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Kärnteknisk mätutrustning – Mätutrustning för strålskyddsändamål – Fast utrustning för detektering av radioaktivt och klyvbart material vid nationsgränser

*Radiation protection instrumentation –
Installed radiation monitors for the detection of radioactive and
special nuclear materials at national borders*

Som svensk standard gäller europastandarden EN 62244:2011. Den svenska standarden innehåller den officiella engelska språkversionen av EN 62244:2011.

Nationellt förord

Europastandarden EN 62244:2011

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 62244, First edition, 2006 - Radiation protection instrumentation - Installed radiation monitors for the detection of radioactive and special nuclear materials at national borders**

utarbetad inom International Electrotechnical Commission, IEC.

ICS 13.280

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**Radiation protection instrumentation -
Installed radiation monitors for the detection of radioactive and special
nuclear materials at national borders**
(IEC 62244:2006, modified)

Instrumentation pour la radioprotection -
Moniteurs de rayonnement installés pour
la détection des matériaux nucléaires
radioactifs et spéciaux aux frontières
nationales
(CEI 62244:2006, modifiée)

Strahlenschutz-Messgeräte -
Fest installierte Strahlungsmonitore für
den Nachweis von radioaktiven Stoffen
und spaltbarem Nuklearmaterial an
Staatsgrenzen
(IEC 62244:2006, modifiziert)

This European Standard was approved by CENELEC on 2011-06-27. 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, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Foreword

The text of the International Standard IEC 62244:2006, prepared by SC 45B, "Radiation protection instrumentation", of IEC TC 45, "Nuclear instrumentation", together with the common modifications prepared by the Technical Committee CENELEC TC 45B, Radiation protection instrumentation, was submitted to the CENELEC formal vote and was approved by CENELEC as EN 62244 on 2011-06-27.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN and CENELEC shall not be held responsible for identifying any or all such patent rights.

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) 2012-06-27

- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2014-06-27

Annex ZA has been added by CENELEC.

Subclauses which are additional to those in IEC 62244 are prefixed "Z".

Endorsement notice

The text of the International Standard IEC 62244:2006 was approved by CENELEC as a European Standard with agreed common modifications as given below.

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 When 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 60038	-	IEC standard voltages	EN 60038 ¹	-
IEC 60050-393	-	International Electrotechnology Vocabulary - Part 393: Nuclear instrumentation - Physical phenomena and basic concepts	-	-
IEC 60050-394 + A1 + A2	1995 1996 2000	International Electrotechnical Vocabulary - Chapter 394: Nuclear instrumentation: Instruments	- - -	- - -
IEC 60068-2-18	-	Environmental testing - Part 2-18: Tests - Tests R and guidance: Water	EN 60068-2-18	-
IEC 60068-2-27	-	Environmental testing - Part 2-27: Tests - Test Ea and guidance: Shock	EN 60068-2-27	-
IEC 60068-2-75	-	Environmental testing - Part 2-75: Tests - Test Eh: Hammer tests	EN 60068-2-75	-
IEC 60359	-	Electrical and electronic measurement equipment - Expression of performance	EN 60359	-
IEC 61000-4-2	-	Electromagnetic compatibility (EMC) - Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test	EN 61000-4-2	-
IEC 61000-4-3	-	Electromagnetic compatibility (EMC) - Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	EN 61000-4-3	-
IEC 61000-4-4	-	Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test	EN 61000-4-4	-
IEC 61000-4-5	-	Electromagnetic compatibility (EMC) - Part 4-5: Testing and measurement techniques - Surge immunity test	EN 61000-4-5	-
IEC 61000-4-6	-	Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields	EN 61000-4-6	-
IEC 61000-4-12	-	Electromagnetic compatibility (EMC) - Part 4-12: Testing and measurement techniques - Ring wave immunity test	EN 61000-4-12	-
IEC 61187	-	Electrical and electronic measuring equipment - Documentation	EN 61187	-

¹ At draft stage.

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RADIATION PROTECTION INSTRUMENTATION – INSTALLED RADIATION MONITORS FOR THE DETECTION OF RADIOACTIVE AND SPECIAL NUCLEAR MATERIALS AT NATIONAL BORDERS

1 Scope and object

The scope of this International Standard is to define the performance of installed monitors used for the detection of gamma and neutron radiation emitters contained in objects/containers or vehicles, general characteristics, mechanical characteristics, environmental requirements, test procedures and documentation.

This standard is applicable to installed monitors designed to detect special nuclear and other radioactive materials by their emitted gamma and/or neutron radiation. They are used to monitor vehicles, cargo containers, people, or packages and are typically located at national and international borders, but may be used at any location where there is a need for this type of monitoring. This standard does not apply to hand-held monitors.

Information regarding the detection of special nuclear material (SNM) is contained in Annex A.

This standard provides the purchaser with information that may be used to determine the performance of the monitor in detecting the presence of radioactive sources. This standard does not provide the data needed to determine the performance of the monitor in measuring the quantity of the radioactive material.

In this standard, the term radioactive material includes both special nuclear and radioactive material unless otherwise specifically noted. The radioactive material may be transported by vehicle, carried by person, or concealed in a cargo container or in a package moved by conveyor belt, such as international mail parcels.

Conformance with the requirements of this standard does not guarantee that a radioactive source will always be discovered.

The selection of the location and the configuration of the monitoring system on each site needs to be optimised to achieve the best performance, however, this is outside the scope of this standard.

2 Normative references

The following referenced documents are relevant to 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 60038, *IEC standard voltages*

IEC 60050-393, *International Electrotechnical Vocabulary (IEV) – Part 393: Nuclear instrumentation – Physical phenomena and basic concepts*

IEC 60050-394:1995, *International Electrotechnical Vocabulary (IEV) – Chapter 394: Nuclear instrumentation: Instruments*

Amendment 1 (1996)

Amendment 2 (2000)

IEC 60068-2-18, *Environmental testing – Part 2-18: Tests – Test R and guidance: Water*

IEC 60068-2-27, *Environmental testing – Part 2: Tests – Test Ea and guidance: Shock*

IEC 60068-2-75, *Environmental testing – Part 2-75: Tests – Test Eh: Hammer tests*

IEC 60359, *Electrical and electronic measurement equipment – Expression of performance*

IEC 61000-4-2, *Electromagnetic compatibility (EMC) – Part 4-2: Testing and measurement techniques – Electrostatic discharge immunity test*

IEC 61000-4-3, *Electromagnetic compatibility (EMC) – Part 4-3: Testing and measurement techniques – Radiated, radio-frequency, electromagnetic field immunity test*

IEC 61000-4-4, *Electromagnetic compatibility (EMC) – Part 4-4: Testing and measurement techniques – Electrical fast transient/burst immunity test*

IEC 61000-4-5, *Electromagnetic compatibility (EMC) – Part 4-5: Testing and measurement techniques – Surge immunity test.*

IEC 61000-4-6, *Electromagnetic compatibility (EMC) – Part 4-6: Testing and measurement techniques – Immunity to conducted disturbances induced by radio-frequency fields*

IEC 61000-4-12, *Electromagnetic compatibility (EMC) – Part 4-12: Oscillatory waves immunity test*

IEC 61187, *Electrical and electronic equipment – Documentation*