



## Utrustning för arbete under spänning - Bärbar utrustning för jordning och för jordning och kortslutning

*Live working –*

*Portable equipment for earthing or earthing and short-circuiting*

Som svensk standard gäller europastandarden EN 61230:1995. Den svenska standarden innehåller den officiella engelska språkversionen av EN 61230:1995.

### Nationellt förord

Europastandarden EN 61230:1995

består av:

- europastandardens ikraftsättningsdokument, utarbetat inom CENELEC
- IEC 1230, First edition, 1993 - Live working -  
Portable equipment for earthing  
or earthing and short-circuiting

utarbetad inom International Electrotechnical Commission, IEC.

I en nationell bilaga NA återges i svensk översättning Bilaga A till EN 61230, vilken innehåller en vägledning för användaren.

Tidigare utgiven svensk standard SS 428 91 01, utgåva 3, 1985, gäller ej fr o m 1996-05-31.

English version

**Live working**  
**Portable equipment for earthing or earthing and short-circuiting**  
(IEC 1230:1993, modified)

Travaux sous tension  
Dispositifs portables de mise à la terre  
ou de mise à la terre et en court-circuit  
(CEI 1230:1993, modifiée)

Arbeiten unter Spannung  
Örtsveränderliche Geräte zum Erden  
oder Erden und Kurzschließen  
(IEC 1230:1993, modifiziert)

This European Standard was approved by CENELEC on 1995-07-04. 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, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, 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 1230:1993, prepared by IEC TC 78, Tools for live working, together with common modifications prepared by the Technical Committee CENELEC TC 78, was submitted to the formal vote and was approved by CENELEC as EN 61230 on 1995-07-04.

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) 1996-07-01
- latest date by which national standards  
conflicting with the EN have to be withdrawn (dow) 1996-07-01

For products which have complied with the relevant national standard before 1996-07-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 2001-07-01.

Annexes designated "normative" are part of the body of the standard.

Annexes designated "informative" are given only for information.

In this standard, annexes A to D and ZB are normative and annex ZA is informative.

Annexes ZA and ZB have been added by CENELEC.

**Annex ZB**  
(normative)

**Normative references to international publications with  
their corresponding European publications**

This European Standard incorporates by dated or undated reference, provisions from other publications, These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE: When an international publication has been modified by common modification, indicated by (mod) the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 50(151)	1978	International Electrotechnical Vocabulary (IEV) - Chapter 151: Electrical and magnetic devices	-	-
IEC 60-1	1989	High-voltage test techniques Part 1: General definitions and test requirements	HD 588.1 S1	1991
IEC 68-2-42	1982	Environmental testing - Part 2: Tests Test Kc: Sulphur dioxide test for contacts and connections	-	-
IEC 71-3	1982	Insulation co-ordination Part 3: Phase-to-phase insulation co-ordination - Principles, rules and application guide	HD 540.3 S1	1991
IEC 410	1973	Sampling plans and procedures for inspection by attributes	-	-
IEC 479-1	1984	Effects of current passing through the human body - Part 1: General aspects Chapter 1: Electrical impedance of the human body - Chapter 2: Effects of alternating current in the range of 15 Hz to 100 Hz - Chapter 3: Effects of direct current	-	-
IEC 694 (mod)	1980	Common clauses for high-voltage switchgear and controlgear standards	HD 448 S3 <sup>1)</sup>	1995
IEC 855 (mod)	1985	Insulating foam-filled tubes and solid rods for live working	HD 496 S1	1988

<sup>1)</sup> HD 448 S3 includes A1:1985 + A2:1993 to IEC 694.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 1138	1992	Cables for portable earthing and short-circuiting equipment	-	-
IEC 1235 (mod)	1993	Live working - Insulating hollow tubes for electrical purposes	EN 61235	1995
ISO 9000	series	Quality management and quality assurance standards	EN ISO 9000	series

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## **LIVE WORKING - PORTABLE EQUIPMENT FOR EARTHING OR EARTHING AND SHORT-CIRCUITING**

### **1 Scope**

This International Standard is applicable to portable equipment, with or without matching fixed connection points, for temporary earthing or earthing and short-circuiting of electrically isolated a.c. transmission and distribution systems, including railway systems, for the protection of workers. It provides recommendations for manufacture, selection, use and maintenance of this equipment

The earthing equipment covered by this standard should be based primarily on current and time, and on voltage where needed for insulation purposes. IEC 855 provides the electrical requirements for insulating components of the equipment.

Component types or configurations are not specified but should comply with the electrical and mechanical requirements of this standard.

This standard is applicable only to equipment using copper cables, copper bars or aluminium bars as the earthing and short-circuiting medium.

Devices meant only for the draining of induced currents, where the risk of energization is completely eliminated, are not included in this standard. However, certain requirements and tests for that type of device can be taken from this standard.

NOTE - The standardization of equipment for d.c. systems is under consideration.

### **2 Normative references**

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 50 (151): 1978, *International Electrotechnical Vocabulary (IEV) - Chapter 151: Electrical and magnetic devices*

IEC 60-1: 1989, *High voltage test techniques - Part 1: General definitions and test requirements*

IEC 68-2: *Environments testing - Part 2: Tests*

IEC 68-2-42: 1982, *Environmental testing - Part 2: Tests - Test Kc: Sulphur dioxide test for contacts and connections*

IEC 71-3: 1982, *Insulation co-ordination - Part 3: Phase-to-phase insulation co-ordination. Principles, rules and application guide*



IEC 410: 1973, *Sampling plans and procedures for inspection by attributes*

IEC 479-1: 1984, *Effects of current passing through the human body - Part 1; General aspects. Chapter 1: Electrical impedance of the human body. Chapter 2: Effects of alternating current in the range of 15 Hz to 100 Hz. Chapter 3: Effects of direct current*

IEC 855: 1985, *Insulating foam-filled tubes and solid rods for live working*

IEC 1235: 1993, *Insulating hollow tubes for electrical purposes* (under consideration)

IEC 1138: 1992, *Cables for portable earthing and short-circuiting equipment*

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