

Svenska Elektriska Kommissionen, SEK

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Arbete med spänning – Spänningsprovare – Del 1: Enpoliga (kapacitiva) spänningsprovare för högspänning

Live working –

Voltage detectors –

Part 1: Capacitive type to be used for voltages exceeding 1 kV a.c.

Som svensk standard gäller europastandarden EN 61243-1:2005. Den svenska standarden innehåller den officiella engelska språkversionen av EN 61243-1:2005.

Nationellt förord

Europastandarden EN 61243-1:2005

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 61243-1, Second edition, 2003 - Live working - Voltage detectors - Part 1: Capacitive type to be used for voltages exceeding 1 kV a.c.**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 61243-1, utgåva 1, 1997, SS-EN 61243-1/A1, utgåva 1, 1997 och SS-EN 61243-1 C1, utgåva 1, 1999, gäller ej fr o m 2008-03-01.

Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a säkerhet, prestanda, dokumentation, utförande och skötsel av elprodukter, elanläggningar och metoder. Genom att utforma sådana standarder blir säkerhetskraven tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

SEK är Sveriges röst i standardiseringsarbetet inom elområdet

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SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

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Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

SEK

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English version

**Live working –
Voltage detectors
Part 1: Capacitive type to be used for voltages
exceeding 1 kV a.c.
(IEC 61243-1:2003, modified)**

Travaux sous tension –
DéTECTEURS de tension
Partie 1: Type capacitif pour usage
sur des tensions alternatives
de plus de 1 kV
(CEI 61243-1:2003, modifiée)

Arbeiten unter Spannung –
Spannungsprüfer
Teil 1: Kapazitive Ausführung
für Wechselspannungen über 1 kV
(IEC 61243-1:2003, modifiziert)

This European Standard was approved by CENELEC on 2005-03-01. 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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, 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 61243-1:2003, 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 61243-1 on 2005-03-01.

This European Standard supersedes EN 61243-1:1997 + A1:1997 + corrigendum June 1999.

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) | 2006-03-01 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn | (dow) | 2008-03-01 |

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61243-1:2003 was approved by CENELEC as a European Standard with agreed common modifications as given below.

COMMON MODIFICATIONS

1. [REDACTED]

[REDACTED]

1. [REDACTED]

2. [REDACTED]

[REDACTED]

[REDACTED]

1. [REDACTED]

2. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application 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.

NOTE Where an international publication has been modified by common modifications, 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 60060-1 + corr. March	1989 1990	High-voltage test techniques Part 1: General definitions and test requirements	HD 588.1 S1	1991
IEC 60068-1	- ¹⁾	Environmental testing Part 1: General and guidance	EN 60068-1	1994 ²⁾
IEC 60068-2-6 + corr. March	1995 1995	Part 2: Tests - Test Fc: Vibration (sinusoidal)	EN 60068-2-6	1995
IEC 60068-2-14 + A1	1984 1986	Part 2: Tests - Test N: Change of temperature	EN 60068-2-14	1999
IEC 60068-2-32 + A2	1975 1990	Part 2: Tests - Test Ed: Free fall (Procedure 1)	EN 60068-2-32	1993
IEC 60071-1	1993	Insulation co-ordination Part 1: Definitions, principles and rules	EN 60071-1	1995
IEC 60417	database	Graphical symbols for use on equipment	-	-
IEC 60942	- ¹⁾	Electroacoustics - Sound calibrators	EN 60942	2003 ²⁾
IEC 61260	1995	Electroacoustics - Octave-band and fractional-octave-band filters	EN 61260	1995
IEC 61477 A1	2001 2002	Live working - Minimum requirements for the utilization of tools, devices and equipment	EN 61477 A1	2002 2002
IEC 61672-1	2002	Electroacoustics - Sound level meters Part 1: Specifications	EN 61672-1	2003
ISO 286-1	1988	ISO system of limits and fits Part 1: Bases of tolerances, deviations and fits	EN 20286-1	1993
ISO 286-2	1988	Part 2: Tables of standard tolerance grades and limit deviations for holes and shafts	EN 20286-2	1993
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
CIE 15.2 ³⁾	1986	Colorimetry	-	-

¹⁾ Undated reference.

²⁾ Valid edition at date of issue.

³⁾ CIE = International Commission on Illumination.

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LIVE WORKING – VOLTAGE DETECTORS –

Part 1: Capacitive type to be used for voltages exceeding 1 kV a.c.

1 Scope

This part of IEC 61243 is applicable to portable voltage detectors, with or without built-in power sources, to be used on electrical systems for voltages of 1 kV to 765 kV a.c., and frequencies of 50 Hz and/or 60 Hz.

This part applies only to voltage detectors of capacitive type used in contact with the part to be tested, as a complete device including its insulating element or as a separate device, adaptable to an insulating stick which, as a separate tool, is not covered by this standard (see 4.4.1 for general design).

Other types of voltage detectors are not covered by this part of the standard.

Some restrictions on their use are applicable in the case of factory-assembled switchgear and on overhead systems of electrified railways (see Annex B, instructions for use).

NOTE Except where otherwise specified, all the voltages defined in this standard refer to values of phase-to-phase voltages of three-phase systems. In other systems, the applicable phase-to-phase or phase-to-earth (ground) voltages should be used to determine the operating voltage.

2 Normative references

The following referenced documents are indispensable for the application 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 60060-1:1989, *High-voltage test techniques – Part 1: General definitions and test requirements*

IEC 60068-1, *Environmental testing -Part 1: General and guidance*

IEC 60068-2-6:1995, *Environmental testing – Tests – Test Fc and guidance: Vibration (sinusoidal)*

IEC 60068-2-14:1984, *Environmental testing – Tests – Test N: Change of temperature*
Amendment 1 (1986)

IEC 60068-2-32:1975, *Environmental testing – Tests – Test Ed: Free fall*
Amendment 2 (1990)

IEC 60071-1:1993, *Insulation co-ordination – Part 1: Terms, definitions, principles and rules*