesure électriques*