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Live working –
Hand tools for use up to 1 000 V AC and 1 500 V DC

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LIVE WORKING – HAND TOOLS FOR USE UP TO 1 000 V AC AND 1 500 V DC

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International Standard IEC 60900 has been prepared by IEC technical committee 78: Live working.

This fourth edition cancels and replaces the third edition, published in 2012. This edition constitutes a technical revision.

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

a) addition of a third category of tools has been added, namely *hybrid hand tools*;
b) introduction of a new informative Annex A on examples of *insulated*, *insulating* and *hybrid hand tools*.

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

FDIS	Report on voting
78/1221/FDIS	78/1229/RVD

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LIVE WORKING – HAND TOOLS FOR USE UP TO 1 000 V AC AND 1 500 V DC

1 Scope

This document is applicable to *insulated*, *insulating* and *hybrid hand tools* used for working live or close to live parts at nominal voltages up to 1 000 V AC and 1 500 V DC.

The products designed and manufactured according to this document contribute to the safety of the users provided they are used by skilled persons, in accordance with safe methods of work and the instructions for use (where appropriate).

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, *High-voltage test techniques – Part 1: General definitions and test requirements*

IEC 60212, *Standard conditions for use prior to and during the testing of solid electrical insulating materials*

IEC 60417, *Graphical symbols for use on equipment* (available at: http://www.graphical-symbols.info/equipment)

IEC 61318, *Live working – Conformity assessment applicable to tools, devices and equipment*

IEC 61477, Live working – *Minimum requirements for the utilization of tools, devices and equipment*

ISO 1174-1, *Assembly tools for screw and nuts – Driving squares – Part 1: Driving squares for hand socket tools*

ISO 9654, *Pliers and nippers for electronics – Single-purpose nippers – Cutting nippers*

ISO 9655, *Pliers and nippers for electronics – Single-purpose pliers – Pliers for gripping and manipulating*

ISO 9656, *Pliers and nippers for electronics – Test methods*

ISO 9657, *Pliers and nippers for electronics – General technical requirements*

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Edition 4.0 2018-06

INTERNATIONAL STANDARD

NORME INTERNATIONALE

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Live working – Hand tools for use up to 1 000 V AC and 1 500 V DC

Travaux sous tension – Outils à main pour usage jusqu'à 1 000 V en courant alternatif et 1 500 V en courant continu



IEC 60900:2018-06(en-fr)

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COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

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TRAVAUX SOUS TENSION – OUTILS À MAIN POUR USAGE JUSQU'À 1 000 V EN COURANT ALTERNATIF ET 1 500 V EN COURANT CONTINU

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La Norme internationale IEC 60900 a été établie par le comité d'études 78 de l'IEC: Travaux sous tension.

Cette quatrième édition annule et remplace la troisième édition, parue en 2012. Cette édition constitue une révision technique.

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

a) ajout d'une troisième catégorie d'outils: les *outils à main hybrides*;
b) introduction d'une nouvelle Annexe A informative sur des exemples des différents types d'*outils à main: isolés, isolants et hybrides*.

Le texte de cette norme est issu des documents suivants:

FDIS	Rapport de vote
78/1221/FDIS	78/1229/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.

Ce document a été rédigé selon les Directives ISO/IEC, Partie 2.

Les termes définis à l'Article 3 sont rédigés en *italique* tout au long du présent document.

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INTRODUCTION

Le présent document a été préparé conformément aux exigences de l'IEC 61477 lorsque cela s'applique.

Pendant certaines ou pendant toutes les étapes de son cycle de vie, les produits couverts par le présent document peuvent avoir un impact sur l'environnement. Ces impacts peuvent être de légers à importants, de court ou de long terme, et se produire à un niveau local, régional ou global.

Le présent document ne contient pas d'exigences et de dispositions d'essai s'adressant aux fabricants, ou de recommandations aux utilisateurs des produits ayant pour but d'améliorer l'environnement. Cependant, tous les intervenants à la conception, la fabrication, l'emballage, la distribution, l'utilisation, l'entretien, la réparation, la réutilisation, la récupération et la mise au rebut sont invités à prendre en compte les éléments environnementaux.

TRAVAUX SOUS TENSION – OUTILS À MAIN POUR USAGE JUSQU'À 1 000 V EN COURANT ALTERNATIF ET 1 500 V EN COURANT CONTINU

1 Domaine d'application

Le présent document est applicable aux *outils à main isolés, isolants* et *hybrides* utilisés sous tension ou à proximité de parties actives, à des tensions nominales jusqu'à 1 000 V en courant alternatif et 1 500 V en courant continu.

Les produits conçus et fabriqués en conformité avec le présent document contribuent à la sécurité des utilisateurs, à condition qu'ils soient utilisés par des personnes qualifiées, conformément à des méthodes de travail en toute sécurité et aux instructions d'emploi (le cas échéant).

2 Références normatives

Les documents suivants cités dans le texte 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, *Technique des essais à haute tension – Partie 1: Définitions et exigences générales*

IEC 60212, *Conditions normales à observer avant et pendant les essais de matériaux isolants électriques solides*

IEC 60417, *Symboles graphiques utilisables sur le matériel* (disponible sous: http://www.graphical-symbols.info/equipment)

IEC 61318, *Travaux sous tension – Évaluation de la conformité applicable à l'outillage, au matériel et aux dispositifs*

IEC 61477, Travaux sous tension – *Exigences minimales pour l'utilisation des outils, dispositifs et équipements*

ISO 1174-1, *Outils de manœuvre pour vis et écrous – Carrés d'entraînement – Partie 1: Carrés d'entraînement pour outils à main*

ISO 9654, *Pinces pour l'électronique – Pinces unifonction – Pinces coupantes*

ISO 9655, *Pinces pour l'électronique – Pinces unifonction – Pinces de serrage et de manipulation*

ISO 9656, *Pinces pour l'électronique – Méthodes d'essai*

ISO 9657, *Pinces pour l'électronique – Spécifications techniques générales*