SLOVENSKI STANDARD
SIST EN 61243-5:2002

01-september-2002

Delo pod napetostjo - Napetostni detektorji - 5. del: Sistem za detekcijo napetosti (VDS) (IEC 61243-5:1997, spremenjen)

Live working - Voltage detectors -- Part 5: Voltage detecting systems (VDS)

Arbeiten unter Spannung - Spannungsprüfer -- Teil 5: Spannungsprüfsysteme (VDS)

Travaux sous tension - Détecteurs de tension -- Partie 5: Systèmes détecteurs de tension (VDS)

Ta slovenski standard je istoveten z: EN 61243-5:2001

ICS:

13.260	Varstvo pred električnim udarom. Delo pod napetostjo	Protection against electric shock. Live working

SIST EN 61243-5:2002 **en**

EUROPEAN STANDARD | EN 61243-5

NORME EUROPÉENNE

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ICS 22.260.99

English version

Live working - Voltage detectors
Part 5: Voltage detecting systems (VDS)
(IEC 61243-5:1997, modified)

Travaux sous tension -
Détecteurs de tension
Partie 5: Systèmes détecteurs de tension (VDS)
(CEI 61243-5:1997, modifiée)

Arbeiten unter Spannung -
Spannungsprüfer
Teil 5: Spannungsprüfsysteme (VDS)
(IEC 61243-5:1997, modifiziert)

This European Standard was approved by CENELEC on 2000-11-01. 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, Czech Republic, 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

Ref. No. EN 61243-5:2001 E

Foreword

The text of the International Standard IEC 61243-5:1997, prepared by IEC TC 78, Live working, together with the common modifications prepared by the Technical Committee CENELEC TC 78, Equipment and tools for live working, was submitted to the formal vote and was approved by CENELEC as EN 61243-5 on 2000-11-01.

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) 2001-11-01

- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2003-11-01

Annexes designated "normative" are part of the body of the standard.
Annexes designated "informative" are given for information only.
In this standard, annexes A, B, C and ZB are normative and annexes D, E, F and ZA are informative.
Annexes ZA and ZB have been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61243-5:1997 was approved by CENELEC as a European Standard with agreed common modifications as given below.

COMMON MODIFICATIONS

Contents

Annexes, **add**

ZA Special conditions for voltage indicators which can be connected to a 230 V a.c. socket-outlet

ZB Normative references to international publications with their corresponding European publications

4.9 Indicator

4.9.7 **Add** the following note :

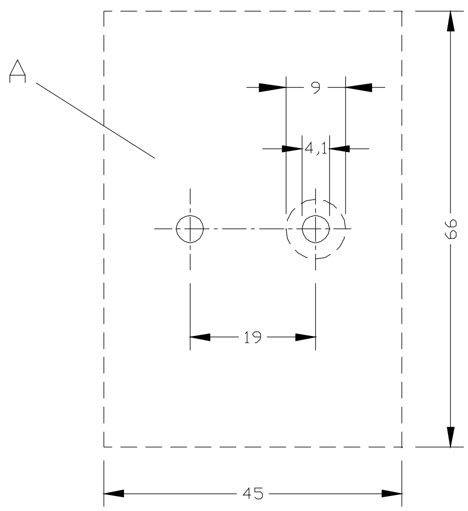
NOTE The use of such indicators is restricted by special patent rights (see annex ZA).

4.9.14 **Add** the following note :

NOTE See also annex ZA.

Table 2 – Dimensional characteristics of interface and test point

Second line (HR), second column (Socket arrangement), **replace** the drawing by:



Second line (HR), fourth column (Relevant standard), **modify** the text as follows :

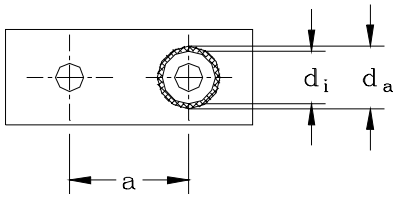
Refer to Figure C.1 or ZA.1, socket carrying the signal according to IEC 61010-2-031.

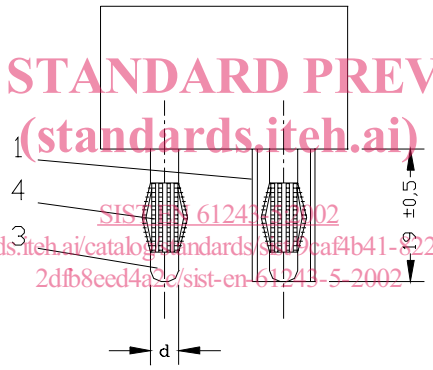
Replace annex C by:

Annex C
(normative)

Dimensional characteristics of plug arrangements

HR-, MR and LRM-systems,
Voltage indicator MR-system





Dimensions in millimeters

a = 19 mm, d = 4 mm, d_i = 6,5 mm, d_a = 7,8 mm

1 Insulating collar

3 The edges shall be chamfered or rounded off

4 Elastic contact

Signal carrying pole (right side in figure) according to IEC 61010 - 031

Figure C.1 - Plug arrangement for voltage indicator HR-system - Safety plug

Add the following annexes ZA and ZB:

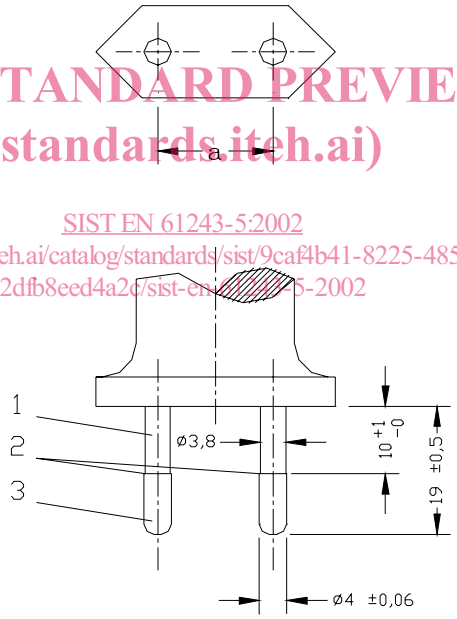
Annex ZA
(informative)

Special conditions for voltage indicators which can be connected to a 230 V a.c. socket-outlet

Voltage indicators which can be connected to a 230 V a.c. socket-outlet are covered in some countries by special patent rights.

Voltage indicators built according to Figure ZA.1 are included in this standard but manufacturers of these indicators should ask the patent holder to negociate licences, if applicable.

NOTE See European Patent EP 00 92 51 B1.



Dimensions in millimeters

a is 18 mm to 19,2 mm in the plane of the engagement face and is 17 mm to 18 mm at the end of the pins.

1 Insulating collar

2 Metal pin, pin ends shall be rounded

3 the edges shall be chamfered or rounded off

Figure ZA.1 – Europlug

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 modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 60050-151	1978	International Electrotechnical Vocabulary (IEV) Chapter 151: Electrical and magnetic devices	-	-
IEC 60060-1 + corr. March	1989 1990	High-voltage test techniques Part 1: General definitions and test requirements	HD 588.1 S1	1991
IEC 60068-2-3	1969	Basic environmental testing procedures Part 2: Tests - Test Ca: Damp heat, steady state	HD 323.2.3 S2[1]	1987
IEC 60068-2-6 + corr. March	1995 1995	Environmental testing Part 2: Tests - Test Fc and guidance: Vibration (sinusoidal)	EN 60068-2-6	1995
IEC 60068-2-11	1981	Part 2: Tests - Test Ka: Salt mist	EN 60068-2-11	1999
IEC 60068-2-14	1984	Part 2: Tests - Test N: Change of temperature	EN 60068-2-14[2]	1999
IEC 60068-2-63	1991	Part 2: Test methods - Test Eg: Impact, spring hammer	EN 60068-2-63	1994
IEC 60096-0-1	1990	Radio-frequency cables Part 0: Guide to the design of detail specifications -- Section 1: Coaxial cables	-	-
IEC 60225	1966[3]	Octave, half-octave and third-octave band filters intended for the analysis of sounds and vibrations	-	-
IEC 60227-3 (mod)	1993	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V Part 3: Non-sheathed cables for fixed wiring	HD 21.3 S3	1995

1) HD 323.2.3 S2 includes A1:1984 to IEC 60068-2-3.

2) EN 60068-2-14 includes A1:1986 to IEC 60068-2-14.

3) IEC 60225 is superseded by IEC 61260:1995, which is harmonized as EN 61260:1995.

Publication	Year	Title	EN/HD	Year
IEC 60352-1	1983	Solderless connections Part 1: Solderless wrapped connections - General requirements, test methods and practical guidance	EN 60352-1[4)]	1994
IEC 60352-2	1990	Part 2: Solderless crimped connections - General requirements, test methods and practical guidance	EN 60352-2	1994
IEC 60352-5	1995	Part 5: Solderless press-in connections - General requirements, test methods and practical guidance	EN 60352-5[5)]	1995
IEC 60384 (mod)	series	Fixed capacitors for use in electronic equipment	EN 60384	series
IEC 60529	1989	Degrees of protection provided by enclosures (IP Code)	EN 60529 + corr. May	1991 1993
IEC 60536	1976	Classification of electrical and electronic equipment with regard to protection against electric shock	HD 366 S1[6)]	1977
IEC 60603-11	1992	Connectors for frequencies below 3 MHz for use with printed boards Part 11: Detail specification for concentric connectors (dimensions for free connectors and fixed connectors)	-	-
IEC 60651	1979	Sound level meters	EN 60651	1994
IEC 60694	1980	Common clauses for high-voltage switchgear and controlgear standards	HD 448 S4[7)]	1996
IEC 60760	1989	Flat, quick-connect terminations	-	-
IEC 60999-1	1990	Connecting devices - Safety requirements for screw-type and screwless-type clamping units for electrical copper conductors Part 1: General requirements and particular requirements for conductors from 0,5 mm² up to 35 mm² (included)	EN 60999-1[8)]	1993
IEC 61010-2-031	1993	Safety requirements for electrical equipment for measurement, control and laboratory use Part 2-031: Particular requirements for hand-held probe assemblies for electrical measurement and test	EN 61010-2-031	1994

4) EN 60352-1:1994 is superseded by EN 60352-1:1997, which is based on IEC 60352-1:1997.

5) EN 60352-5:1995 is superseded by EN 60352-5:2001, which is based on IEC 60352-5:2001.

6) HD 366 S1 is superseded by EN 61140:2001, which is based on IEC 61140:1997.

7) HD 448 S4 is superseded by EN 60694:1996 + corrigendum May 1999, which is based on IEC 60694:1996.

8) EN 60999-1:1993 is superseded by EN 60999-1:2000, which is based on IEC 60999-1:1999.

Publication	Year	Title	EN/HD	Year
ISO 3740	1980[9)]	Acoustics – Determination of sound power levels of noise sources - Guidelines for the use of basic standards and for the preparation of noise test codes	-	-
ISO 3744	1994	Acoustics – Determination of sound power levels of noise sources using sound pressure - Engineering method in an essentially free field over a reflecting plane	EN ISO 3744	1995
ISO 3745	1977	Acoustics – Determination of sound power levels of noise sources - Precision methods for anechoic and semi-anechoic rooms	-	-
ISO 3746	1995	Acoustics – Determination of sound power levels of noise sources using sound pressure - Survey method using an enveloping measurement surface over a reflecting plane	EN ISO 3746	1995
QC 001005	1994	Register of firms, products and services approved under the IECQ System, including ISO 9000	-	-

9) ISO 3740:2000 is harmonized as EN ISO 3740:2000.

NORME INTERNATIONALE

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Travaux sous tension –
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Partie 5:
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Live working –
Voltage detectors –

Part 5:
Voltage detecting systems (VDS)

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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LIVE WORKING – VOLTAGE DETECTORS –

Part 5 : Voltage detecting systems (VDS)

FOREWORD

1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the 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, the IEC publishes International Standards. 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. The 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 the 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 National Committees.

3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.

4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.

5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.

6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61243-5 has been prepared by IEC technical committee 78: Tools for live working.

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

FDIS	Report on voting
78/203/FDIS	78/217/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.

Annexes A, B and C form an integral part of this standard.

Annexes D, E and F are for information only.

INTRODUCTION

Capacitive voltage detecting systems have already been used for a long time, especially on hermetically enclosed gas insulated switchgear in the medium voltage range. At the beginning this technique was used only for information about the voltage. With this part of IEC 61243, it is the intention to have the same level of safety for detection of the absence or presence of voltage as with conventional voltage detectors.